

# 1/8 DIN Load Cell Panel Meter



## Economical Panel Meter for Load Cell Applications

DPS20



DPS20 shown smaller than actual size.

OMEGA's new panel meter for load cells delivers high-performance at 1/8 DIN size for panel mounts and integration in a wide range of weight applications. The DPS20 accepts 4 and 6 wire load cells and provides 5Vdc and 10Vdc configurable excitation voltage to power the load cell. Two power supply options for high and low AC/DC power, allows this unit to be suited for global use.

The optional relays, analog output, and Modbus® RTU serial communications provide control and communication capability. Additional features of the DPS20 load cell meter include independent scaling of the load cell signal and reading units, prevention of false tares, stability alarms, and rear terminal with configurable function.

- ✓ **Fast Access Menu - Front Key Access to Modify the Alarm Setpoints and Read Values for Tare, Gross Weight, mV Signal, Excitation Voltage and Excitation Current**
- ✓ **Tare Functions - Configurable Tare Function Accessible from Front Key, Rear Terminal and Auto-Tare Function.**
- ✓ **Alarms 1, 2 or 3, Independent, Configurable as Max/Min, with Setpoint, Hysteresis, Activation and Deactivation Delays, Activation on Stability, Dual Setpoints and Latched Alarms.**

### APPLICATIONS

- ✓ **Assembly Line**
- ✓ **Control Panel**
- ✓ **Laboratory**
  
- ✓ **Load Cell Characterization Based on Sensibility, Nominal Load and Excitation Voltage Values.**
- ✓ **Independent Scaling - Easily Rescale Reading Units Without Affecting the Load Cell Characterization.**
- ✓ **Define a Maximum Tare Value to Prevent Undesired Tares**
- ✓ **Output and Control Options: 1, 2 or 3 Relay Outputs, analog 4 to mA or 0 to 10 Vdc Isolated Output, Modbus RTU Isolated Serial Output.**
- ✓ **Recursive Display Filter and Configurable Steps for Minimum Predefined Changes on the Reading.**
- ✓ **5 Levels of Brightness**
- ✓ **Password Protection**

## Specifications

**Digits:** 6

**Reading:** 999999/-199999

**Decimal Point:** Configurable

**LED color:** Red

**Digit Height:** 14 mm (0.55")

**Types of Load Cell:** 1mV/V, 2mV/V, 3mV/V and others

**Excitation Voltage:** 5Vdc or 10Vdc (configurable)

**Maximum Exc. Current:** 140mA

**Maximum Vdc at Input:** ±30Vdc

**Number of Wires:** 4 and 6 wire cells

**Number of Cells** (for standard 350Ohms cells): 1 to 8 load cells (at 5Vdc) and 1 to 4 load cells (at 10Vdc)

**Internal Signal Ranges:** 100mV, 30mV, 20mV, 15mV, 10mV, 5mV

**Accuracy at 25°C:** 0.05%FS

**Thermal Stability:** 50ppm/°C

**Input Impedance:** 20MΩ

**Acquisitions per Second** (and alarms update): 16, 50 or 60 acq./sec. (configurable)

**Display Refresh** (and bus and analog output update): 16, 50 or 60 acq./seg. (configurable)

**Step Response** (0% to 99% of signal): 17, 20 or 63 mSec. (configurable)

**Signal Terminals:** plug-in screw terminals (3.81 mm pitch)

**Output and Control Options:** relays, analog outputs, Modbus RTU.

**Configuration:** by front keypad

**External Contact:** with configurable functions

**Power 'HV':** 85 to 265 Vac/dc (isolated 2500 Veff)

**Power 'LV':** 11 to 60 Vdc and 24/48Vac (isolated 1500 Veff)

**Consumption:** <1.5W (meter only) and <4.0W (meter with output options)

**Power terminals:** plug-in screw terminals (5.08mm pitch)

**Power wires:** max. 2.5mm<sup>2</sup> (max. AWG14)

## Output and Control Options:

1, 2 or 3 relays

1, 2 or 3 isolated analog outputs 4/20 mA or 0/10 Vdc

Modbus RTU isolated serial output

**Front Protection:** NEMA 4 (IP65)

**Connections:** plug-in screw terminals

**Weight:** <150 gr (5.3 oz)

**Mounting:** panel

**Front Size:** 96x48 mm (1/8 DIN)

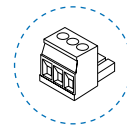
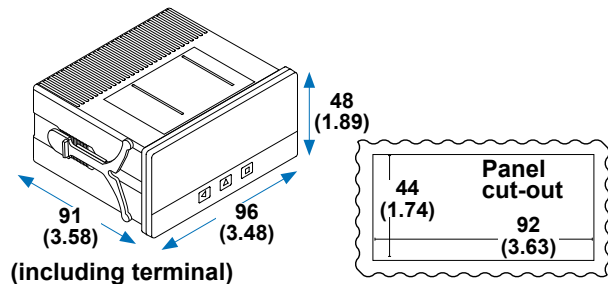
**Panel Cut-Out:** 92x44 mm

**Depth:** 91 mm (including terminals)

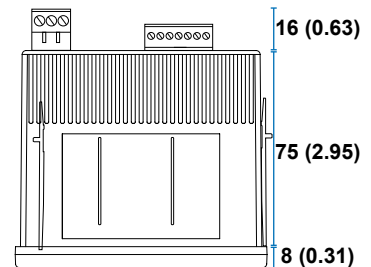
**Operation Temperature:** 0 to 50°C (32 to 122 °F)

**Storage Temperature:** -20 to 70°C (-4 to 158 °F)

**Packing box:** paperboard, 15x12x5cm



Detail of the plug-in screw terminal. Both male and female terminals are included.



## To Order

| Model No.          | Description   |
|--------------------|---|
| DPS20-HV           | 1/8 DIN panel meter with 85/265Vac/dc power supply  |
| DPS20-HV-AO        | 1/8 DIN panel meter with 85/265Vac/dc power supply with 1 analog output                                 |
| DPS20-HV-R1        | 1/8 DIN panel meter with 85/265Vac/dc power supply with 1 relay output                                  |
| DPS20-HV-R1-AO     | 1/8 DIN panel meter with 85/265Vac/dc power supply with 1 relay output and 1 analog output              |
| DPS20-HV-R1-R1     | 1/8 DIN panel meter with 85/265Vac/dc power supply with 2 relay output                                  |
| DPS20-HV-R1-R1-AO  | 1/8 DIN panel meter with 85/265Vac/dc power supply with 2 relay output and 1 analog output              |
| DPS20-HV-R1-R1-R1  | 1/8 DIN panel meter with 85/265Vac/dc power supply with 3 relay output                                  |
| DPS20-HV-RTU       | 1/8 DIN panel meter with 85/265Vac/dc power supply with 1 Modbus RTU output                             |
| DPS20-HV-R1-R1-RTU | 1/8 DIN panel meter with 85/265Vac/dc power supply with 2 relay output and 1 Modbus RTU output          |
| DPS20-LV           | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply   |
| DPS20-LV-AO        | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 1 analog output                        |
| DPS20-LV-R1        | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 1 relay output                         |
| DPS20-LV-R1-AO     | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 1 relay output and 1 analog output     |
| DPS20-LV-R1-R1     | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 2 relay output                         |
| DPS20-LV-R1-R1-AO  | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 2 relay output and 1 analog output     |
| DPS20-LV-R1-R1-R1  | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 3 relay output                         |
| DPS20-LV-RTU       | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 1 Modbus RTU output                    |
| DPS20-LV-R1-R1-RTU | 1/8 DIN panel meter with 11/60Vdc and 24/48Vac power supply with 2 relay output and 1 Modbus RTU output |

Comes complete with operator's manual. The AC powered units can not be shipped to Canada.

## Options

### Relay output

**Module:** R1

**Type of relay:** 3 contacts (Com, NO, NC)

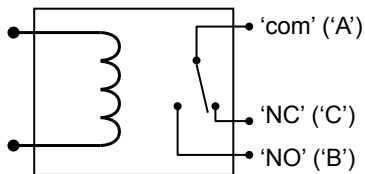
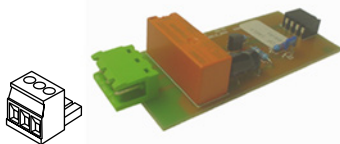
**Max. current:** 8A (resistive load)

**Max. voltage:** 250 Vac continuous

**Isolation:** 3500 Veff

**Terminal:** plug-in screw terminal, pitch 5.08 mm

**Installation allowed at:** Opt.1, Opt.2 and Opt.3



### Analog output

**Module:** AO

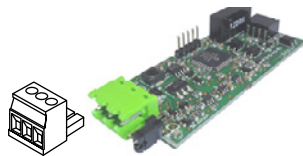
**Output signal:** 4/20mA, 0/10Vdc (mA active and passive)

**Accuracy:** 0.1% FS

**Isolation:** 1000 Vdc

**Terminal:** plug-in screw terminal, pitch 5.08 mm

**Installation allowed at:** Opt.1, Opt.2 and Opt.3



### Modbus RTU output

**Module:** RTU

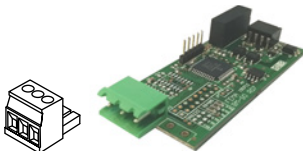
**Type of bus:** RS-485, up to 57.6 Kbps

**Accuracy:** 0.1% FS

**Isolation:** 1000 Vdc

**Terminal:** plug-in screw terminal, pitch 5.08 mm

**Installation allowed at:** Opt.1, Opt.2 and Opt.3



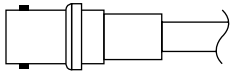
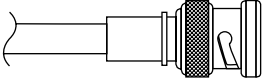
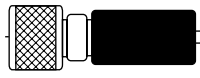
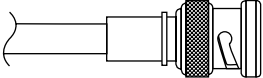


# INDIIT/OUTDIIT CABLES

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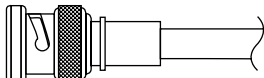
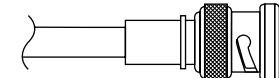
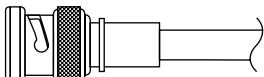
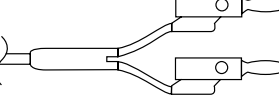
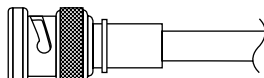

## FOR DYNAMIC SENSORS, POWER SUPPLIES, AND INSTRUMENTATION

To Order Visit [omega.com/acc-cables](http://omega.com/acc-cables) for Pricing and Details

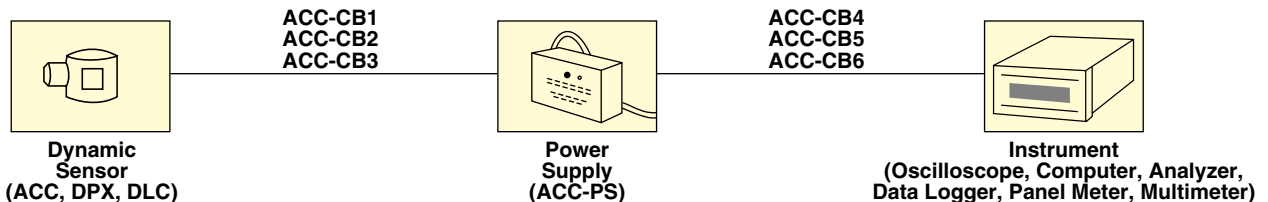
### POWER SUPPLY/ACCELEROMETER INTERFACE CABLES

| MODEL NO.               | CONNECTOR A   | CABLE   | CONNECTOR B   |
|-------------------------|---|---|---|
| ACC-CB1-6<br>ACC-CB1-15 | <br>BNC Female             | 1.83 m (6')<br>4.58 m (15')<br>4.8 mm (0.190") Dia.<br>coaxial cable                                | <br>BNC Male                 |
| ACC-CB2-10              | <br>10-32 Male Plug        | 3.05 m (10')<br>2.0 mm (0.080") Dia.<br>coaxial cable   | <br>BNC Male                 |
| ACC-CB3-6<br>ACC-CB3-15 | <br>4 Pin 1/4-28 Male Plug | 1.83 m (6')<br>4.58 m (15')<br>4.8 mm (0.190") Dia.<br>coaxial cable<br>for triaxial accelerometers | <br>4-Pin 1/4-28 Female Plug |

### POWER SUPPLY/INSTRUMENTATION INTERFACE CABLES

| MODEL NO.               | CONNECTOR A   | CABLE  | CONNECTOR B   |
|-------------------------|---|--|---|
| ACC-CB4-6<br>ACC-CB4-15 | <br>BNC Male | 1.83 m (6')<br>4.58 m (15')<br>4.8 mm (0.190") Dia.<br>coaxial cable | <br>BNC Male     |
| ACC-CB5-2               | <br>BNC Male | 0.61 m (2')<br>4.8 mm (0.190") Dia.<br>coaxial cable                 | <br>Banana Plugs |
| ACC-CB6                 | <br>BNC Male | 0.18 m (7")<br>20 AWG<br>copper wire                                 | <br>Pigtail      |

#### TYPICAL SYSTEM BLOCK DIAGRAM



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# ACCELEROMETERS

## 100 mV/g OUTPUT



ACC-101 shown actual size.

### ACC101



- ✓ Ideal for Machine Vibration Monitoring
- ✓ Low-Impedance Drives, Cable Lengths to 304 m (1000')
- ✓ Fast Turn-On Time (1 s)

The ACC101 accelerometer is low cost yet extremely durable. It is constructed of high-strength aluminum; has a rugged strain relief, a rugged 1/4-28 stud mounting, and an epoxy seal; and uses the kind of dependable components usually found only in higher-priced accelerometers.

#### SPECIFICATIONS

**Excitation:** 2 mA nominal @ 24 to 30 Vdc, constant current (18V supply can be used but will limit amplitude range)

**Rated Output:** 100 mV/g nominal @ 100 Hz

**Frequency Range:** 3 Hz to 5 kHz (up to ±10% rated output shift)

**Amplitude Range:** ±70 g peak with ACC-PS1; ±80 g peak with ACC-PS2, ACC-PS3

**Amplitude Linearity:** ±1% up to 65 g peak

**Temperature Range:** -18 to 82°C (0 to 180°F)

**Temperature Sensitivity Effect:** -54 to 38°C (-65 to 100°F) ≤5% FS  
 38 to 121°C (100 to 250°F) ≤8% FS

**Thermal Shock:** 1.2 g/°C

**Transverse Sensitivity:** 5% of axial maximum

**Maximum g Without Damage:** 5000 g peak

**Maximum g Without Clipping:** ±80 g peak

**Mounted Resonance Frequency:** >18 kHz

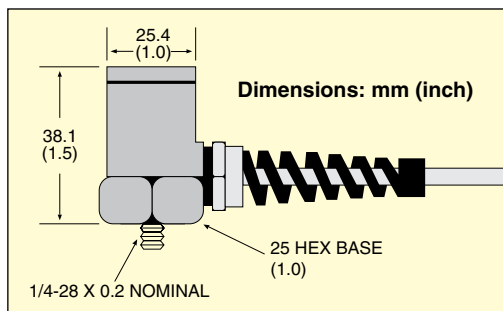
**Output Impedance:** 50 Ω nominal

**Bias Voltage:** 10V nominal

BOS-200 oscilloscope, visit us online.



ACC-101 shown with ACC-PS1 power supply, and BOS-200 oscilloscope, both sold separately.



Dimensions: mm (inch)

**Material:** Aluminum; hard anodized thermal insulating boot included

**Dimensions:** 3.81 H x 2.54 cm (1.50 x 1.0") hex base

**Connector:** 2.5 m (10') integral coaxial cable with BNCM

**Mounting:** 1/4-28 removable stud  
**Mounting Torque Maximum:** 40 cm-kg (35 in-lb)

**Base Strain:** 0.002 g/microstrain max  
**Noise Floor (Wideband):** 0.00025 g (rms)  
**Weight:** 50 g (1.75 oz) nominal (without cable)

#### To Order

| MODEL NO. | DESCRIPTION                   |
|-----------|-------------------------------|
| ACC101    | General purpose accelerometer |

#### ACCESSORIES

| MODEL NO.   | DESCRIPTION   |
|---|---|
| MAGNET1   | Magnetic mounting base (10 lb holding force) 25.4 Dia. x 31.8 mm H (1.00 x 1.25") |
| <b>POWER SUPPLIES/SIGNAL CONDITIONERS</b>                             |   |
| ACC-PS1   | Battery power supply (BNCF connections)   |
| ACC-PS2   | Rechargeable power supply/amplifier (BNCF connections)                            |
| ACC-PS3   | AC power supply (BNCF connections)  |
| <b>Interface cables used between power supply and instrumentation</b> |   |
| ACC-CB4-15  | 4.6 m (15') coaxial cable (BNCM/BNCM)   |
| ACC-CB5-2   | 0.6 m (2') coaxial cable (BNCM/banana plug)                                       |
| ACC-CB6   | 178 mm (7") coaxial cable (BNCM/pigtail)  |

Comes complete with operator's manual.

Visit us online for details on the above power supplies and cables.

**Ordering Example:** ACC101, accelerometer, ACC-PS1, power supply, and ACC-CB5-2, coaxial cable.

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## FOR HIGH VIBRATION LEVELS

### 10 mV/g OUTPUT TO 500 g

## ACC103



- ✓ Ideal for Laboratory Shake Testing
- ✓ High Shock/Acceleration Range Up to  $\pm 500$  g
- ✓ Fast Turn-On Time (1 s)

At only 15 grams, the ACC103 laboratory accelerometer is ideal for applications in which low weight is critical, such as shake tests and vibration labs. It has a 10 mV/g output and can measure vibrations up to 500 g.

### SPECIFICATIONS

**Frequency Response:** 1 Hz to 10 kHz (up to  $\pm 10\%$  rated output shift)

**Rated Output:** 10 mV/g nominal @ 100 Hz

**Frequency Range:** 2 Hz to 10 kHz (up to  $\pm 5\%$  rated output shift)

**Amplitude Range:**  $\pm 500$  g peak

**Amplitude Linearity:**  $\pm 2\%$  up to 500 g peak

**Temperature Range:**  $-50$  to  $120^\circ\text{C}$  ( $-60$  to  $250^\circ\text{F}$ )

**Temperature Sensitivity Effect:** 0.06% FS/ $^\circ\text{F}$

**Discharge Time Constant:** 0.5 s minimum

**Transverse Sensitivity:** 5% of axial maximum

**Strain Sensitivity:**

0.001 g per microstrain @  $25^\circ/\mu\sigma$

**Maximum g Without Clipping:**  $\pm 1000$  g

**Mounted Resonance Frequency:**  $>40$  kHz

**Output Impedance:** 100  $\Omega$

**Bias Voltage:** 10V nominal

**Base Strain:** 0.03 g/microstrain nominal

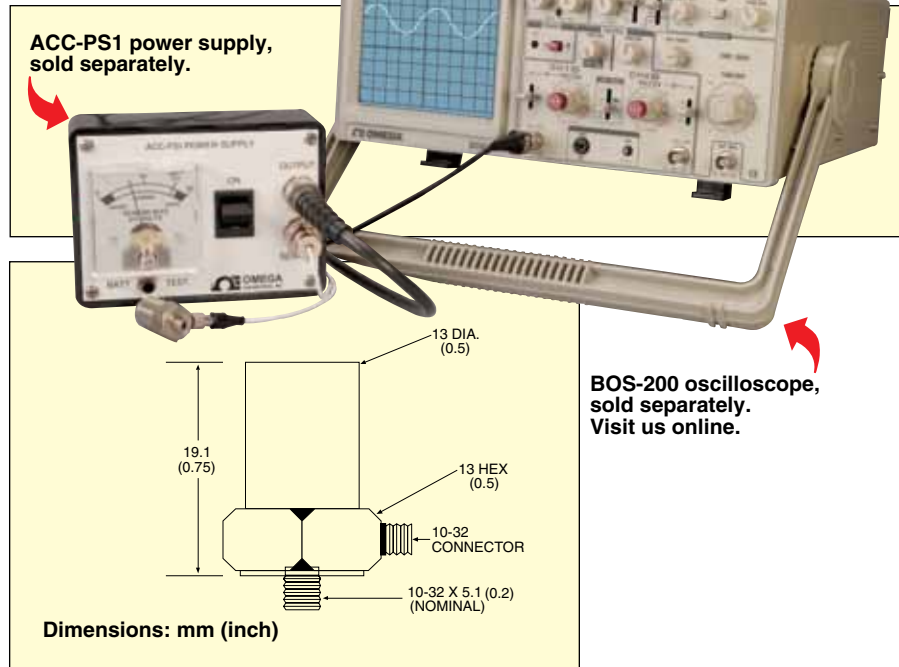
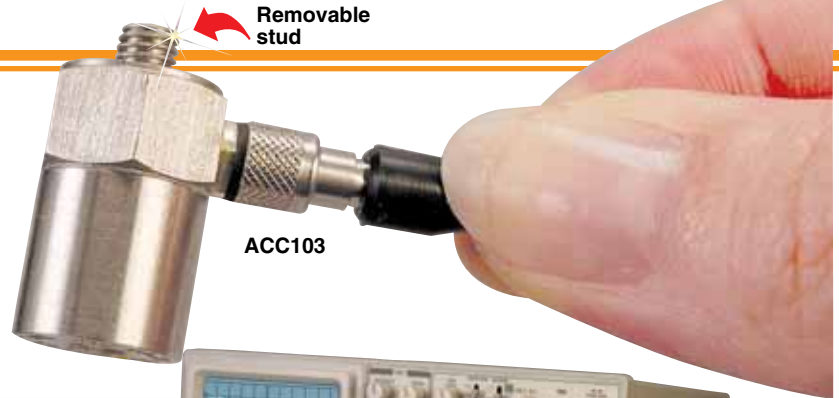
**Noise Floor (Wideband):** 0.007 g (rms)

**Weight:** 1.5 g (0.05 oz) nominal (without cable)

**Material:** Stainless steel

**Dimensions:** 7.11 H x 6.35 mm hex base (0.28 x 0.25")

**Connector:** 10-32 male, cable not included (order model no. **ACC-CB2-10**)



| To Order   |  |
|------------|--|
| MODEL NO.  | DESCRIPTION  |
| ACC103     | Accelerometer for high vibration levels              |
| ACC-CB2-10 | 3 m (10') coaxial cable (10-32/BNCM) <b>required</b> |

| ACCESSORIES  |   |
|--|---|
| MODEL NO.  | DESCRIPTION   |
| MAGNET2  | Magnetic mounting base (10 lb holding force) 19.1 Dia. x 19.1 mm high (0.75 x .75") |
| POWER SUPPLIES   |   |
| ACC-PS1  | Battery power supply/amplifier (BNCF connections)                                   |
| ACC-PS2  | Battery power supply/amplifier (BNCF connections)                                   |
| ACC-PS3  | AC power supply/amplifier (BNCF connections)  |
| INTERFACE CABLES USED BETWEEN POWER SUPPLY AND INSTRUMENTATION |   |
| ACC-CB4-15   | 4.6 m (15') coaxial cable (BNCM/BNCM)   |
| ACC-CB5-2  | 0.6 m (2') coaxial cable (BNCM/banana plug)   |
| ACC-CB6  | 178 mm (7") coaxial cable (BNCM/pigtail)  |

Comes complete with instruction sheet.

Visit us online for details on the above accessories.

**Ordering Example:** ACC103, accelerometer, ACC-CB2-10, coaxial cable, ACC-PS1, power supply, and ACC-CB5-2, coaxial cable.

# ACCELEROMETERS

## ACC786A

- ✓ Rugged Design
- ✓ Corrosion Resistant
- ✓ Hermetic Seal
- ✓ Isolated Case
- ✓ ESD Protection
- ✓ Reverse Wiring Protection

The OMEGAROMETER™ Series accelerometers are designed for industrial vibration measurements. They feature a hermetically sealed 316L SS case suitable for harsh environments. The ACC786A is a general purpose model with a top cable exit.

### SPECIFICATIONS

#### DYNAMIC

**Sensitivity, ±5%, 25°C (77°F):** 100 mV/g

**Acceleration Range:** 80 g peak

**Amplitude Non-Linearity:** 1%

#### Frequency Response:

±5%: 3 to 5000 Hz

±10%: 1 to 9000 Hz

±3 dB: 0.5 to 14,000 Hz

**Resonance Frequency:** 30 kHz

**Transverse Sensitivity, Maximum:** 5% of axial

#### Temperature Response:

-50°C (-58°F) = -5%;

120°C (248°F) = 5%

#### ELECTRICAL

##### Power Requirement:

**Voltage Source:** 18 to 30 Vdc

**Current Regulating Diode:** 2 to 10 mA

##### Electrical Noise, Equiv. g:

**Broadband:** 2.5 Hz to 25 kHz: 700 µg

**Spectral:** 10 Hz: 10 µg/Hz

100 Hz: 5 µg/Hz

1000 Hz: 5 µg/Hz

**Output Impedance, Maximum:** 100 Ω

**Bias Output Voltage:** 12 Vdc

**Grounding:** Isolated case, internally shielded

#### ENVIRONMENTAL

##### Temperature Range:

-50 to 120°C (-58 to 248°F)

**Vibration Limit:** 500 g peak



ACC786A with optional ACC-CB7-10WP cable shown smaller than actual size.



**Shock Limit:** 5000 g peak  
**Electromagnetic Sensitivity, Equiv. g, Max:** 70 µg/gauss

**Sealing:** Hermetic

**Base Strain Sensitivity, Max:** 0.0002 g/microstrain

#### PHYSICAL

##### Sensing Element Design:

PZT ceramic/shear

**Weight:** 90 g (3.2 oz)

**Case Material:** 316L SS

**Mounting:** ¼-28 UNF tapped hole

##### Connections:

**Pin A:** Power/signal

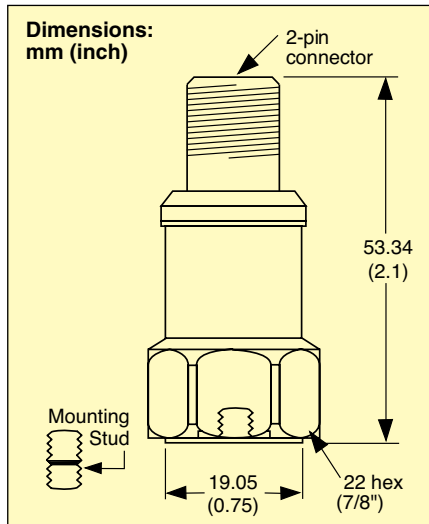
**Pin B:** Common

##### Output Connector:

2 pin, MIL-C-5015 style

**Mating Connector:** Amphenol 97-3106A-10SL-4S type

**Recommended Cabling:** ACC-CB7-10



### To Order

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| ACC786A   | General purpose accelerometer with top exit connector |

ACC786A includes mounting stud and calibration data and instruction sheet. Specify cable separately; see Accessories.

### ACCESSORIES

| MODEL NO.    | DESCRIPTION  |
|--------------|--|
| ACC-CB7-10   | 3 m (10') MIL/BNC twisted-pair shielded cable      |
| ACC-CB7-10WP | 3 m (10') waterproof twisted-pair shielded cable   |
| ACC-B3       | Magnetic mounting base for flat surfaces, 30 lbf   |
| ACC-B5       | Magnetic mounting base for curved surfaces, 30 lbf |
| ACC-PS2      | Rechargeable power supply with built-in amplifier  |
| ACC-PS3*     | 115 Vac power supply                               |

**Note:** Visit us online for details on the above power supplies and cables

\* For 230 Vac power supply add suffix "-230" to model number, no extra charge.

**Ordering Example:** ACC786A + ACC-CB7-10 + ACC-B3 + ACC-PS2, typical accelerometer system.

# ACCELEROMETERS

- ✓ Corrosion Resistant
- ✓ Reverse Wiring Protection
- ✓ Ground Isolated
- ✓ ESD Protection

The OMEGAROMETER™ Series accelerometers are designed for industrial vibration measurements. They feature a hermetically sealed 316L SS case suitable for harsh environments. The ACC787A is a general purpose model with a side cable exit.

## SPECIFICATIONS

### DYNAMIC

**Sensitivity, ±10%, 25°C (77°F):**

100 mV/g

**Acceleration Range<sup>1</sup>:** 80 g peak

**Amplitude Non-Linearity:** 1%

**Frequency Response:**

±10%: 1.0 to 5000 Hz

±3 dB: 0.7 to 10,000 Hz

**Resonance Frequency:**

22 kHz

**Transverse Sensitivity,**

**Max:** 5% of axial

**Temperature Response:**

See graph

### ELECTRICAL

**Power Requirement:**

**Voltage Source<sup>1</sup>:**

18 to 30 Vdc

**Current Regulating Diode<sup>1,2</sup>:**

2 to 10 mA

**Electrical Noise, Equiv.**

**g Nominal:**

**Broadband:** 2.5 Hz to 25 kHz: 700 µg

**Spectral:**

10 Hz: 10 µg/√Hz

100 Hz: 5 µg/√Hz

1000 Hz: 5 µg/√Hz

**Output Impedance, Max:** 100 Ω

**Bias Output Voltage, Nominal:** 12 Vdc

**Grounding:** Isolated case,

internally shielded

### ENVIRONMENTAL

**Temperature Range:** -50 to 120°C

(-58 to 248°F)

**Vibration Limit:** 500 g peak

**Shock Limit:** 5000 g peak

**Electromagnetic Sensitivity,**

**Equiv. g, Max:** 70 µg/gauss

**Sealing:** Hermetic to 10<sup>-8</sup> cc/s

**Base Strain Sensitivity, Max:**

0.002 g/microstrain

### PHYSICAL

**Weight:** 145 g (5.1 oz)

**Case Material:** 316L SS

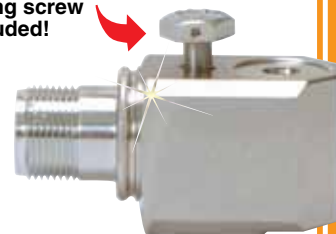
**Mounting:** ¼-28 captive hex head screw

with 1.2 mm (0.046") diameter safety

## ACC787A



Mounting screw included!



**Connector:** 2 pin, MIL-C-5015 style

**Connections:**

**Pin A:** Power/signal

**Pin B:** Common

**Mating Connector:**

Amphenol 97-3106A-10SL-4S type

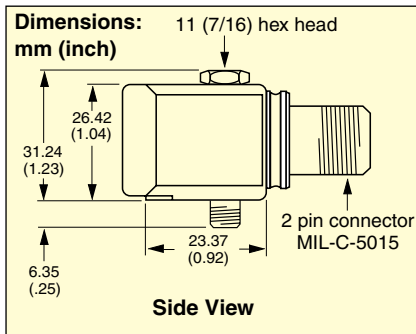
**Recommended Cabling:** ACC-CB7-10

**NOTES:** <sup>1</sup> To minimize signal distortion when driving long cables or high-vibration signals, 24 to 30 Vdc powering is recommended. The higher-level constant current source should be used when driving long cables.

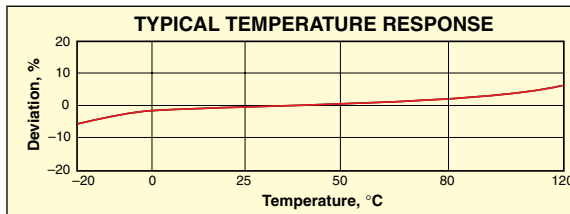
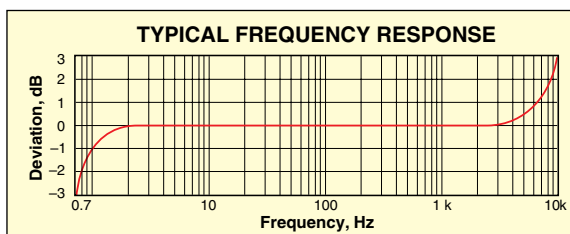
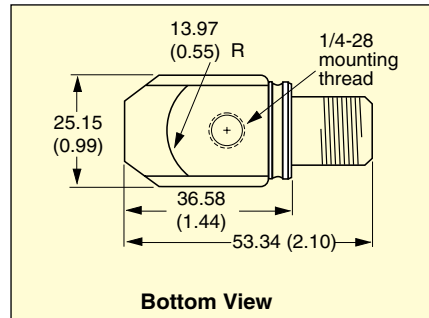
<sup>2</sup> A maximum current of 6 mA is recommended for operating temperatures above 100 °C (212°F).

ACC787A, with ACC-CB7-10WP cable, shown smaller than actual size.

### ACC787A Side View



### ACC787A Bottom View



## To Order

| MODEL NO. | DESCRIPTION  |
|-----------|--|
| ACC787A   | General purpose accelerometer with side exit connector |

ACC787A includes captive mounting screw and calibration data. Specify cable separately; see Accessories.

## ACCESSORIES

| MODEL NO.    | DESCRIPTION   |
|--------------|---|
| ACC-CB7-10   | 3.05 m (10') MIL/BNC twisted-pair shielded cable    |
| ACC-CB7-10WP | 3.05 m (10') waterproof twisted-pair shielded cable |
| ACC-B3-1     | Magnetic mounting base for flat surfaces, 40 lbf    |
| ACC-B5       | Magnetic mounting base for curved surfaces, 30 lbf  |
| ACC-PS2      | Rechargeable power supply with built-in amplifier   |
| ACC-PS3      | 115 Vac power supply                                |

**Note:** Visit us online for details on the above power supplies and cables.

**Ordering Example:** ACC787A, accelerometer, ACC-CB7-10, cable, ACC-B3-1, mounting base, and ACC-PS2, power supply (typical system).



# ACCELEROMETERS

## TOP-MOUNT PREMIUM GRADE

### ACC793



- ✓ Intrinsic Safety Certified Options
- ✓ Hermetic Design
- ✓ Ground Isolated
- ✓ ESD Protection
- ✓ Reverse Wiring Protection

The OMEGAROMETER™ Series accelerometers are designed for industrial vibration measurements. They feature a hermetically sealed 316L SS case suitable for harsh environments. The ACC793 is a high-performance model with a top cable exit. FM and CSA intrinsic safety approval is an available option.

### SPECIFICATIONS

#### DYNAMIC

**Sensitivity, ±5%, 25°C (77°F):** 100 mV/g

**Acceleration Range:** 80 g peak

**Amplitude Non-Linearity:** 1%

**Frequency Response:**

±5%: 1.5 to 5000 Hz

±10%: 1.0 to 7000 Hz

±3 dB: 0.5 to 15,000 Hz

**Resonance Frequency:** 25 kHz

**Transverse Sensitivity, Maximum:** 5% of axial

**Temperature Response:**

-50°C (-58°F) = -10%

120°C (248°F) = 5%

#### ELECTRICAL

**Power Requirement:**

**Voltage Source:** 18 to 30 Vdc

**Current Regulating Diode<sup>1</sup>:** 2 to 10 mA

**Electrical Noise (Equiv. g, Nominal):**

**Broadband:** 2.5 Hz to 25 kHz: 600 µg

**Spectral:** 10 Hz: 8 µg/√Hz

100 Hz: 5 µg/√Hz

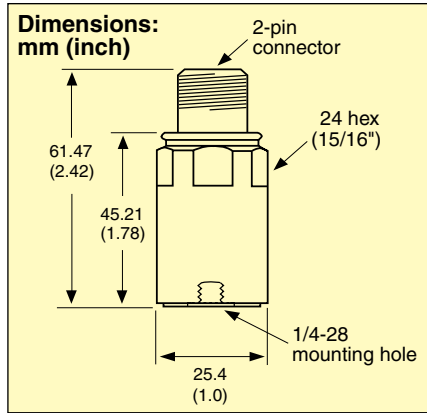
1000 Hz: 5 µg/√Hz

**Output Impedance, Maximum:** 100 Ω

**Bias Output Voltage:** 12 Vdc

**Grounding:** Isolated case,

internally shielded



#### ENVIRONMENTAL

**Temperature Range:** -50 to 120°C (-58 to 248°F)

**Vibration Limit:** 500 g peak

**Base Strain Sensitivity, Maximum:** 0.0005 g/microstrain

**Sealing:** Hermetic to 10<sup>-8</sup> cc/s

#### PHYSICAL

**Weight:** 112 g (3.9 oz)

**Case Material:** 316L SS

**Mounting:** ¼-28 tapped hole

**Output Connector:**

2 pin, MIL-C-5015 style

**Connections:**

**Pin A:** Power/signal

**Pin B:** Common

**Mating Connector:**

Amphenol 97-3106A-10SL-4S type

**Recommended Cabling:**

ACC-CB7-10



ACC793 with ACC-CB7-10WP cable shown smaller than actual size.



Mounting stud included!

#### Agency Approvals:

**FM:** Class I, II, III, Division I,

Groups A, B, C, D, E, F, G; Division II,

Groups A, B, C, D, F, G

**CSA:** Class I, Division I, Groups

A, B, C, D

**NOTE:** <sup>1</sup> A maximum current of 6 mA is recommended for operating temperatures above 100°C (212°F).

| To Order   |  |
|------------|--|
| MODEL NO.  | DESCRIPTION  |
| ACC793     | Premium accelerometer with top exit connector                              |
| ACC793-FM  | FM-certified intrinsically safe premium accelerometer with top exit cable  |
| ACC793-CSA | CSA-certified intrinsically safe premium accelerometer with top exit cable |

ACC793 includes mounting stud and calibration data. Specify cable separately; see Accessories.

#### ACCESSORIES

| MODEL NO.    | DESCRIPTION   |
|--------------|---|
| ACC-CB7-10   | 3.05 m (10') MIL/BNC twisted-pair shielded cable    |
| ACC-CB7-10WP | 3.05 m (10') waterproof twisted-pair shielded cable |
| ACC-B3       | Magnetic mounting base for flat surfaces, 30 lbf    |
| ACC-B5       | Magnetic mounting base for curved surfaces, 30 lbf  |
| ACC-PS2      | Rechargeable power supply with built-in amplifier   |
| ACC-PS3*     | 115 Vac power supply                                |

\* Add suffix "-230" for 230 Vac power supply, no extra charge.

Ordering Example: ACC793 + ACC-CB7-10 + ACC-B3 + ACC-PS2, typical

# ACCELEROMETERS

## ACC797

- Rugged, General Purpose
- Corrosion Resistant
- ESD Protection
- Reverse Wiring Protection

The OMEGAROMETER™ accelerometer is designed for industrial vibration measurements. It features a hermetically sealed 316L SS case suitable for harsh environments. The ACC797 is a high-performance model with a side cable exit.

### SPECIFICATIONS

#### DYNAMIC

**Sensitivity, ±5%, 25°C (77°F):** 100 mV/g

**Acceleration Range<sup>1</sup>:** 50 g peak

**Amplitude Non-Linearity:** 1%

**Frequency Response:**

±5%: 3 to 5000 Hz

±10%: 2 to 7000 Hz

±3 dB: 1 to 12,000 Hz

**Resonance Frequency:** 26 kHz

**Transverse Sensitivity, Max:**

5% of axial

#### ELECTRICAL

**Power Requirement:**

**Voltage Source:** 18 to 30 Vdc

**Current Regulating Diode<sup>1,2</sup>:** 2 to 10 mA

**Electrical Noise, Equiv. g:**

**Broadband:** 2.5 Hz to 25 kHz: 600 µg

**Spectral:** 10 Hz: 8 µg/√Hz

100 Hz: 5 µg/√Hz

1000 Hz: 5 µg/√Hz

**Output Impedance, Max:** 100 Ω

**Bias Output Voltage:** 12 Vdc

**Grounding:** Isolated case,

internally shielded

#### ENVIRONMENTAL

**Temperature Range:** -50 to 120°C

(-58 to 248°F)

**Vibration Limit:** 500 g peak

**Shock Limit:** 5000 g peak

**Electromagnetic Sensitivity, Equiv. g:**

30 µg/gauss

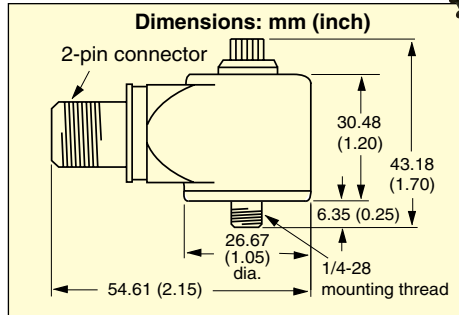
**Base Strain Sensitivity:**

0.002 g/microstrain

#### PHYSICAL

**Weight:** 135 g (4.8 oz)

**Case Material:** 316L SS



ACC797, with ACC-CB7-10WP cable, shown smaller than actual size.

Mounting screw included!

**Mounting:** ¼-28 screw

**Output Connector:** 2 pin, MIL-C-5015 style

**Connections:**

**Pin A:** Power/signal

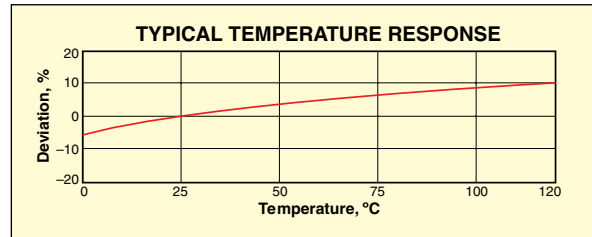
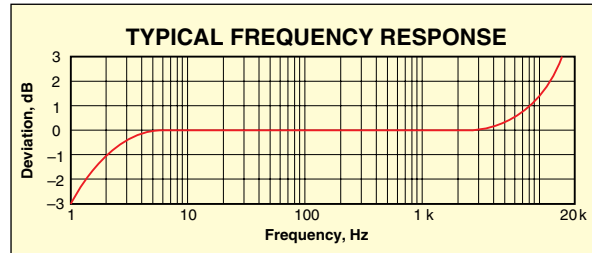
**Pin B:** Common

**Mating Connector:** Amphenol

97-3106A-10SL-4S type

**Recommended Cabling:** ACC-CB7-10

**NOTES:** <sup>1</sup> To minimize signal distortion when driving long cables with high-vibration signals, 24 to 30 Vdc powering is recommended. The higher-level constant current source should be used when driving long cables; please consult Sales. <sup>2</sup> A maximum current of 6 mA is recommended for operating temperatures above 100°C (212°F).



### To Order

| MODEL NO. | DESCRIPTION                                    |
|-----------|--|
| ACC797    | Premium accelerometer with side exit connector |

ACC797 includes captive mounting screw and calibration data. Specify cable separately; see Accessories.

### ACCESSORIES

| MODEL NO.    | DESCRIPTION   |
|--------------|---|
| ACC-CB7-10   | 3.05 m (10') MIL/BNC twisted-pair shielded cable    |
| ACC-CB7-10WP | 3.05 m (10') waterproof twisted-pair shielded cable |
| ACC-B3-1     | Magnetic mounting base for flat surfaces, 40 lbf    |
| ACC-B5       | Magnetic mounting base for curved surfaces, 30 lbf  |
| ACC-PS2      | Rechargeable power supply with built-in amplifier   |
| ACC-PS3      | 115 Vac power supply                                |

\* Add suffix "-230" for 230 Vac power supply, no extra charge.

**Ordering Example:** ACC797 accelerometer, ACC-CB7-10, cable, ACC-B3-1, mounting base, and ACC-PS2, power supply (typical system).

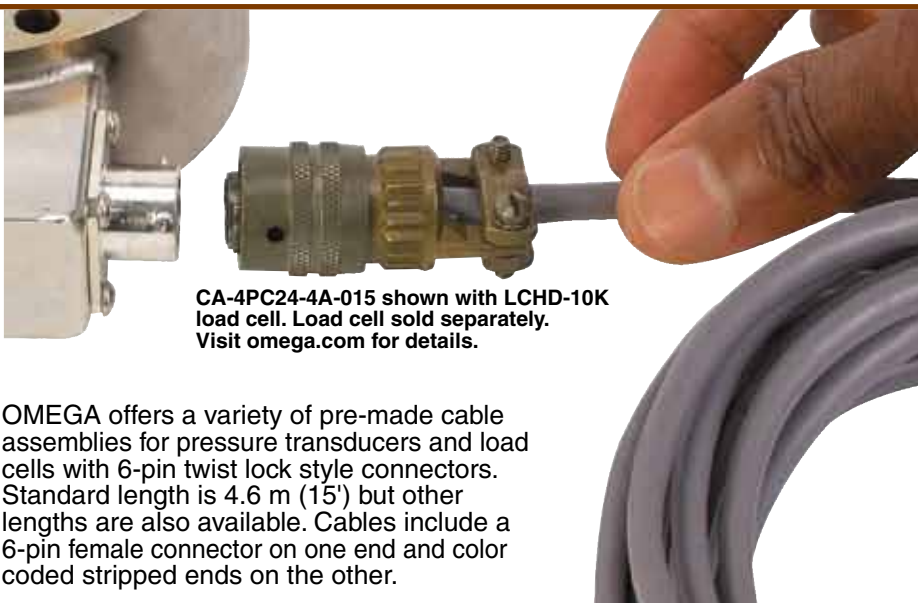
# CABLE ASSEMBLIES WITH TWIST LOCK CONNECTORS FOR LOAD CELLS AND PRESSURE TRANSDUCERS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)



## CA Series

- ✓ Ready Made Cable Assemblies
- ✓ Includes 6-Pin Twist Lock Connectors
- ✓ 4.6 m (15') Length Standard, Other Lengths Available
- ✓ PVC or FEP Insulation



CA-4PC24-4A-015 shown with LCHD-10K load cell. Load cell sold separately. Visit [omega.com](http://omega.com) for details.

### Wiring Code 1

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Black | - Input    |

### Wiring Code 2

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Green | + Output   |
| B      | White | - Output   |
| C      | Black | - Input    |
| D      | Red   | + Input    |

### Wiring Code 3

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Green | + Output   |
| B      | White | - Output   |
| C      | Black | - Input    |
| D      | Red   | + Input    |
| E      | Blue  | Shunt      |
| F      | Brown | Shunt      |

### Wiring Code 4

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Blue  | + Input    |
| C      | Black | - Input    |
| D      | Brown | - Input    |
| E      | White | - Output   |
| F      | Green | + Output   |

### Wiring Code 5

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Green | + Output   |
| C      | White | - Output   |
| D      | Black | - Input    |
| E      | Blue  | Shunt      |
| F      | Brown | Shunt      |

### Wiring Code 6

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Green | + Output   |
| C      | White | - Output   |
| D      | Black | - Input    |

OMEGA offers a variety of pre-made cable assemblies for pressure transducers and load cells with 6-pin twist lock style connectors. Standard length is 4.6 m (15') but other lengths are also available. Cables include a 6-pin female connector on one end and color coded stripped ends on the other.

| CA-            | 2          | PC         | 24  | -1          | -015        |
|----------------|------------|------------|-----|-------------|-------------|
| Cable Assembly | # of Wires | Insulation | AWG | Wiring Code | Length (ft) |

To Order Visit [omega.com/ca\\_series](http://omega.com/ca_series) for Pricing and Details

| MODEL NO.       | WIRES | INSULATION | PRODUCT USED ON  |
|-----------------|-------|------------|--|
| CA-2PC24-1-015  | 2     | PVC        | All with 2 wire 4 to 20 mA output                        |
| CA-2TE22-1-015  | 2     | FEP        | All with 2 wire 4 to 20 mA output                        |
| CA-4PC24-2-015  | 4     | PVC        | LC111, LC511, LC315, LC213, LC214, PX103-5V, PX41x1-5V   |
| CA-4PC24-2A-015 | 2     | PVC        | LC111 < 250 lbs, PX101 (4 pin connector)                 |
| CA-4TE24-2-015  | 4     | FEP        | PX35   |
| CA-6PC24-3-015  | 6*    | PVC        | LC1011, LC1112, LC1113, LC411, LC412, LC711, LC712       |
| CA-6TE24-3-015  | 6*    | FEP        | PX01, PX02, PX03, PX80, PX81, PX91                       |
| CA-6PC24-4-015  | 6*    | PVC        | LCHD 5 to 5000 lbs, PX610, PX61, PX931                   |
| CA-4PC24-4-015  | 4     | PVC        | LCHD 5 to 5000 lbs, PX610, PX61, PX931 (without sense)   |
| CA-6PC24-4A-015 | 6*    | PVC        | LCHD >5000 lbs   |
| CA-4PC24-4A-015 | 4     | PVC        | LCHD >5000 lbs (without sense)                           |
| CA-6TE24-5-015  | 6*    | FEP        | PX32   |
| CA-4TE24-6-015  | 4     | FEP        | PX5000, PX5500, PX6000 (mV outputs)                      |
| CA-4PC24-6-015  | 4     | PVC        | PX101  |
| CA-6PC24-5-015  | 6*    | PVC        | PX5000, PX5500, PX6000 (amplified 0 to 5 or 0 to 10 Vdc) |

\* Note: 6 conductor cables only required when using them on a product that has an internal shunt or input sensing leads.

Ordering Examples: PX01C1-100GI 0 to 100 psi, 4 to 20 mA pressure transducer and CA-2TE22-1-015, 4.6 m (15') 2 conductor FEP cable. LC412-10K low profile 10,000 pound load cell and CA-6PC24-3-015 4.6 m (15') 6 conductor PVC cable.

ACCESSORIES



# INDICATORS WITH REMOTE SENSORS

## DFG-RS3



- ✓ Interchangeable Force and Torque Sensors
- ✓ High Speed 2000 Hz Sampling rate
- ✓ Ultra-Compact Size
- ✓ 4 Selectable Units of Measure
- ✓ Load Cells Available in Ranges from 0.25 to 10,000 lb
- ✓ Torque Sensors for 10 oz-in to 100 lb-in Ranges
- ✓ USB Data Output
- ✓ Programmable SetPoints with Pass/Fail Indicators
- ✓ Large Backlit Graphics Display
- ✓ Live Load Bargraph with Set Point Markers
- ✓ Peak Readings and Set Points Always Displayed

The DFG-RS3 is an economical digital force and torque indicator that works with a wide variety of plug and play force and torque sensors. All calibration and configuration data is stored in the sensors smart connector instead of the indicator making the sensors truly interchangeable. In addition all of the remote sensors are also fully compatible with the advanced DFG-RS5 force/torque indicators.

A variety of interchangeable force and torque sensors are available for use with the RS3 series. Sensors are available in a range of capacities from 0.25 to 10,000 pounds force for load cells and 10 oz-in to 100 lb-in for torque sensors. In addition to the pre-calibrated sensors the DFG-RSA programmable adapter allows the end user to calibrate most bridge type force or torque sensor with a 1 to 3 mV/V full scale output to work with the DFG-RS3.



DFG-RS3 shown with DFG-RSA, sold separately, shown smaller than actual size.

See our full line of remote sensors RLC and RTQ series.



DFG-RSA smaller than actual size.

Calibrates remote sensor to meter.

The RS3 series also shares menu structure and most specifications with the DFG35/HHTQ35 force and torques gauges. A backlit graphic LCD displays large characters and a menu is available to access the gauges features and configurable parameters. Units also have a USB output for data collection and set-point indicators for pass-fail testing.

### SPECIFICATIONS

**Accuracy:** 0.2% of full scale + sensor

**Power:** Rechargeable battery or AC using adapter (batteries and adapter included)

**Battery Life:** Up to 7 hours continuous use with backlight on or 24 hours with backlight off

**Low Battery:** Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low

**Configurable Settings:** Digital filters, USB output, automatic Shutoff, default settings, key tones, audio alarms, calibration

**USB Output:** Individual data points by pressing the "DATA" key. Configurable to 115,200 baud

**Operating Temperature:** 4 to 38°C (40 to 100°F)

**Humidity:** 96% RH non-condensing

**Dimensions:** 99.1 H x 64.3 W x 38.1 mm D (3.90 x 2.53 x 1.50")

**Weight:** 0.3 kg (0.7 lb)

### SENSOR COMMON SPECIFICATIONS

**Operating Temperature:** 5 to 38°C (40 to 100°F)

**Operating Humidity:** 96% non-condensing maximum

### LOAD CELLS

**Safe Overload:** 150% of full scale (200% for RLC03-025, RLC03-2 and RLC04 series)

### TORQUE SENSORS

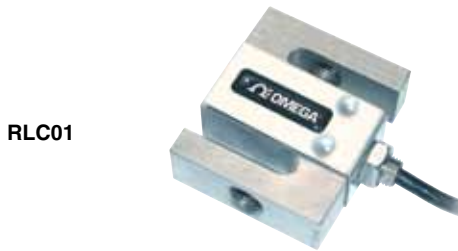
**Safe Overload:** 150% of full scale (300% for RTQ50-10Z, RTQ50-50Z)

**Chuck Opening:** RTQ50-10Z and RTQ50-50Z – 0.062 to 0.375"

RTQ50-12, RTQ50-100 – 0.078 to 0.5"



for models shown on this page. Ask your sales representative for full details.



RLC01



RLC02



RLC03



RLC04



RTQ50

| To Order  |                 |                     |
|---|-----------------|---------------------|
| MODEL NO.   | CAPACITY        | ACCURACY FULL SCALE |
| <b>Series Tension/Compression Load Cells</b>              |                 |                     |
| RLC01-50  | ±50 lbs         | ±0.15%              |
| RLC01-100   | ±100 lbs        | ±0.15%              |
| RLC01-200   | ±200 lbs        | ±0.15%              |
| RLC01-500   | ±500 lbs        | ±0.15%              |
| RLC01-1K  | ±1000 lbs       | ±0.15%              |
| RLC01-2K  | ±2000 lbs       | ±0.15%              |
| RLC01-5K  | ±5000 lbs       | ±0.15%              |
| RLC01-10K   | ±10,000 lbs     | ±0.15%              |
| <b>Series Compression Load Cells</b>                      |                 |                     |
| RLC02-100   | 0 to 100 lbs    | ±0.5%               |
| RLC02-200   | 0 to 200 lbs    | ±0.5%               |
| RLC02-500   | 0 to 500 lbs    | ±0.5%               |
| RLC02-1K  | 0 to 1000 lbs   | ±0.5%               |
| RLC02-2K  | 0 to 2000 lbs   | ±0.5%               |
| RLC02-5K  | 0 to 5000 lbs   | ±0.5%               |
| RLC02-10K   | 0 to 10,000 lbs | ±0.5%               |
| <b>Series Low Capacity Tension/Compression Load Cells</b> |                 |                     |
| RLC03-0.25  | ±0.25 lbs       | ±0.15%              |
| RLC03-0.5   | ±0.5 lbs        | ±0.15%              |
| RLC03-2   | ±2 lbs          | ±0.15%              |
| RLC03-5   | ±5 lbs          | ±0.15%              |
| RLC03-10  | ±10 lbs         | ±0.15%              |
| RLC03-20  | ±20 lbs         | ±0.15%              |
| RLC03-50  | ±50 lbs         | ±0.15%              |
| RLC03-100   | ±100 lbs        | ±0.15%              |
| <b>Series Miniature Tension/Compression Load Cells</b>    |                 |                     |
| RLC04-0.25  | ±0.25 lbs       | ±0.2%               |
| RLC04-0.5   | ±0.5 lbs        | ±0.2%               |
| RLC04-2   | ±2 lbs          | ±0.2%               |
| RLC04-5   | ±5 lbs          | ±0.2%               |
| RLC04-10  | ±10 lbs         | ±0.2%               |
| RLC04-20  | ±20 lbs         | ±0.2%               |
| RLC04-50  | ±50 lbs         | ±0.2%               |
| RLC04-100   | ±100 lbs        | ±0.2%               |
| <b>Series Reaction Torque Sensors</b>                     |                 |                     |
| RTQ50-10Z   | ±10 oz in       | ±0.35%              |
| RTQ50-20Z   | ±20 oz in       | ±0.35%              |
| RTQ50-50Z   | ±50 oz in       | ±0.35%              |
| RTQ50-12  | ±12 lb in       | ±0.35%              |
| RTQ50-50  | ±50 lb in       | ±0.35%              |
| RTQ50-100   | ±100 lb in      | ±0.35%              |

| To Order  |   |
|-----------|---|
| MODEL NO. | DESCRIPTION   |
| DFG-RS3   | Economical force or torque indicator for use with remote sensors* |
| DFG-RSA   | User configurable remote sensor adaptor*                          |

Comes complete with carrying case, universal voltage AC adaptor, quick start guide, users manual and certificate of conformance. All RLC or RTQ sensors come with a NIST traceable calibration certificate. Hooks sold separately part # G1038.

\* Remote sensors sold separately.

**Ordering Examples:** DFG-RS3, economical handheld force or torque indicator, plus RLC01-500, remote 500 pound "S" type load cell.

DFG-RS3, economical handheld force or torque indicator, plus RTQ50-12, ±12 lb in reaction torque sensor.

# INDICATORS WITH REMOTE SENSORS

## DFG-RS5

- ✓ Interchangeable Force and Torque Sensors
- ✓ High Speed 7000 Hz Sampling Rate
- ✓ Selectable Units of Measure
- ✓ Load Cells Available in Ranges from 0.25 to 10,000 lb
- ✓ Torque Sensors for 10 oz-in to 100 lb-in Ranges
- ✓ Calibration Data Stored in Sensor
- ✓ USB, RS232, Mitutoyo and Analog Outputs
- ✓ Programmable Setpoints with Indicators and Outputs
- ✓ Large Backlit Graphics Display
- ✓ Live Load Bar Graph with Set Point Markers
- ✓ Peak Readings and Set Points Always Displayed

See our full line of remote sensors RLC and RTQ series.



DFG-RSA smaller than actual size.



Calibrates remote sensor to meter.

DFG-RS5, shown with DFG-RSA, sold separately.

A backlit graphic LCD displays large characters and a menu is available to access the gauges features and configurable parameters. Units also have a USB output for data collection and setpoint indicators for pass-fail testing.

### SPECIFICATIONS

**Accuracy:** 0.1% of full scale  $\pm 1$  digit + sensor

**Power:** Rechargeable battery or AC using adapter (batteries and adapter included)

**Battery Life:** Up to 7 hours continuous use with backlight on or 24 hours with backlight off

**Low Battery:** Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low

**Configurable Settings:** Digital filters, outputs, automatic shutoff, default settings, averaging mode, external trigger, passwords, key tones, audio alarms, backlight, calibration

#### Outputs:

**USB/RS232 Output:** Configurable to 115,200 baud

**Mitutoyo (Digimatic):** Serial BCD suitable for all Mitutoyo SPC compatible devices

**Analog:**  $\pm 1$  Vdc,  $\pm 2\%$  full scale accuracy

**General Purpose:** 3 open drain outputs, 1 input

**Set Points:** 3 open drain lines

**Operating Temperature:** 4 to 38°C (40 to 100°F)

**Humidity:** 96% RH non-condensing

**Dimensions:** 149.4 H x 64.3 W x 33.6 mm D (5.88 x 2.53 x 1.32")

**Weight:** 0.3 kg (0.7 lb)

### SENSOR COMMON SPECIFICATIONS

**Operating Temperature:** 5 to 38°C (40 to 100°F)

**Operating Humidity:** 96% non-condensing maximum

### LOAD CELLS

**Safe Overload:** 150% of full scale (200% for RLC03-025, RLC03-2 and RLC04 series)

### TORQUE SENSORS

**Safe Overload:** 150% of full scale (300% for RTQ50-10Z, RTQ50-50Z)

**Chuck Opening:** RTQ50-10Z and RTQ50-50Z – 0.062 to 0.375" RTQ50-12, RTQ50-100 – 0.078 to 0.5"

The DFG-RS5 is a high performance digital indicator that works with a wide variety of plug and play force and torque sensors. All calibration and configuration data is stored in the sensors smart connector instead of the indicator making the sensors truly interchangeable. In addition all of the remote sensors are also fully compatible with the DFG-RS3 basic force/torque indicators.

A variety of interchangeable force and torque sensors are available for use with the DFG-RS3 series.

Sensors are available in a range of capacities from 0.25 to 10,000 pounds force for load cells and 10 oz-in to 100 lb-in for torque sensors. In addition to the pre-calibrated sensors the DFG-RSA programmable adaptor allows the end user to calibrate most bridge type force or torque sensor with a 1 to 3 mV/V full scale output to work with the DFG-RS5.

The DFG-RS5 also shares menu structure and most specifications with the DFG55 force gauges. It's fast 7000 Hz sampling rate produces accurate results even for quick action tests. It also has an average mode that addresses the need to record the average load over time and an on board data memory for up to 1000 readings.



OMEGACARE<sup>SM</sup> extended warranty shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.



RLC01



RLC02



RLC03



RLC04



RTQ50

| To Order  |                 |                     |
|---|-----------------|---------------------|
| MODEL NO.   | CAPACITY        | ACCURACY FULL SCALE |
| <b>RLC01 Series Tension/Compression Load Cells</b>              |                 |                     |
| RLC01-50  | ±50 lbs         | ±0.15%              |
| RLC01-100   | ±100 lbs        | ±0.15%              |
| RLC01-200   | ±200 lbs        | ±0.15%              |
| RLC01-500   | ±500 lbs        | ±0.15%              |
| RLC01-1K  | ±1000 lbs       | ±0.15%              |
| RLC01-2K  | ±2000 lbs       | ±0.15%              |
| RLC01-5K  | ±5000 lbs       | ±0.15%              |
| RLC01-10K   | ±10,000 lbs     | ±0.15%              |
| <b>RLC02 Series Compression Load Cells</b>                      |                 |                     |
| RLC02-100   | 0 to 100 lbs    | ±0.5%               |
| RLC02-200   | 0 to 200 lbs    | ±0.5%               |
| RLC02-500   | 0 to 500 lbs    | ±0.5%               |
| RLC02-1K  | 0 to 1000 lbs   | ±0.5%               |
| RLC02-2K  | 0 to 2000 lbs   | ±0.5%               |
| RLC02-5K  | 0 to 5000 lbs   | ±0.5%               |
| RLC02-10K   | 0 to 10,000 lbs | ±0.5%               |
| <b>RLC03 Series Low Capacity Tension/Compression Load Cells</b> |                 |                     |
| RLC03-0.25  | ±0.25 lbs       | ±0.15%              |
| RLC03-0.5   | ±0.5 lbs        | ±0.15%              |
| RLC03-2   | ±2 lbs          | ±0.15%              |
| RLC03-5   | ±5 lbs          | ±0.15%              |
| RLC03-10  | ±10 lbs         | ±0.15%              |
| RLC03-20  | ±20 lbs         | ±0.15%              |
| RLC03-50  | ±50 lbs         | ±0.15%              |
| RLC03-100   | ±100 lbs        | ±0.15%              |
| <b>RLC04 Series Miniature Tension/Compression Load Cells</b>    |                 |                     |
| RLC04-0.25  | ±0.25 lbs       | ±0.2%               |
| RLC04-0.5   | ±0.5 lbs        | ±0.2%               |
| RLC04-2   | ±2 lbs          | ±0.2%               |
| RLC04-5   | ±5 lbs          | ±0.2%               |
| RLC04-10  | ±10 lbs         | ±0.2%               |
| RLC04-20  | ±20 lbs         | ±0.2%               |
| RLC04-50  | ±50 lbs         | ±0.2%               |
| RLC04-100   | ±100 lbs        | ±0.2%               |
| <b>RTQ50 Series Reaction Torque Sensors</b>                     |                 |                     |
| RTQ50-10Z   | ±10 oz in       | ±0.35%              |
| RTQ50-20Z   | ±20 oz in       | ±0.35%              |
| RTQ50-50Z   | ±50 oz in       | ±0.35%              |
| RTQ50-12  | ±12 lb in       | ±0.35%              |
| RTQ50-50  | ±50 lb in       | ±0.35%              |
| RTQ50-100   | ±100 lb in      | ±0.35%              |

| To Order  |   |
|-----------|---|
| MODEL NO. | DESCRIPTION   |
| DFG-RS5   | Advanced force or torque indicator for use with remote sensors* |
| DFG-RSA   | User configurable remote sensor adaptor*                        |

Comes complete with carrying case, universal voltage AC adaptor, quick start guide, users manual and certificate of conformance. All RLC or RTQ sensors come with a NIST traceable calibration certificate.

\* Remote sensors sold separately.

Ordering Examples: DFG-RS5, advanced handheld force or torque indicator, plus RLC01-500, remote 500 pound "S" type load cell.

DFG-RS5, advanced handheld force or torque indicator, plus RTQ50-12, ±12 lb in reaction torque sensor.

# 0.3% FULL SCALE ACCURACY

## DFG35 Series



- ✓ High Speed 2000 Hz Sampling Rate
- ✓ Ultra-Compact Size
- ✓ 4 Selectable Units of Measure
- ✓ USB Data Output
- ✓ Programmable Setpoints with Pass/Fail Indicators
- ✓ Large Backlit Graphics Display
- ✓ Live Load Bar Graph with Set Point Markers
- ✓ Peak Readings and Set-Points Always Displayed
- ✓ Configurable Audio Alarms and Key Tones

OMEGA's DFG35 Series is an economical digital force gauge designed for tension and compression measurements in a variety of applications. They are available in ranges from 0.12 to 500 lbF (0.5 to 2500 N) and have a 2000 Hz sample rate.

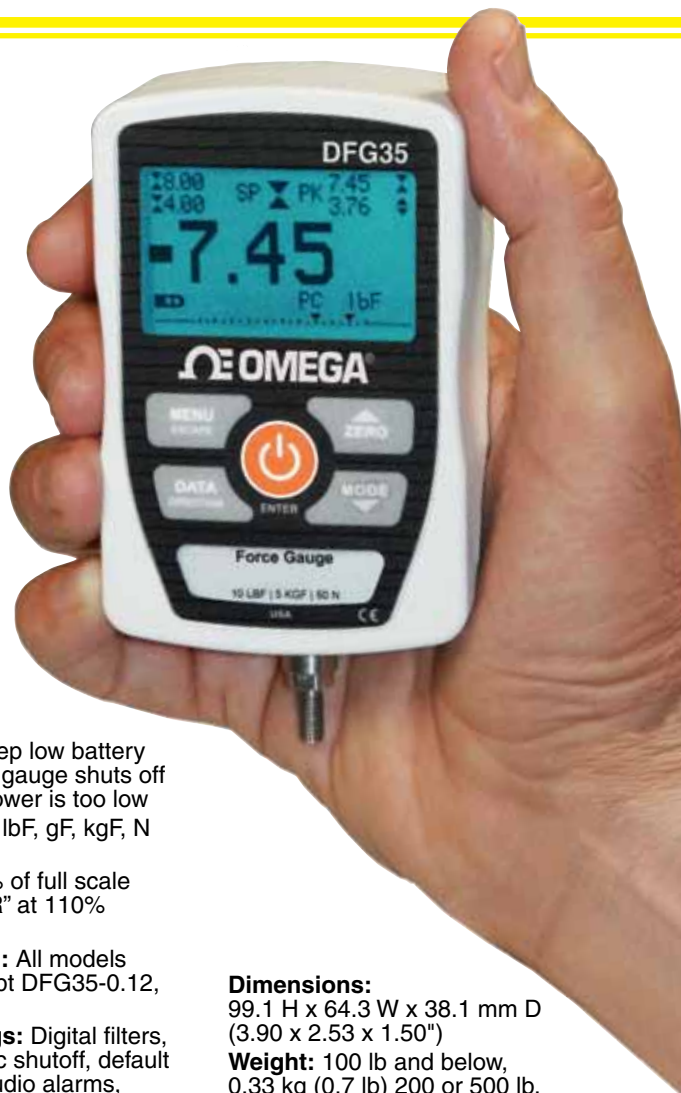
A backlit graphic LCD displays large characters and a menu is available to access the gauges features and configurable parameters. Units have a USB output for data collection and setpoint indicators for pass-fail testing.

### SPECIFICATIONS

**Accuracy:** 0.3% of full scale  $\pm$  1 digit

**Power:** Rechargeable battery or AC using adaptor (batteries and adaptor included)

**Battery Life:** Up to 7 hours continuous use with backlight on or 24 hours with backlight off



DFG35-10

**Low Battery:** Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low

**Measurement Units:** lbF, gF, kgF, N (depending on model)

**Safe Overload:** 150% of full scale (display shows "OVER" at 110% and above)

**Full Scale Deflection:** All models 0.25 mm (0.01") except DFG35-0.12, 0.13 mm (0.05")

**Configurable Settings:** Digital filters, USB output, automatic shutoff, default settings, key tones, audio alarms, calibration

**Dimensions:** 99.1 H x 64.3 W x 38.1 mm D (3.90 x 2.53 x 1.50")

**Weight:** 100 lb and below, 0.33 kg (0.7 lb) 200 or 500 lb, 0.41 kg (0.9 lb)

### To Order

| MODEL NO.  | RANGE VS RESOLUTION |           |             |              |
|------------|---------------------|-----------|-------------|--------------|
|            | lbF                 | gF        | kgF         | N            |
| DFG35-0.12 | 0.12 x 0.0001       | 50 x 0.05 | —           | 0.5 x 0.0005 |
| DFG35-0.25 | 0.25 x 0.0002       | 100 x 0.1 | —           | 1 x 0.001    |
| DFG35-0.5  | 0.5 x 0.0005        | 250 x 0.2 | —           | 2.5 x 0.002  |
| DFG35-2    | 2 x 0.002           | —         | 1 x 0.001   | 10 x 0.01    |
| DFG35-5    | 5 x 0.005           | —         | 2.5 x 0.002 | 25 x 0.02    |
| DFG35-10   | 10 x 0.01           | —         | 5 x 0.005   | 50 x 0.05    |
| DFG35-20   | 20 x 0.02           | —         | 10 x 0.01   | 100 x 0.1    |
| DFG35-50   | 50 x 0.05           | —         | 25 x 0.02   | 250 x 0.2    |
| DFG35-100  | 100 x 0.1           | —         | 50 x 0.05   | 500 x 0.5    |
| DFG35-200  | 200 x 0.2           | —         | 100 0.1     | 1000 x 1     |
| DFG35-500  | 500 x 0.5           | —         | 250 x 0.2   | 2500 x 2     |

Comes complete with carrying case, AC adaptor with US plug, extension rod, cone, chisel, V-groove, flat, hook, USB cable and CD with USB drivers and operator's manual.

For AC adaptor with European plug add suffix "-E" to model number, UK style plug add "-U", no extra cost.

**Ordering Examples:** DFG35-20, 20 lb digital force gauge with US style plug.

DFG35-100-U. 100 lb force gauge with UK style plug.



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**ADVANCED DIGITAL FORCE GAUGES**  
**RANGES FROM 50 GRAMS TO 500 POUNDS**

## DFG55 Series



- ✓ High Speed 7000 Hz Sample Rate
- ✓ 5 Selectable Units of Measurement
- ✓ USB, RS232, Mitutoyo and Analog Outputs Standard
- ✓ Large Backlit Graphic Display with Bar Graph
- ✓ 1000 Point Data Memory
- ✓ Programmable Setpoints with Audible Alarms and Outputs
- ✓ Peak Readings and Setpoints Always Displayed
- ✓ Averaging Mode Calculates Average Reading Over Time



DFG55-10.

Comes complete with carrying case, AC adaptor with US plug, extension rod, cone, chisel, V-groove, flat, hook, coupling, certificate of calibration, USB cable and resource CD with USB drivers and operator's manual.



LOAD CELLS 

OMEGA's DFG55 advanced digital force gauges are designed for tension and compression force testing in numerous applications across virtually every industry. With capacities from 0.12 to 500 lb (0.5 to 2500 N) the gauges feature an industry-leading sampling rate of 7000 Hz, producing accurate results even for quick-action tests. Accuracy is  $\pm 0.1\%$  of full scale  $\pm 1$  digit, and resolution is 1/5000.

A large, backlit graphics LCD displays large, legible characters, while the simple menu navigation allows for quick access to the gauges' many features and configurable parameters. Data can be transferred to a PC or other data collector via USB, RS232, Mitutoyo (Digimatic), or analog outputs.

On-board data memory for up to 1000 readings is included, as are statistical calculations and output to a PC. Integrated set points with indicators are ideal for pass-fail testing and for triggering external devices such as an alarm, relay, or test stand. The gauges are overload protected to 150% of capacity, and an analog load bar is shown on the display for graphical representation of applied force.

The DFG55's averaging mode addresses the need to record the average force over time, useful in applications such as peel testing, while external trigger mode makes switch activation testing simple and accurate.

### SPECIFICATIONS

**Accuracy:**  $\pm 0.1\%$  of full scale  $\pm 1$  digit  
**Power:** AC or NiMH rechargeable battery (included)

**Battery Life:** Up to 7 hours continuous with back-light on; up to 24 hours with back-light off

**Low Battery:** Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low.

**Measurement Units:** lbF, ozF, gF, kgF, N, kN, mN (depending on model)

**Safe Overload:** 150% of full scale (display shows "OVL" at 110% and above)

**Full Scale Deflection:** 0.25 mm (0.01") except DFG55-0.12, 0.13 mm (0.05")

**Analog Output:**  $\pm 1$  Vdc,  $\pm 0.25\%$  FS

**USB/RS232 Output:** Configurable up to 115,200 baud; includes Gauge Control Language 2 for full computer control

**Setpoint Outputs:** Three open drain lines

**Dimensions:** 149.4 H x 64.3 W x 33.6 mm D (5.88 x 2.53 x 1.32")

**Weight:** Ranges 100 lb or less 0.45 kg (1.0 lb), 200 lb and up 0.54 kg (1.2 lb)



DFG55-10, shown smaller than actual size.

## To Order

### RANGE vs RESOLUTION

| MODEL NO.  | lbF            | ozF         | kgF          | gF          | N            | kN           | mN         |
|------------|----------------|-------------|--------------|-------------|--------------|--------------|------------|
| DFG55-0.12 | 0.12 x 0.00002 | 2 x 0.0005  | -            | 50 x 0.01   | 0.5 x 0.0001 | -            | 500 x 0.1  |
| DFG55-0.25 | 0.25 x 0.00005 | 4 x 0.001   | -            | 100 x 0.2   | 1 x 0.0002   | -            | 1000 x 0.2 |
| DFG55-0.5  | 0.5 x 0.0001   | 8 x 0.002   | -            | 250 x 0.05  | 2.5 x 0.0005 | -            | 2500 x 0.5 |
| DFG55-2    | 2 x 0.0005     | 32 x 0.01   | 1 x 0.0002   | 1000 x 0.02 | 10 x 0.002   | -            | -          |
| DFG55-5    | 5 x 0.001      | 80 x 0.02   | 2.5 x 0.0005 | 2500 x 0.5  | 25 x 0.005   | -            | -          |
| DFG55-10   | 10 x 0.002     | 160 x 0.05  | 5 x 0.001    | 5000 x 1    | 50 x 0.01    | -            | -          |
| DFG55-20   | 20 x 0.005     | 320 x 0.1   | 10 x 0.002   | 10000 x 2   | 100 x 0.02   | -            | -          |
| DFG55-50   | 50 x 0.01      | 800 x 0.2   | 25 x 0.005   | 25000 x 5   | 250 x 0.05   | -            | -          |
| DFG55-100  | 100 x 0.02     | 1600 x 0.05 | 50 x 0.01    | 50000 x 10  | 500 x 0.1    | -            | -          |
| DFG55-200  | 200 x 0.05     | 3200 x 1    | 100 x 0.02   | -           | 1000 x 0.2   | 1 x 0.0002   | -          |
| DFG55-500  | 500 x 0.1      | 8000 x 2    | 250 x 0.05   | -           | 2500 x 0.5   | 2.5 x 0.0005 | -          |

Comes complete with carrying case, AC adaptor with US plug, extension rod, cone, chisel, V-groove, flat, hook, coupling, certificate of calibration, USB cable and CD with USB drivers and operator's manual.

For AC adaptor with European plug add suffix "-E" to model number, UK style plug add "-U", no extra charge.

**Ordering Examples:** DFG55-20, 20 lb digital force gauge with US style plug.

DFG55-100-II 100 lb force gauge with UK style plug

## DFG81 Series

- ✓ ±0.3% Accuracy
- ✓ Rugged Die-Cast Aluminum Housing
- ✓ Tare Ring and Peak Hold
- ✓ Ergonomic Design, Economical Price
- ✓ Mountable to Test Fixtures

The ruggedly constructed DFG81 gages will withstand harsh industrial environments yet remain accurate to ±0.3%. These gages are sold as kits complete with gage, hard carrying case, 5 measuring tips, and a 3-inch extension rod. The ergonomic design makes the DFG81 ideal for handheld use. It can also be mounted on a test fixture.



DFG81-1KG, shown close to actual size.

DFG81 gages are sold as kits complete with gage, hard carrying case, 5 measuring tips and a 3" extension rod.



### To Order

| CAPACITY  |        |            |           |            |         |
|-----------|--------|------------|-----------|------------|---------|
| MODEL NO. | POUNDS | MODEL NO.  | KILOGRAMS | MODEL NO.  | NEWTONS |
| DFG81-2   | 2      | DFG81-1KG  | 1         | DFG81-10N  | 10      |
| DFG81-5   | 5      | DFG81-2KG  | 2         | DFG81-20N  | 20      |
| DFG81-10  | 10     | DFG81-3KG  | 3         | DFG81-30N  | 30      |
| DFG81-20  | 20     | DFG81-5KG  | 5         | DFG81-50N  | 50      |
| —         | —      | DFG81-10KG | 10        | DFG81-100N | 100     |
| DFG81-30  | 30     | DFG81-20KG | 20        | DFG81-200N | 200     |
| DFG81-50  | 50     | DFG81-30KG | 30        | DFG81-300N | 300     |
| DFG81-100 | 100    | DFG81-50KG | 50        | DFG81-500N | 500     |

Comes with gage, hard carrying case, 5 measuring tips and 3" extension rod.

Ordering Example: DFG81-10KG, complete kit with 10 kg range digital force gage.

## DFG82 Series

- ✓ Outstanding  $\pm 0.1\%$  Accuracy
- ✓ Rugged Die-Cast Aluminum Housing
- ✓ Tare Ring and Peak Hold
- ✓ Ergonomic Design

The DFG82 Series laboratory-grade mechanical force gauges are durable yet highly accurate, making them ideal for tension and compression quality control measurements. DFG82 gauges are sold in kits, complete with meter, hard case, measuring adaptors (flat head, cone, chisel, notched, small hook, large hook, and fork), and extension rod. The ergonomic design is well suited for handheld testing.



DFG82-100, shown close to actual size.

DFG82 is sold as a complete kit including a hard case, measuring adaptors (flat head, cone, chisel, notched, small hook, large hook, and fork), and extension rod.



### To Order

| CAPACITY  |        |            |           |            |         |
|-----------|--------|------------|-----------|------------|---------|
| MODEL NO. | POUNDS | MODEL NO.  | KILOGRAMS | MODEL NO.  | NEWTONS |
| DFG82-2   | 2      | DFG82-1KG  | 1         | DFG82-10N  | 10      |
| DFG82-5   | 5      | DFG82-2KG  | 2         | DFG82-20N  | 20      |
| DFG82-10  | 10     | DFG82-3KG  | 3         | DFG82-30N  | 30      |
| DFG82-20  | 20     | DFG82-5KG  | 5         | DFG82-50N  | 50      |
| —         | —      | DFG82-10KG | 10        | DFG82-100N | 100     |
| DFG82-30  | 30     | DFG82-20KG | 20        | DFG82-200N | 200     |
| DFG82-50  | 50     | DFG82-30KG | 30        | DFG82-300N | 300     |
| DFG82-100 | 100    | DFG82-50KG | 50        | DFG82-500N | 500     |

Comes with hard case, measuring adaptors (flat head, cone, chisel, notched, small hook, large hook, and fork), and extension rod.

Ordering Example: DFG82-10, complete kit with 10 lb range digital force gauge.

# CONDITIONER MODULES FOR STRAIN GAGES, LOAD CELLS, AND TRANSDUCERS

## DMD-460 Series



Up to 2 kHz  
 Dynamic Response  
 DMD-465WB

- ✓ Bridge Excitation  
 4 to 15 Vdc Up to 120 mA
- ✓ Works with 120, 350,  
 500 Ω and Greater  
 Bridge Circuits
- ✓ Adjustable Gain and Offset
- ✓ 6-Wire Bridge Connections
- ✓ Voltage and Current  
 Output Versions
- ✓ 115 and 230 Vac, and  
 DC-Powered Models



DMD-465, shown smaller than actual size.

The DMD-460 Series bridge amplifiers are self-contained, AC or DC-powered, signal conditioning modules for strain gages, load cells, and bridge-type sensors. The DMD-465 contains a precision differential instrumentation amplifier with voltage output. The similar DMD-465WB has a frequency response to 2 kHz, while the DMD-466 has a 4 to 20 mA output instead of a voltage output.

### SPECIFICATIONS

#### Common

**Power:** Standard 115 Vac or optional 220 Vac  $\pm 10\%$  50/60 Hz or 10 to 36 Vdc 0.7 A @ 10V, 0.17 A @ 36V at maximum excitation load

**Operating Temperature:** 0 to 70°C (32 to 158°F)

**Storage Temperature:** -25 to 85°C (-13 to 185°F)

**Weight:** 510 g (18 oz)

**Size:** 96 L x 51 W x 73 mm H (3.75 x 2 x 2.87")

#### Bridge Supply

**Excitation Voltage Range:** 4 to 15 Vdc

**Current Output:** 120 mA max

**Line and Load Regulation:** (0 to 100 mA) 0.05% max

**Output Noise:** 0.5 mVrms

#### Voltage Output

**DMD-465 and DMD-465WB**

**Gain Range:** 40 to 250 (up to 1000 with external resistor on DMD-465 only)

#### Dynamic Response:

**DMD-465:** DC to -3 dB = 3 Hz

**DMD-465WB:** DC to -3 dB = 2 kHz

**Max Output (2 kΩ Load):**  $\pm 10$  Vdc

**Output Impedance:** 0.01 to 1 Ω

**Output Offset:** -5 to 2V

(DMD-465WB only)

**Gain Temp Coefficient:** 200 ppm/°C

**Input Bias Current:** 30 nA

**Input Impedance:** 3000 MΩ

**Output Noise (RTO):** @ gain = 100

**DMD-465:** 120 μVrms

**DMD-465WB:** 1 Hz to 2 kHz = 2 mV

**Input Noise Line Frequency:** 15 μV p-p

**Common-Mode Rejection:** 90 dB @

gain 40, 100 dB @ gain 250

**Common-Mode Input Voltage:**  $\pm 15$  V

#### 4 to 20 mA Transmitter DMD-466

**Output:** 4 to 20 mA, 0 to 20 mA

**Input Range for 20 mA Output:**

10 mV min, 50 mV max

**Zero Adjust:** 0 to  $\pm 12$  mA

**Linearity:**  $\pm 0.05\%$  FS

**Temperature Stability:** 200 ppm/°C

**Input Impedance:** 1000 MΩ

**Common-Mode Rejection:** 90 dB

**Common-Mode Input Voltage:**  $\pm 15$  V

**Compliance Voltage:** 10 Vdc

**Output Noise:** 1 μA rms @ gain

0.2 mA/mV, 1 to 100 Hz

**Dynamic Response:** DC to -3 dB = 3 Hz

**Response Time:** To 99% of final value

200 ms, typical; to 99.9% of final value

300 ms, typical

### To Order

| MODEL NO.      | DESCRIPTION                              |
|----------------|--|
| DMD-465        | Voltage output                           |
| DMD-465-220V   | 220 Vac powered DMD-465                  |
| DMD-465WB      | High-frequency voltage output            |
| DMD-465WB-220V | 220 Vac powered DMD-465WB                |
| DMD-466        | Current output (4 to 20 mA)              |
| DMD-466-220V   | 220 Vac powered DMD-466                  |
| DMD-466-DC     | 10 to 36 Vdc powered DMD-466             |
| POWER CORD-SE  | Power cord with stripped end termination |

Comes complete with operator's manual.

**Ordering Examples:** DMD-465WB, wide bandwidth amplifier/signal conditioner module with 115 Vac power.

DMD-466, amplifier/signal conditioner module with 4 to 20 mA output

# ISOLATED SIGNAL CONDITIONERS

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## WITH TRANSDUCER POWER UP TO 120 mA FOR STRAIN GAGES, LOAD CELLS, AND TRANSDUCERS

### DMD-470 Series



- ✓ 700V I/O Isolation
- ✓ 1100V Line Isolation
- ✓ Power for Four 350 Ω Load Cells, Fixed 10V or Variable 5 to 10 Vdc
- ✓ Adjustable Gain and Offset
- ✓ Large Tare Offset Adjustment
- ✓ 6-Wire Bridge Connections
- ✓ Voltage or Current Output Models

DMD-470 Series bridge amplifiers are AC-powered signal conditioning modules with triple-isolated voltage or current outputs for load cells, bridge-type sensors, and strain gages. Both models have dual zero/tare functions. Zero is used for normal bridge balance, and the tare feature allows up to 68% of the input to be offset while still achieving full output span. The DMD-475 has an isolated voltage output; the DMD-476 is similar but has an isolated 4 to 20 mA output. Both models have input ranges of 5 to 50 mV for a full scale output (0 to 10V or 4 to 20 mA).

### SPECIFICATIONS

#### Common

**Power:** 115 Vac ±10 Vac standard or 220 Vac ±10% 50/60 Hz optional

#### Isolation:

**AC Line:** 1100 Vrms, 60 pF

**Input to Output:** 700 Vdc and 60 pF

#### Operating Temperature:

-25 to 55°C (-13 to 131°F)

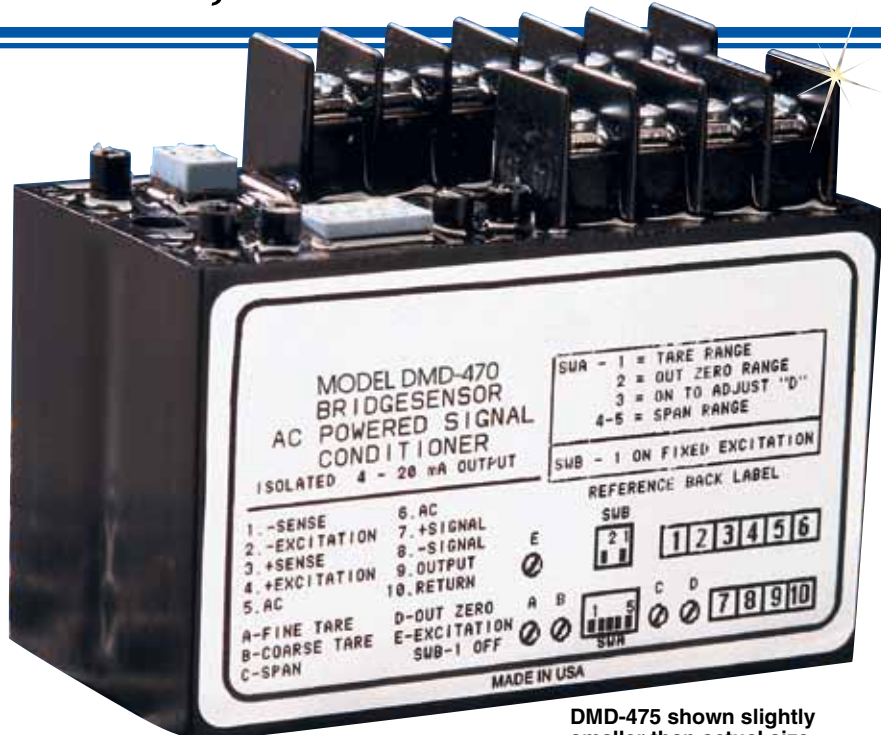
#### Storage Temperature:

-25 to 85°C (-13 to 185°F)

**Weight:** 510 g (18 oz)

**Size:** 96 L x 51 W x 73 mm H (3.75 x 2 x 2.87")

5 to 10 Vdc



DMD-475 shown slightly smaller than actual size.

**Current Output:** 120 mA maximum  
**Line and Load Regulation:** 0.02% max  
**Output Noise:** 1 mVrms max (120 Hz)  
**Temp Coefficient:** 60 ppm @ 10V, 100 ppm max

#### DMD-475 (Voltage Output)

**Gain Range:** 200 to 2000  
**Input Range for 10V Output:** 5 to 50 mV  
**Linearity:** ±0.005% FS  
**Temperature Stability:** 0.005%/°C  
**Tare Adjustment:** -3 to 25 mV  
**Input Resistance:** 1000 MΩ  
**Output Zero Adjust:** 0 to 2V  
**Output Range:** -3 to 10 Vdc  
**Output Current:** 5 mA maximum  
**Dynamic Response:** DC to -3 dB = 10 Hz, 2 pole  
**Response Time:** 10 to 90% = 35 ms

#### DMD-476 (4 to 20 mA Transmitter)

**Output:** 4 to 20 mA, 0 to 20 mA  
**Input Range for 16 mA Span:** 5 mV min, 50 mV max  
**Linearity:** ±0.01%  
**Zero Adjust:** 0 to ±12 mA  
**Temperature Stability:** 0.005%/°C  
**Tare Adjustment:** -3 to 25 mV equals 80% of 3 mV/V cell  
**Input Impedance:** 1000 MΩ  
**Common-Mode Rejection:** 100 dB  
**Common-Mode Input Voltage:** 5V  
**Output Zero Adjust:** 0 or 4 mA  
**Output Range:** 4 to 20 mA or 0 to 20 mA  
**Compliance Voltage:** -1 to 20V  
**Dynamic Response:** DC to -3 dB = 10 Hz, 2 pole  
**Response Time:** 10 to 90% = 35 ms

### To Order

| MODEL NO      | DESCRIPTION                              |
|---------------|--|
| DMD-475       | Voltage output (0 to 10 Vdc), 120 Vac    |
| DMD-475-220V  | 220 Vac powered DMD-475                  |
| DMD-476       | Current output (4 to 20 mA), 120 Vac     |
| DMD-476-220V  | 220 Vac powered DMD-476                  |
| DMD-476-DC    | DC powered DMD-476                       |
| POWER CORD-SE | Power cord with stripped end termination |

Comes complete with operator's manual.

**Ordering Examples:** DMD-475, isolated voltage output (0 to 10 Vdc) amplifier/signal conditioner module.

DMD-476, isolated current output (4 to 20 mA) amplifier/signal conditioner module.

STRAIN GAGES

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# BRIDGE/STRAIN GAGE SIGNAL CONDITIONER

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FIELD RANGEABLE ISOLATED VOLTAGE OR CURRENT OUTPUTS

**Input: 100 to 10,000  $\Omega$  Bridges**  
**0.5 to 40 mV/V**  
**Output: 0-1 to 0-10V,  $\pm 5$  or  $\pm 10V$ ,**  
**or 0-1 to 4-20 mA**  
**(Sink or Source)**

### DMD4059 Series

- ✓ Standard DIN Rail Mounting
- ✓ Drives up to Four 350  $\Omega$  Bridges
- ✓ Non-Interactive Zero and Span
- ✓ Fast Setup—Over 100 I/O Ranges
- ✓ Removable Connectors
- ✓ Full 3-Way Isolation
- ✓ Output Test Button
- ✓ Adjustable Excitation, 1 to 10 Vdc
- ✓ Zero Offset

#### Applications

- ✓ Load Cell Weighing and Scales
- ✓ Strain Gage Pressure Transducers
- ✓ Tanks, Melt Pressure, Level, Flow

The DMD4059 accepts an input from 1 to 4 full Wheatstone strain bridge sensors, pressure transducers or load cells. It provides filtering, amplifies, and converts the millivolt input signal into the selected dc voltage or current output that is linear to the input. The 3-way 1200V isolation eliminates ground loops, common mode voltages and greatly reduces noise pick-up. Sense wire connections are available to give maximum accuracy. Input, output, excitation and zero offset are field configurable via external rotary and slide switches. Offsets of up to  $\pm 100\%$  of span can be used to cancel sensor offsets or tare fixed loads. Features such as red and green LEDs vary in intensity to show input and output activity and an output test button helps with set-up and troubleshooting.

#### SPECIFICATIONS

**Input Range:** 100 to 10,000  $\Omega$  bridges @ 10 Vdc, drives up to four 350  $\Omega$  bridges @ 10 Vdc  
**Minimum:** 0 to 5 mV range, 0.5 mV/V sensitivity  
**Maximum:** 0 to 400 mV range, 40 mV/V sensitivity



DMD4059, shown smaller than actual size with standard DIN rail (sold separately).



Detail of front panel.

- Input Impedance:** 200 k $\Omega$  typical
- Excitation Voltage:** Switch selectable 0 to 10 Vdc in 1V increments
- Maximum Output:** 10 Vdc @ 120 mA
- Drive Capability:** Up to four 350  $\Omega$  bridges @ 10 Vdc
- Fine Adjustment:**  $\pm 5\%$  via multi-turn potentiometer
- Stability:**  $\pm 0.01\%$  per  $^{\circ}C$
- Sense Lead Compensation:** Better than  $\pm 0.01\%$  per 1  $\Omega$  change in leadwire resistance
- Maximum Lead Wire Resistance:** 10  $\Omega$  with 350  $\Omega$  @ 10 Vdc
- Zero Offset (Tare):**  $\pm 100\%$  of span in 15% increments

**Output Ranges:**

**Voltage (10 mA max):** 0-1 to 0-10 Vdc

**Bipolar Voltage (10 mA max):** ±5 or ±10 Vdc

**Current:** 0-2 mA to 0-25 mA

**Compliance, Drive @ 20 mA:** 20V, 1000 Ω drive;  
current output can be selectively wired for sink or source

**Output Linearity, Ripple and Noise:** Better than ±0.1% of span, <10 mV rms ripple and noise

**Output Zero and Span (Fine Adjustment):** Multi-turn potentiometers to compensate for load and lead variations, ±15% of span adjustment range typical

**Function Test Button:** Sets output to test level when pressed. Adjustable 0 to 100% of span via potentiometer. Factory default is approx 50% of span

**Response Time:** 70 ms typical

**Common Mode Rejection:** 100 db min

**Isolation:** 1200 Vrms min, 3-way isolation, power to input, power to output and input to output

**Operating Temp Range:** -10 to 60°C (14 to 140°F)

**Thermal Stability:** Better than ±0.02% of span per °C

**Standard Power:** 80 to 265 Vac, 50/60 Hz or 85 to 300 Vdc

**Low Voltage Option:** 9 to 30 Vdc or 10 to 32 Vac

**Power Consumption:** 2 to 5 W depending upon number of load cells

**Mounting:** Mounts to standard 35 mm DIN rail

**Environmental Protection:** IP40

**Connections:** Four 4-terminal removable connectors  
14 AWG max wire size

**Dimensions:** 22.5 W x 117 H x 122 mm D  
(0.89 x 4.62 x 4.81"), height includes connectors

**Weight:** 159 g (5.6 oz)

| EXCITATION SWITCH |          |
|-------------------|----------|
| VOLTAGE           | POSITION |
| 10                | A        |
| 9                 | 9        |
| 8                 | 8        |
| 7                 | 7        |
| 6                 | 6        |
| 5                 | 5        |
| 4                 | 4        |
| 3                 | 3        |
| 2                 | 2        |
| 1                 | 1        |
| 0                 | 0        |

| CONNECTIONS  |              |
|--------------|--------------|
| TERMINAL NO. | SIGNAL       |
| 3            | Sig. Out -   |
| 4            | Sig. Out +   |
| 6            | Sense Lead   |
| 9            | Sig. Input + |
| 10           | Exc. -       |
| 11           | Sig. Input - |
| 12           | Exc. +       |
| 13           | Power +      |
| 16           | Power -      |

**SETUP INPUT AND OUTPUT**

| Input →                | Output    |            |            |            |            |            |            |             |             |             |     |
|------------------------|-----------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-----|
|                        | 0 to 5 mV | 0 to 10 mV | 0 to 20 mV | 0 to 25 mV | 0 to 30 mV | 0 to 40 mV | 0 to 50 mV | 0 to 100 mV | 0 to 200 mV | 0 to 250 mV |     |
| <b>Rotary Switches</b> | BCD       | BCD        | BCD        | BCD        | BCD        | BCD        | BCD        | BCD         | BCD         | BCD         | BCD |
| 0 to 1V                | 200       | A00        | 300        | 600        | E00        | B00        | 000        | 800         | 100         | 400         |     |
| 0 to 5V                | 209       | A09        | 309        | 609        | E09        | B09        | 009        | 809         | 109         | 409         |     |
| 1 to 5V                | 206       | A06        | 306        | 606        | E06        | B06        | 006        | 806         | 106         | 4066        |     |
| ±5V                    | 204       | A04        | 304        | 604        | E04        | B04        | 004        | 804         | 104         | 404         |     |
| 0 to 10V               | 203       | A03        | 303        | 603        | E03        | B03        | 003        | 803         | 103         | 403         |     |
| ±10V                   | 205       | A05        | 305        | 605        | E05        | B05        | 005        | 805         | 105         | 405         |     |
| 4 to 20 mA             | 207       | A07        | 307        | 607        | E07        | B07        | 007        | 807         | 107         | 407         |     |

**Example:** 0 to 30 mV input, 4 to 20 mA output: Code **E07**. Set switch "B" to E, switch "C" to 0 and switch "D" to 7.

**To Order**

| MODEL NO.         | DESCRIPTION  |
|-------------------|--|
| <b>DMD4059</b>    | Standard voltage isolated strain gage signal conditioner (AC/DC powered) |
| <b>DMD4059-DC</b> | Low voltage isolated strain gage signal conditioner (AC/DC powered)      |

*Comes complete with operator's manual.*

**Ordering Example:** DMD4059, standard power, isolated strain gage signal conditioner.



Panel Punches Available, Visit [omega.com/panelpunches](http://omega.com/panelpunches)

# and Temperature Meters

## With Optional Relays and Analog Output

**MONOGRAM<sup>®</sup> SERIES**

### DP25B Series



#### Inputs

- Thermocouple
- RTD
- Process (DC Voltage and Current)
- Strain Gage

#### Options

- Relay Output with Adjustable Deadband
- Isolated or Non-Isolated Analog Output
- Patented Programmable Color Display
- Low-Voltage Power Options
- NEMA 4 Front Bezel

#### Panel Meters

The OMEGA DP25B Series features the biggest, brightest display of any 1/2 DIN panel meter. The user can select the display color: **RED**, **AMBER**, or **GREEN**.

Unparalleled accuracy in signal conditioning is available in this economical series of panel meters/controllers. The series has a 4-digit, 9-segment display plus optional dual 5 A, SPDT relays (Form "C") and a choice of isolated or non-isolated analog output. The scalable 0 to 10 Vdc, 0 to 20 mA, or 4 to 20 mA analog output can be used for retransmission of the display value or as a proportional control output, as required. The microprocessor-based DP25B series includes instruments for process (DC voltage and current) strain gage, thermocouple, and RTD.

#### Specifications

**Display:** 4-digit, 9-segment, 21 mm (0.83") red, amber or green LED (programmable)

**Analog-to-Digital Technique:** Dual slope

**Internal Resolution:** 15 bit

**Polarity:** Automatic

**Read Rate:** 3/second

**Step Response:** 2 seconds

**Relay Outputs (Optional):** 2 From "C" on/off relays. Configurable for latched and unlatched by software.

Max Current: 5 AMPS, **Resistive Load\***

Max Voltage: 250 V AC or 28 V DC

**\*Important Note:** For inductive loads not to exceed maximum voltage/current relay specifications, a proper TVS protection diode needs to be used externally across Wiper and NC/NO contacts of relays.

**Analog Output (Optional):** 0 to 10V, 4 to 20 mA or 0 to 20 mA; can be assigned to a display range (scalable) or proportional control output with setpoint #1 when used as a control output

**Power:** 115 Vac or 230 Vac  $\pm 10\%$ , 10 to 32 Vdc, 26 to 56 Vdc; 8 W max (DP25B-TC or -RTD), 11 W max (DP25B-F or -S); 240 Vrms overvoltage protection



DP25B, shown actual size.

**BEZEL DESIGN IS A REGISTERED TRADEMARK**

#### Thermocouple and RTD Models

The DP25B Series for thermocouple and RTD inputs is a versatile panel meter and limit alarm-in-one that is easily programmable. The DP25B-TC is selectable for J, K, T, or J DIN thermocouples. The DP25B-RTD accepts 100  $\Omega$  Pt (0.00385 curve) RTDs.

#### DP25B-TC (Thermocouple)

| Input Type | Range                           | Accuracy         |
|------------|---------------------------------|------------------|
| J          | -210 to 760°C (-346 to 1400°F)  | 0.5°C<br>(0.9°F) |
| K          | -270 to 1372°C (-454 to 2500°F) |                  |
| T          | -210 to 400°C (-346 to 752°F)   |                  |
| J DIN      | -200 to 900°C (-328 to 1652°F)  |                  |

**Isolation:** Dielectric strength to 2500V transient per 3 mm spacing based on EN 61010 for 260 Vrms or Vdc

**NMR:** 60 dB

**CMR:** 120 dB

**Operating Temperature:** 0 to 50°C (32 to 122°F)

**Storage Temperature:** -40 to 85°C (-40 to 185°F)

**Relative Humidity:** 90% @ 40°C (104°F) non-condensing

**Dimensions:** 48 H x 96 W x 152 mm D (1.89 x 3.78 x 6.0")

**Panel Cutout:** 45 H x 92 mm W (1.772 x 3.622")

**Weight:** 36 g (1.27 lb)

#### Specifications (Thermocouple Meter)

**Input:** Thermocouple Types J, K, T and J DIN

**Relay Hysteresis:**

Programmable from 0 to 9999

**Accuracy:**  $\pm 0.50^\circ\text{C}$  (0.9°F) after 30 min warm-up

**Temperature Coefficient:**  $\pm 50$  PPM/°C

**Input Resistance:** 100 M $\Omega$

### Process and Strain Models

The DP25B-E process and strain meters accept a wide range of DC voltage and current inputs to cover any typical process application. They feature easy, front-panel scaling to virtually any engineering units, selectable excitation of 4 voltages to work with most transducers and transmitters, front panel and remote tare function for weighing applications, and a hardware lockout to prevent unauthorized changes in set-up.



DP25B-TC-GN, programmed for optional green display (no additional charge), shown actual size.

### DP25B-RTD (RTD)

| Input Type                         | Range                             | Accuracy         |
|------------------------------------|-----------------------------------|------------------|
| RTD, 100 $\Omega$ Pt, 2, 3, 4-wire | -200 to 850°C<br>(-328 to 1562°F) | 0.5°C<br>(0.9°F) |

### Specifications (RTD Temperature Meter)

**Input:** RTD 100  $\Omega$  Pt (0.00385 curves)  
2-, 3- and 4-wire selectable  
**Accuracy:**  $\pm 0.50^\circ\text{C}$  (0.9°F) after 30 min warm-up  
**Temperature Coefficient:**  $\pm 50$  PPM/°C  
**Input Resistance:** 100 M $\Omega$

### DP25B-E (Process)/DP25B-S (Strain)

| Input Type | Range   | Accuracy  |
|------------|---|-----------|
| mV, V, mA  | 0 to 100 mV, $\pm 50$ mV,<br>0 to 10 V $\pm 5$ V, 0 to 20 mA,<br>4 to 20 mA | 0.02% Rdg |

### Specifications (Process and Strain Meters)

**Input Ranges:** 0 to 100 mV,  $\pm 50$  mV, 0 to 10V,  $\pm 5$ V, 0 to 20 mA, 4 to 20 mA  
**Protection:** 240 Vrms max for voltage input ranges; 200 mA for current ranges  
**Input Impedance:** 100 M $\Omega$  for 100 mV or  $\pm 50$  mV range; 1 M $\Omega$  for 10V or  $\pm 5$ V range; 5  $\Omega$  for 20 mA current input  
**Analog-to-Digital Technique:** Dual slope  
**Internal Resolution:** 15 bit  
**Polarity:** Automatic  
**Max Error Strain/Process:**  $\pm 0.03\%$  rdg  
**Span Temperature Coefficient:**  $\pm 50$  ppm/°C  
**Warm-Up to Rated Accuracy:** 30 min  
**Excitation Voltage:** 24V @ 25 mA or 12V @ 50 mA; 10V @ 120 mA or 5V @ 60 mA



Select Your  
Color!

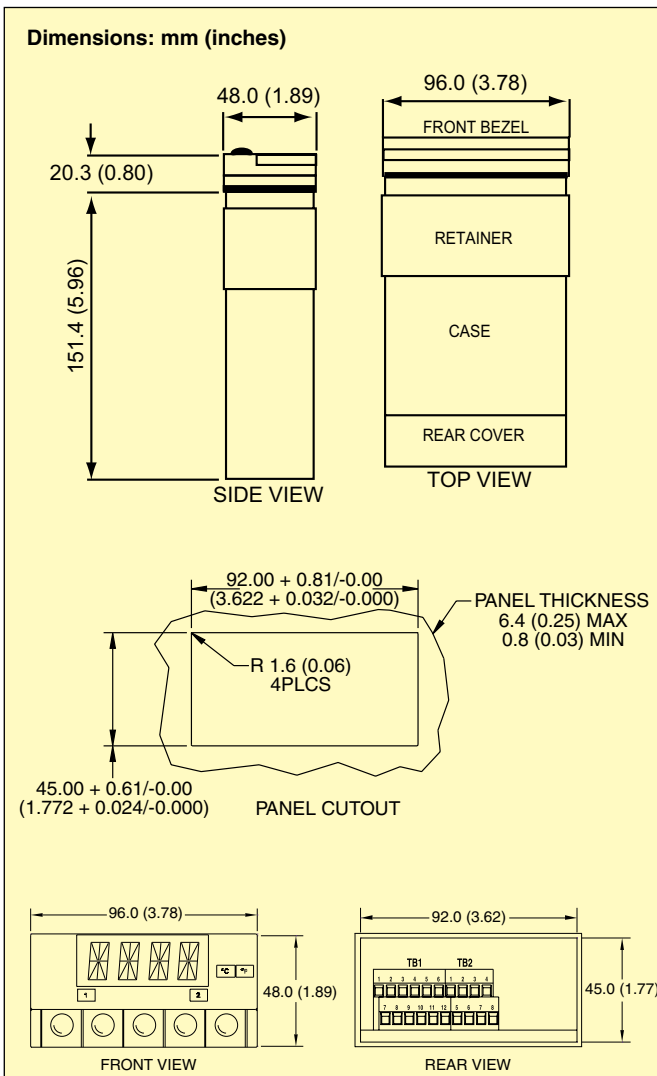
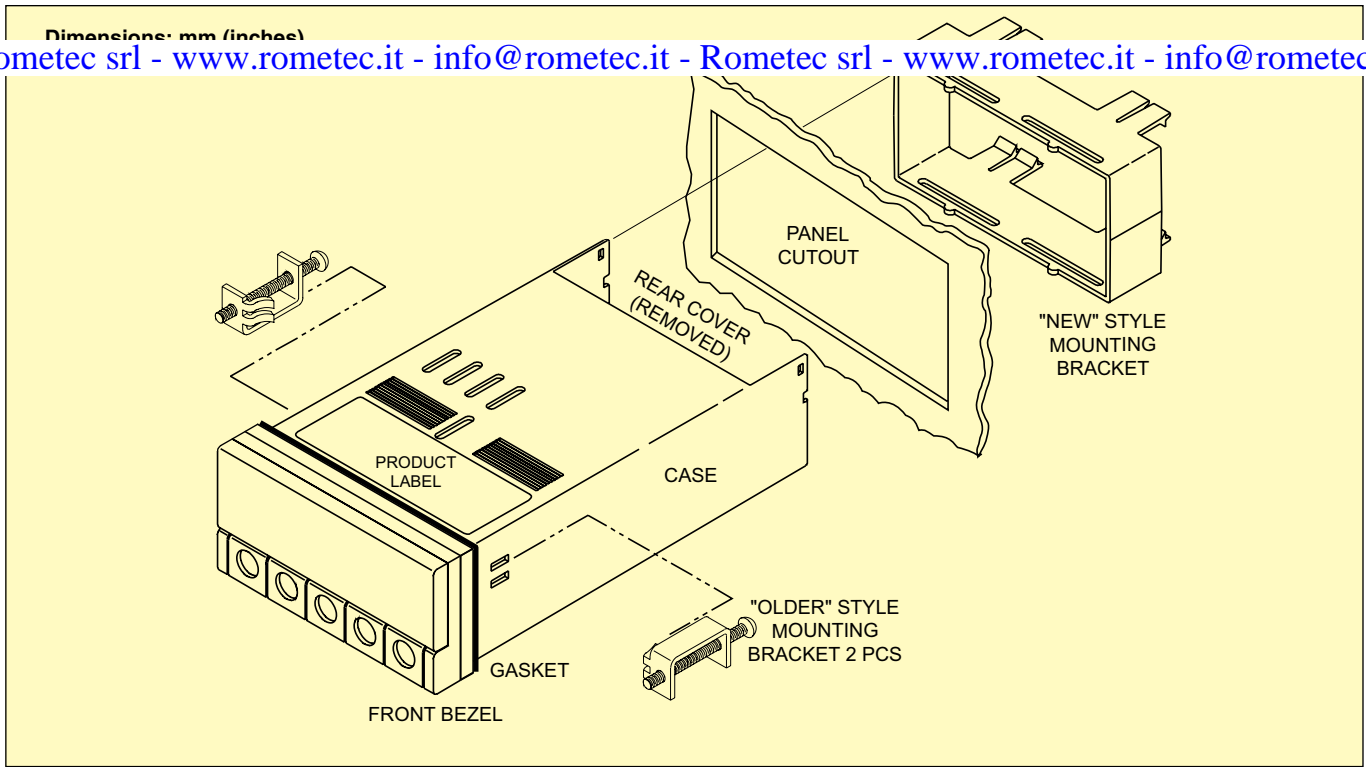
Program to display in RED,  
AMBER, or GREEN.

### Totally Programmable Color Displays

The OMEGA® DP25B Series meters and controllers have totally programmable color displays—for RED, AMBER, or GREEN.

RED  
AMBER  
GREEN





**To Order** Visit [omega.com/dp25b\\_tc](http://omega.com/dp25b_tc) for Pricing and Details

| MODEL NO. | DESCRIPTION                      |
|-----------|----------------------------------|
| DP25B-TC  | Thermocouple                     |
| DP25B-RTD | RTD                              |
| DP25B-E   | Process (DC voltage and current) |
| DP25B-S   | Strain input                     |

**POWER OPTIONS\***

| ORDER SUFFIX | POWER        |
|--------------|--------------|
| -230         | 230 Vac      |
| -DC10/32     | 10 to 32 Vdc |
| -DC26/56     | 26 to 56 Vdc |

**OUTPUT OPTIONS\***

| ORDER SUFFIX | POWER                    |
|--------------|--------------------------|
| -A           | Analog output            |
| -AI-R        | Isolated analog output   |
| -R           | Dual 5 A relays          |
| -AR          | Analog and relay options |

**ACCESSORY**

| MODEL NO. | DESCRIPTION         |
|-----------|---------------------|
| DPP-5     | 1/8 DIN panel punch |

\* Not field installable. For "-AI" option, the "-R" option is required. Comes complete with operator's manual.

**Ordering Examples:** DP25B-TC-DC10/32-AR, thermocouple indicator for J, K, T or J DIN input, low-voltage power, analog output and dual 5 A relays.

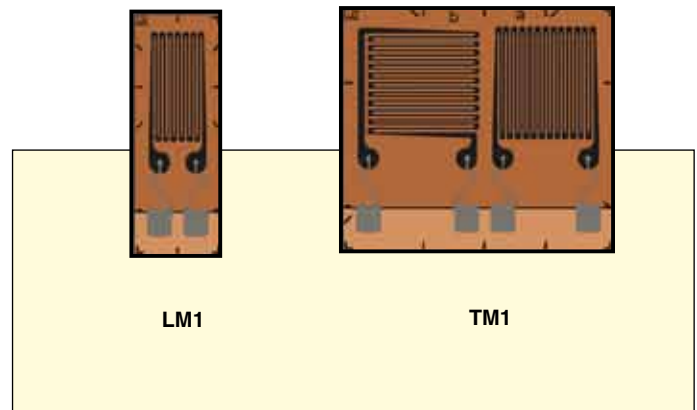
DP25B-E, process meter.



# M Series Encapsulated Foil Strain Gages

## Glass Fiber Reinforced Phenolic Carrier

- ✓ High Resistance to Alternating Loads
- ✓ High Temperature Range 300°C (572°F)
- ✓ Wide Spectrum of Different Types



M Series strain gages have been specially developed for high resistance to alternating loads at increased strain levels and high temperatures up to 300°C (572°F). They are foil strain gages with measuring grids made of a special nickel-chromium alloy. OMEGA/HBM offer this special strain gage with various geometries, measuring grid lengths and temperature response matching.

New materials offering high strength such as fiber composites pose a major challenge for strain gages used for measurements specifically when pushing components to their mechanical limit of performance. Situations may arise where a strain gage subjected to alternating loads at increased load levels is weakened and fails earlier than the component under test. The M Series has been specially developed for high resistance to alternating loads and allows for testing of materials featuring high strength.

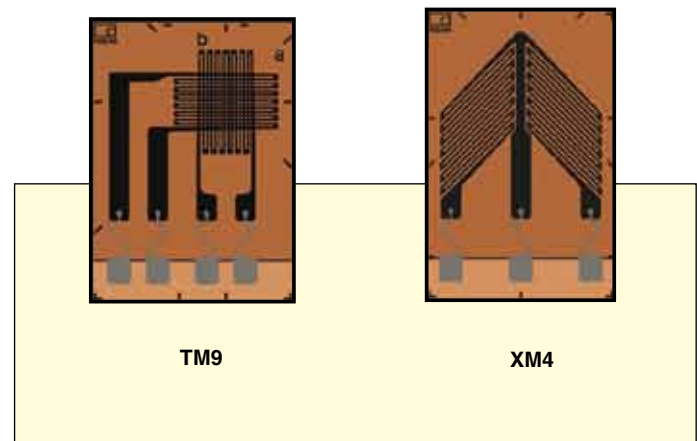
All M Series strain gage types are available with different measuring grid lengths:

- 1.5 mm: where space is a constraint or when highly selective measurement results are required
- 3 mm: for inhomogeneous materials and where space is a requirement or not
- 6 mm: for inhomogeneous materials and where space is not a requirement

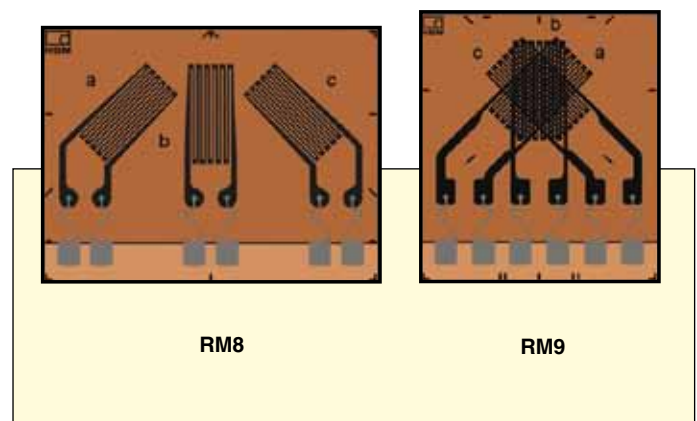
The right measuring grid length: The measuring grid length depends on the aim of measurement, since the result of a measurement with strain gages will be determined as the average of strains. In general, measuring grid lengths of 3 to 6 mm (0.06 to 0.24") generates a better result.

Long measuring grids are recommended where there is an inhomogeneous material such as concrete or wood. A long strain gage will bridge the inhomogeneity of the work piece and return the strain underneath the measuring grid as the measurement result.

Short measuring grids are suitable for detecting a local strain state. Therefore, they are suitable for determining strain gradients, the maximum point of notch stresses and similar stresses.



All models shown larger than actual size.





## Specifications

### Strain Gage Construction–Foil Strain Gage

#### Carrier:

**Material:** Glass fiber reinforced phenolic

**Thickness:** 35 ±10 µm

#### Grid Foil:

**Material:** CrNi

**Thickness:** 5 µm

#### Encapsulation:

**Material:** Polyimide film

**Thickness:** 25 ±5 µm

**Connections:** Solder pads with strain relief

**Resistance:** 350 and 1000 Ω

**Resistance Tolerance:** ±0.3%<sup>(1)</sup>

**Gage Factor:** Approximate 2.2 (specified on each package)

**Gage Factor Tolerance:** ±1.5% (for grid length <3 mm)  
±0.7% (for grid length ≥3 mm)

**Temperature Coefficient of the Gage Factor:**

Specified on each package

**Transverse Sensitivity:**

Specified on each package

**Operating Temperature Range:**

-200 to 300°C (-328 to 662°F)

**Temperature Response (Ferrite Steel):**

10.8 ppm/K (6.0 ppm/°F)

**Maximum Elongation:**

**Positive Direction:** 10,000 µm (1%)

**Negative Direction:** 15,000 µm (-1.5%)

<sup>(1)</sup>For stacked rosettes 0.5%. <sup>(2)</sup>Maximum zero point drift ±100 µm/m.

<sup>(3)</sup>Consider temperature limits of the different adhesives.

**Minimum Bending Radius:** 5 mm (0.20") for linear gages  
10 mm (0.39") for stacked rosettes

**Bonding Material that Can Be Used<sup>(3)</sup>:**

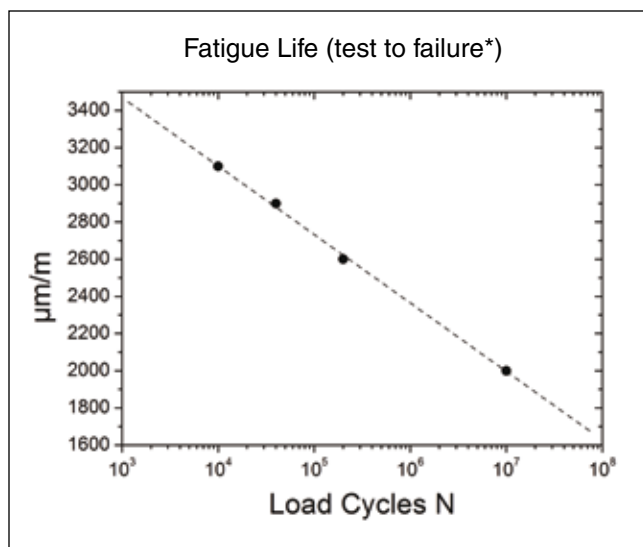
Z70 or EP310S

**Fatigue Life (Test to Failure<sup>(2)</sup>):**

10<sup>7</sup> cycles at 2000 µm/m

10<sup>6</sup> cycles at 2200 µm/m

10<sup>4</sup> cycles at 3100 µm/m



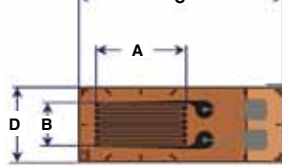






## Geometries

|  |   |
|--|---|
|  | <b>LM1</b><br>Linear strain gage with one measurement grid measuring strain in one direction  |
|  | <b>TM1</b><br>T rosette with two measurement grids, offset by 90° measuring tension and compression   |
|  | <b>TM9</b><br>Stacked T rosette with two measurement grids, offset by 90° measuring tension and compression   |
|  | <b>XM4</b><br>V-shaped strain gage with two measurement grids, arranged at ±45° to the axis determination of shear stresses                           |
|  | <b>RM8</b><br>Rectangular strain gage rosette with three measurement grids at 0°/45°/90° biaxial stress state with unknown principal stress direction |
|  | <b>RM9</b><br>Stacked strain gage rosette with three measurement grids at 0°/45°/90° biaxial stress state with unknown principal stress direction     |

\* Maximum zero point drift ±100 µm/m

## To Order

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

|                  | Model No.               | Nominal Resistance<br>$\Omega$ | Dimensions: mm (inch) |               |                |                | Maximum Permanent Effective Excitation Voltage <sup>(1)</sup> |
|---|-------------------------|--------------------------------|-----------------------|---------------|----------------|----------------|---|
|   |                         |                                | Measurement Grid      |               | Carrier        |                |   |
|   |                         |                                | A                     | B             | C              | D              |   |
| <b>LM1</b><br>   | <b>1-LM11-1.5/350GE</b> | 350                            | 1.5<br>(0.06)         | 2.5<br>(0.10) | 9<br>(0.35)    | 4.4<br>(0.17)  | 7   |
|   | <b>1-LM11-3/350GE</b>   | 350                            | 3<br>(0.12)           | 3.4<br>(0.13) | 11.8<br>(0.46) | 5.4<br>(0.21)  | 11  |
|   | <b>1-LM11-6/350GE</b>   | 350                            | 6<br>(0.24)           | 3.4<br>(0.13) | 14.8<br>(0.58) | 5.4<br>(0.21)  | 16  |
| <b>TM1</b><br>   | <b>1-TM11-1.5/350GE</b> | 350                            | 1.5<br>(0.06)         | 2.5<br>(0.10) | 9.5<br>(0.37)  | 8<br>(0.31)    | 7   |
|   | <b>1-TM11-3/350GE</b>   | 350                            | 3<br>(0.12)           | 3.4<br>(0.13) | 11.7<br>(0.46) | 10.6<br>(0.42) | 11  |
|   | <b>1-TM11-6/350GE</b>   | 350                            | 6<br>(0.24)           | 6.3<br>(0.29) | 15<br>(0.59)   | 16.6<br>(0.65) | 22  |
| <b>TM9</b><br>   | <b>1-TM91-1.5/350GE</b> | 350                            | 1.5<br>(0.06)         | 2.5<br>(0.10) | 11.3<br>(0.44) | 7.9<br>(0.31)  | 5.8   |
|   | <b>1-TM91-3/350GE</b>   | 350                            | 3<br>(0.12)           | 3.7<br>(0.15) | 15<br>(0.59)   | 11.7<br>(0.46) | 10  |
|   | <b>1-TM91-6/350GE</b>   | 350                            | 6<br>(0.24)           | 3.7<br>(0.15) | 18<br>(0.71)   | 13<br>(0.51)   | 14  |
| <b>XM4</b><br>   | <b>1-XM41-1.5/350GE</b> | 350                            | 1.5<br>(0.06)         | 1.5<br>(0.06) | 10.6<br>(0.42) | 6<br>(0.24)    | 5.4   |
|   | <b>1-XM41-3/350GE</b>   | 350                            | 3<br>(0.12)           | 3<br>(0.12)   | 15<br>(0.59)   | 8.2<br>(0.32)  | 10  |
|   | <b>1-XM41-6/350GE</b>   | 350                            | 6<br>(0.24)           | 4<br>(0.16)   | 18.6<br>(0.73) | 12.2<br>(0.48) | 17  |
| <b>RM8</b><br> | <b>1-RM81-1.5/350GE</b> | 350                            | 1.5<br>(0.06)         | 2.5<br>(0.10) | 11<br>(0.43)   | 13.3<br>(0.52) | 7   |
|   | <b>1-RM81-3/350GE</b>   | 350                            | 3<br>(0.12)           | 3.4<br>(0.13) | 14.6<br>(0.57) | 18.4<br>(0.72) | 11  |
|   | <b>1-RM81-6/350GE</b>   | 350                            | 6<br>(0.24)           | 3.4<br>(0.13) | 17.1<br>(0.67) | 22.5<br>(0.86) | 16  |
| <b>RM9</b><br> | <b>1-RM91-1.5/350GE</b> | 350                            | 1.5<br>(0.06)         | 2.5<br>(0.10) | 11.3<br>(0.44) | 11.1<br>(0.44) | 5.3   |
|   | <b>1-RM91-3/350GE</b>   | 350                            | 3<br>(0.12)           | 3.7<br>(0.15) | 15<br>(0.59)   | 16<br>(0.63)   | 9.3   |
|   | <b>1-RM91-6/350GE</b>   | 350                            | 6<br>(0.24)           | 3.7<br>(0.15) | 18<br>(0.71)   | 16<br>(0.63)   | 13  |

<sup>(1)</sup> Maximum permitted effective excitation voltage specified for steel material.

**Ordering Example:** 1-RM91-1.5/350GE, package of 5 encapsulated strain gages, 1.5 mm (0.06") measuring grid length.

**Note:** All models sold in a 5-pack, except 1-LM11 which are sold in a 10-pack.

1-Z70



1-EP310S



1-BCY01



1-RMS1



1-RMS1-SPRAY



## Accessories

| Model No.             | Description   |
|-----------------------|---|
| <b>1-Z70</b>          | Rapid adhesive; single component cold curing adhesive made of cyanacrylate    |
| <b>1-EP310S</b>       | High temperature adhesive; two-component epoxy resin adhesive                 |
| <b>1-BCY01</b>        | Accelerator for Z70 rapid adhesive; epoxy resin adhesive                      |
| <b>1-RMS1*</b>        | Cleaning solvent; environmentally friendly mixture of isopropanol and acetone |
| <b>1-RMS1-SPRAY**</b> | Spray version of RMS1 cleaning solvent  |

\* NOTE: Satisfactory bonding joints are only achieved if the adhesive covers the bonded surfaces well. Therefore, the application surfaces must be cleaned prior to bonding with a chemically pure solvent and a clean cleaning pad.

\*\* NOTE: 1-RMS1-SPRAY enables the chemically pure cleaning agent to be easily and reliably applied, for example, when preparing measuring points on vertical surfaces or working overhead. Comes in packages containing five 200 ml spray cans and 450 cleaning pads.

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## 0.5% FULL SCALE ACCURACY

### HHTQ35 Series



Standard

- ✓ Ergonomic Torque Sensor with Jacobs Chuck
- ✓ 2000 Hz Sampling Rate
- ✓ Ultra-Compact Size
- ✓ Selectable Units of Measure
- ✓ USB Data Output
- ✓ Programmable Setpoints with Pass/Fail Indicators
- ✓ Large Backlit Graphics Display
- ✓ Live Load Bar Graph with Set Point Markers
- ✓ Peak Readings and Set Points Always Displayed
- ✓ Configurable Audio Alarms and Key Tones



HHTQ35-100 shown smaller than actual size.

OMEGA's HHTQ35 Series is an economical digital force gauge designed for clockwise and counter-clockwise torque measurements in a variety of applications. They are available in ranges from 10 ozFin to 100 lbFin (7 to 1150 KgFmm) and have a 2000 Hz sample rate.

A backlit graphic LCD displays large characters and a menu is available to access the gauges features and configurable parameters. Units have a USB output for data collection and setpoint indicators for pass-fail testing.

### SPECIFICATIONS

**Accuracy:** 0.5% of full scale  $\pm$  1 digit

**Power:** Rechargeable battery or AC using adaptor (batteries and adaptor included)

**Battery Life:** Up to 7 hours continuous use with backlight on or 24 hours with backlight off

**Low Battery:** Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low

**Measurement Units:** ozFin, lbFin, kgFmm, Ncm (depending on model)

**Safe Overload:** 150% of full scale (display shows "OVER" at 110% and above)

**Configurable Settings:** Digital filters, USB output, automatic shutoff, default settings, key tones, audio alarms, calibration

### Dimensions:

**Meter:** 99.1 H x 64.3 W x 38.1 mm D (3.90 x 2.53 x 1.50")

### Sensor:

$\leq$  50Z Range: 44.5 D x 122.4 mm L (1.75 x 4.82")

$>$  50Z Range: 44.5 D x 131.8 mm L (1.75 x 5.19")

**Weight:** 0.8 kg (1.8 lb)

### To Order

| MODEL NO.  | RANGE vs. RESOLUTION |           |           |           |
|------------|----------------------|-----------|-----------|-----------|
|            | ozFin                | lbFin     | kgFmm     | Ncm       |
| HHTQ35-10Z | 10 x 0.01            | —         | 7 x 0.005 | 7 x 0.005 |
| HHTQ35-20Z | 20 x 0.02            | —         | 14 x 0.01 | 14 x 0.01 |
| HHTQ35-50Z | 50 x 0.05            | —         | 36 x 0.05 | 36 x 0.05 |
| HHTQ35-12  | 192 x 0.2            | 12 x 0.01 | —         | 135 x 0.1 |
| HHTQ35-50  | 800 x 1              | 50 x 0.05 | —         | 570 x 0.5 |
| HHTQ35-100 | 1600 x 2             | 100 x 0.1 | —         | 1150 x 1  |

Comes complete with carrying case, AC adaptor with US plug, USB cable and CD with USB drivers, operator's manual and calibration certificate.

For AC adaptor with European plug add suffix "-E" to model number, UK style plug add "-U", no extra cost.

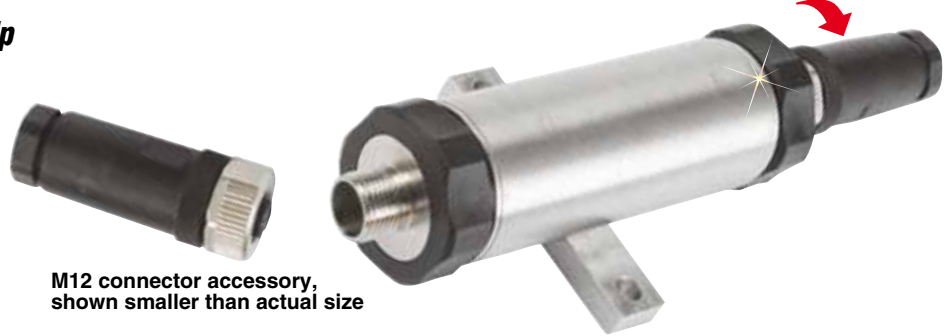
**Ordering Examples:** HHTQ35-20Z, 20 ozFin digital torque gauge with US style plug.

HHTQ35-100-U, 100 lbFin digital torque gauge with UK style plug.

# In-Line Signal Conditioner

**Supply Voltage: 22 to 32 Vdc**  
**Input Current: 200 mA Start Up**  
**(90 mA max)**  
**Current Outputs: 4-20 mA,**  
**12 mA zero  $\pm$  8 mA**  
**Voltage Outputs:**  
**0-5, 0-10,  $\pm$ 5,  $\pm$ 10 Vdc**

IN-UVI, shown smaller than actual size, with one M12 accessory connector.



M12 connector accessory, shown smaller than actual size

## IN-UVI Series



- ✓ Wide Range of Field Selectable Inputs and Outputs
- ✓ Input/Output Isolation
- ✓ Low Thermal Drift
- ✓ IP65 Protected
- ✓ Rugged Stainless Steel Enclosure
- ✓ Ideal for Use with Miniature Transducers or When Space is Limited
- ✓ Improved Signal to Noise Ratio
- ✓ Signals Can Be Sent Over Much Longer Distances than Millivolt Signals

### Typical Applications that Require an In-Line Signal Conditioner:

- ✓ When a Transducer is Located in a Hostile Environment\* or Some Distance From the Display
- ✓ Potentiometer Adjustments (Which are Located in the Signal Conditioner) are More Conveniently Located and More Accessible than the Transducer Itself

\* If the environment at the sensing site is subject to high temperatures, humidity, or corrosive conditions, it may be necessary to place the in-line signal conditioner away from the transducer.

### Application Examples:

- ✓ Monitor Compression Forces of an Automated Clamping Machine that Modifies 44 Assembly Pieces at a Time by Automated Drills
- ✓ Monitor Forces Needed to Raise the Roof of an Aviation Hanger for Larger Airships to Fit Inside

The OMEGA IN-UVI in-line signal conditioner is housed in a rugged stainless steel enclosure, which is connected between the transducer and a readout instrument. The signal conditioner supplies a highly regulated bridge excitation voltage for the transducer and converts the millivolt signal of the transducer to 0 to 5, 0 to 10,  $\pm$ 5,  $\pm$ 10 Vdc or 4 to 20, 12  $\pm$  8 mA.

The IN-UVI features include two selectable excitation voltages, programmable gain amplifier for

signals from 0.5 mV/V to 4 mV/V, wide zero adjustment range and an isolated shunt calibration relay for quick field setup. All output options and excitation voltages are field selectable.

### Specifications

**Supply Voltage:** 22 to 32 Vdc isolated from output

**Isolation Input to Output:** 500 Vdc  
**Capacitance:** 0.022  $\mu$ F  
**Resistance:** 100 M $\Omega$

**Input Current:** 90 mA maximum (must be capable of supplying 200 mA)

**Voltage Output:**  $\pm$ 5 volts,  $\pm$ 10 volts at 2 mA maximum

**Output Resistance:** 60  $\Omega$

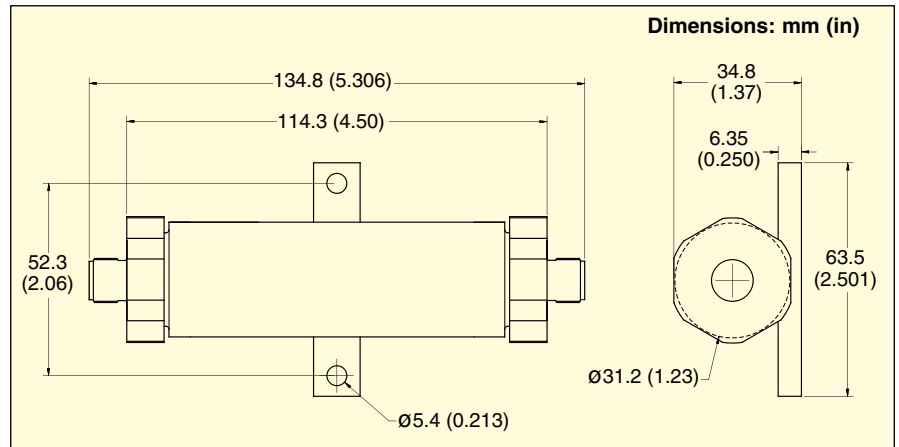
**Noise:** 10 mV peak to peak @ 3 mV/V voltage mode (10 Vdc) 20  $\mu$ A peak to peak current mode

**Short Circuit Protection:** Yes +output to -output

**Current Output:** 4 to 20 mA, 12 mA zero  $\pm$ 8 mA outputs field programmable

**Maximum Load Resistance:** 700  $\Omega$  at 20 mA

**Operating Temperature:** -20 to 60°C (0 to 140°F)





**Response Time:** 200  $\mu$ S (0 to 63%)

**Excitation Max Current:** 30 mA @ 10 Vdc

**Sensor Input Range:** 0.5 mV/V to 4 mV/V in 0.5 steps

**Shunt Cal:** Yes; remotely activated

**Environmental Protection:** IP65

**Long Term Zero Drift:** 0.1% of FS/year

**Temperature Effects:**

**Linearity:** 0.01%

**Adjustment Range:**

**Zero:**  $\pm$ 30%

**Span:**  $\pm$ 20% fine  $\pm$ 40% coarse

**Adjustment Location:** Behind connector endcaps

**EMC Effect:** <0.15% of FS per EN61326-1 (industrial)

**Dimensions:**

124.81 x 24.81 x 21.2 mm D

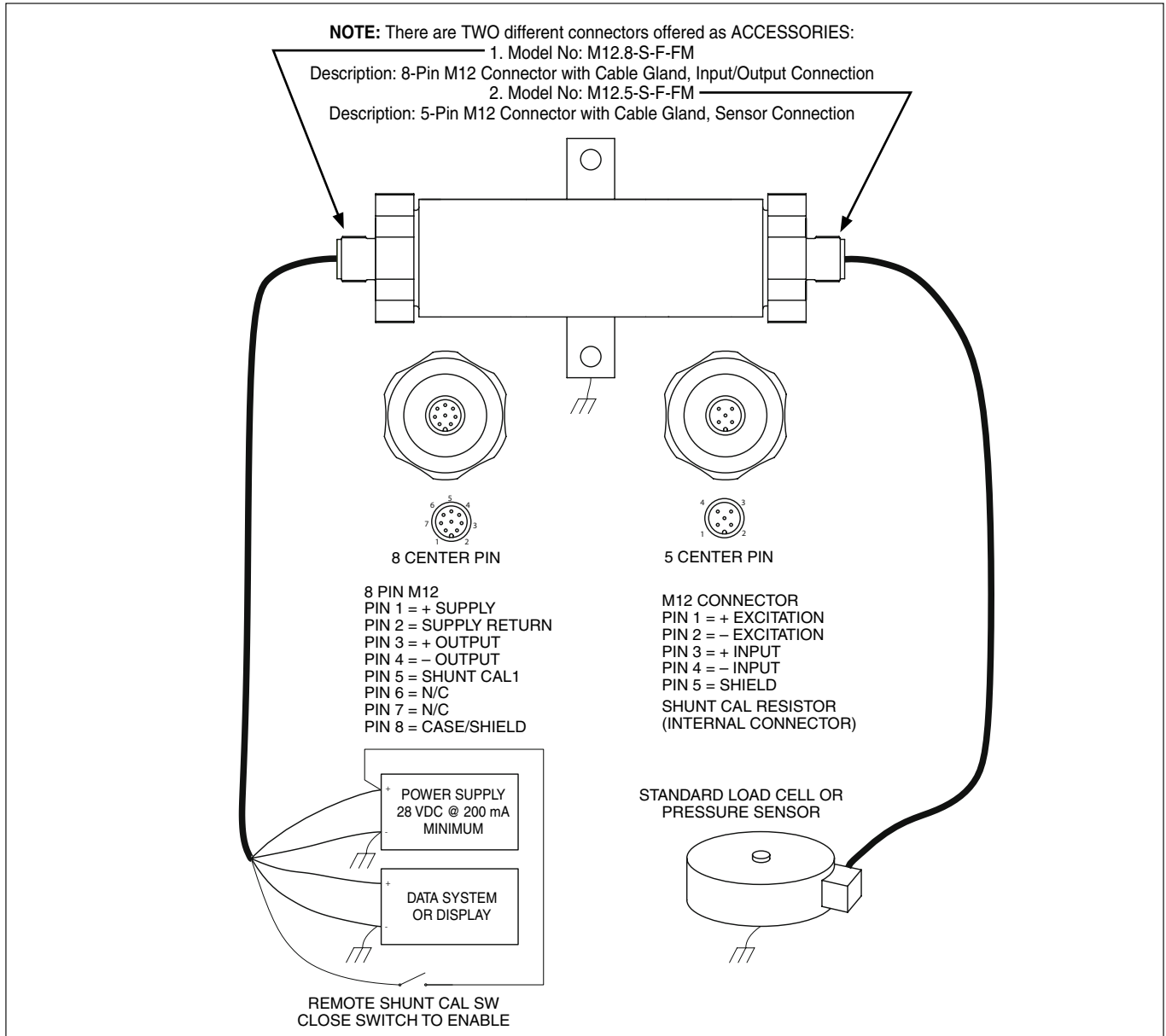
**Transducer Requirements:**

**Bridge Excitation:** 5 Vdc or 10 Vdc

**Bridge Sensitivity:** 1 to 8 mV/V @ 5 Vdc EXC, 0.5 to 4 mV/V for 10 Vdc EXC

**Bridge Resistance:** 350 to 5000  $\Omega$ \*

\* Time constant 0 to 63% (200  $\mu$ S for a 350  $\Omega$  bridges/1.2 mS for a 5000  $\Omega$  bridge)



## To Order

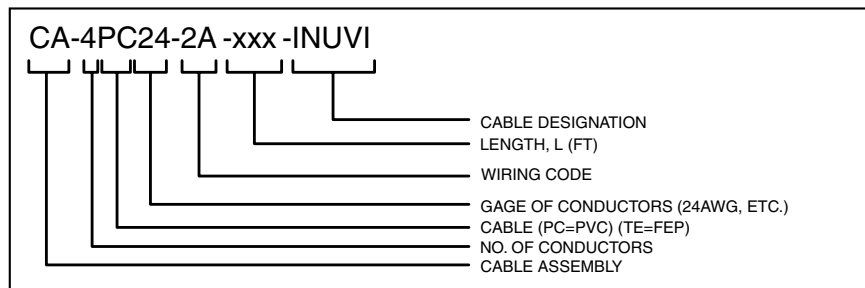
| Model No. | Description                                  |
|-----------|--|
| IN-UVI    | Wheatstone bridge in-line signal conditioner |

## Accessories

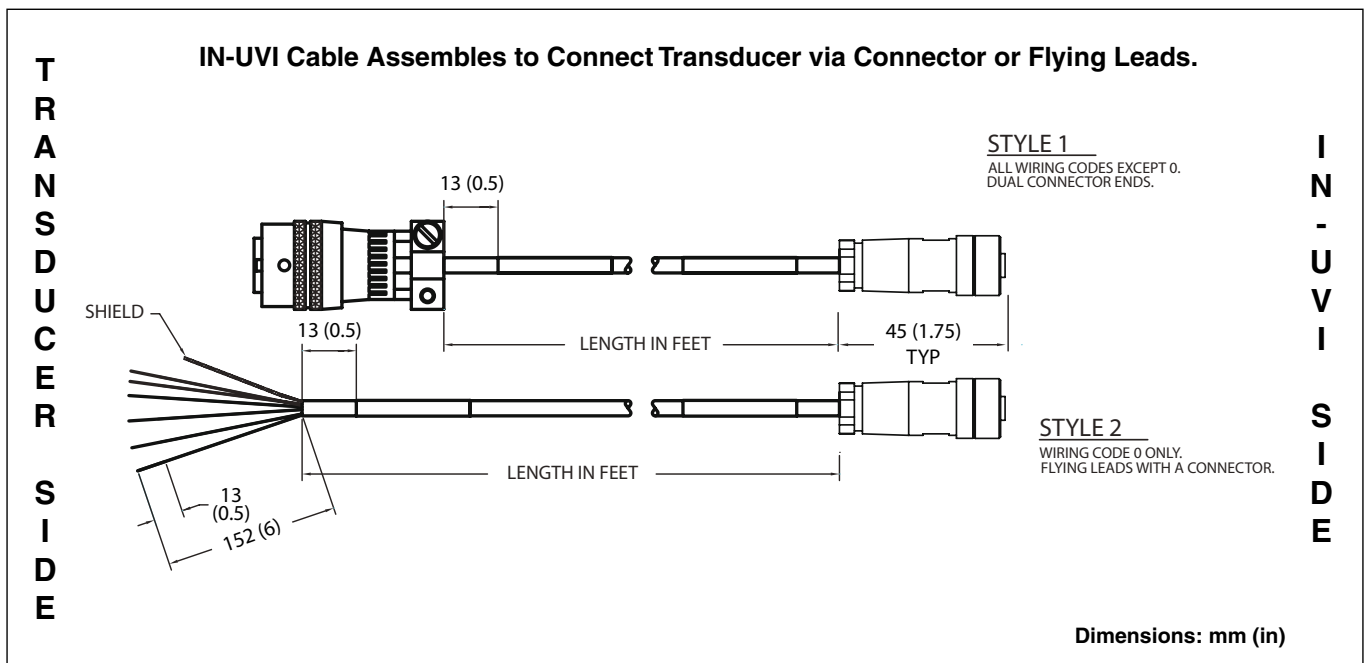
| Model No.    | Description   |
|--------------|---|
| M12.5-S-F-FM | 5-pin M12 connector with cable gland, sensor connection       |
| M12.8-S-F-FM | 8-pin M12 connector with cable gland, input/output connection |

| Model No.              | Connector Sensor Side          | Connector IN-UVI Side | Examples of Product Used on (Contact Sales for Products Not Listed)                            |
|------------------------|--------------------------------|-----------------------|--|
| CA-4PC24-2A-015-INUVI  | P001268                        | M12.5-S-F-FM          | LC111 25-200 lbs   |
| CA-4PC24-3-015-INUVI   | PT06F10-6S                     | M12.5-S-F-FM          | LC1011, LC1112, LC1113, LC411, LC412, LC711, LC712, LC511, LC315, LC213, LC214, LC111 >200 lbs |
| CA-4TE24-3-015-INUVI   | PT06F10-6S                     | M12.5-S-F-FM          | PX35, PX01, PX02, PX80, PX81   |
| CA-4PC24-4-015-INUVI   | PT06F10-6S                     | M12.5-S-F-FM          | LCHD 5 to 5000 lbs, PX610, PX61V1, PX931   |
| CA-4PC24-4A-015-INUVI  | MS3106E-14S-6S                 | M12.5-S-F-FM          | LCHD > 5000 lbs (uses MS3102E-14S-6P)  |
| CA-4TE24-5-015-INUVI   | PT06F10-6S                     | M12.5-S-F-FM          | PX32   |
| CA-4TE24-6-015-INUVI   | PT06F10-6S                     | M12.5-S-F-FM          | (mV) PX5000, PX5500, PX6000 (mV output), PX1004, PX1005  |
| CA-4PC24-8-015-INUVI   | PT06F10-6S                     | M12.5-S-F-FM          | PX429, 3 mV/V  |
| CA-4PC24-0-015-INUVI   | STYLE 2                        | M12.5-S-F-FM          | Style 2 - Wiring Code 0  |
| CA-4TE24-0-015-INUVI   | STYLE 2                        | M12.5-S-F-FM          | Style 2 - Wiring Code 0  |
| Model No.              | Flying Leads Input/Output Side | Connector IN-UVI Side | Examples of Product Used on (Contact Sales for Products Not Listed)                            |
| CA-6PC24-OUT-015-INUVI | STYLE 2                        | M12.8-S-F-FM          | Style 2 - Wiring Code OUT  |

Definition of Cable part number



Insulation Type Temperature Rating: FEP = -55 to 125°C (-67 to 257°F), PVC = -30 to 80°C (-22 to 176°F)



Dimensions: mm (in)

# IN-UVI Wiring Codes

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## Dual Connector Ends, All Wiring Codes Except 0

| Connector Pin Transducer Side | CA*INUVI Wiring Code | IN-UVI Connection | Connector Pin IN-UVI Side |
|-------------------------------|----------------------|-------------------|---------------------------|
| <b>Wiring Code 2A/3</b>       |                      |                   |                           |
| A                             | <b>GREEN</b>         | + Signal          | 3                         |
| B                             | <b>WHITE</b>         | - Signal          | 4                         |
| C                             | <b>BLACK</b>         | - Excitation      | 2                         |
| D                             | <b>RED</b>           | + Excitation      | 1                         |
| E                             | -                    | -                 | -                         |
| F                             | -                    | -                 | -                         |
| -                             | -                    | Shield*           | 5                         |
| <b>Wiring Code 4/4A</b>       |                      |                   |                           |
| A                             | <b>RED</b>           | + Excitation      | 1                         |
| B                             | -                    | -                 | -                         |
| C                             | <b>BLACK</b>         | - Excitation      | 2                         |
| D                             | -                    | -                 | -                         |
| E                             | <b>WHITE</b>         | - Signal          | 4                         |
| F                             | <b>GREEN</b>         | + Signal          | 3                         |
| -                             | -                    | Shield*           | 5                         |
| <b>Wiring Code 5/6</b>        |                      |                   |                           |
| A                             | <b>RED</b>           | + Excitation      | 1                         |
| B                             | <b>GREEN</b>         | + Signal          | 3                         |
| C                             | <b>WHITE</b>         | - Signal          | 4                         |
| D                             | <b>BLACK</b>         | - Excitation      | 2                         |
| E**                           | -                    | -                 | -                         |
| F**                           | -                    | -                 | -                         |
| -                             | -                    | Shield*           | 5                         |
| <b>Wiring Code 8</b>          |                      |                   |                           |
| A                             | <b>RED</b>           | + Excitation      | 1                         |
| B                             | <b>BLACK</b>         | - Excitation      | 2                         |
| C                             | <b>GREEN</b>         | + Signal          | 3                         |
| D                             | <b>WHITE</b>         | - Signal          | 4                         |
| E**                           | -                    | -                 | -                         |
| F**                           | -                    | -                 | -                         |
| -                             | -                    | Shield*           | 5                         |

\*\* No connection for transducer Pins E & F.

## Flying Leads with Connector on IN-UVI End

| Connector Pin Transducer Side | CA*INUVI Wiring Code | IN-UVI Connection | Connector Pin IN-UVI Side |
|-------------------------------|----------------------|-------------------|---------------------------|
| <b>Wiring Code 0</b>          |                      |                   |                           |
| N/A                           | <b>RED</b>           | + Excitation      | 1                         |
| N/A                           | <b>BLACK</b>         | - Excitation      | 2                         |
| N/A                           | <b>GREEN</b>         | + Signal          | 3                         |
| N/A                           | <b>WHITE</b>         | - Signal          | 4                         |
| N/A                           | -                    | Shield*           | 5                         |
| N/A                           | -                    | -                 | -                         |

**NOTE:** Excitation of IN-UVI connects to input of transducer, and output of transducer connects to signal of IN-UVI.

## Flying Leads with Connector

| Connector Pin Transducer Side  | CA*INUVI Wiring Code | IN-UVI Connection | Connector Pin IN-UVI Side |
|--------------------------------|----------------------|-------------------|---------------------------|
| <b>Wiring Code OUT (8-Pin)</b> |                      |                   |                           |
| N/A                            | <b>RED</b>           | + Supply          | 1                         |
| N/A                            | <b>BLACK</b>         | - Supply          | 2                         |
| N/A                            | <b>GREEN</b>         | + Signal          | 3                         |
| N/A                            | <b>WHITE</b>         | - Signal          | 4                         |
| N/A                            | <b>BLUE</b>          | Shunt Cal En      | 5                         |
| N/A                            | -                    | -                 | 6                         |
| N/A                            | -                    | -                 | 7                         |
| N/A                            | <b>BROWN/SHIELD*</b> | Case              | 8                         |

\* Shield not connected to Connector Sensor Side or Transducer.

# ΣΙΜΜΙΝΟ ΔΟΥ/ΤΔΑΝΕΜΙΤΤΕΔ

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## 4 TO 20 mA AND 0 TO 10 Vdc OUTPUTS

**Summing Up to  
4 Load Cells  
with Voltage or  
Current Output**

### JBOX-4800



JBOX-4800 shown smaller than actual size.

- ✓ Complete Strain Gage Bridge Signal Conditioner
- ✓ High-Gain, Low-Drift Amplifier
- ✓ Wide Input Range from 5 to 50 mV Full Scale
- ✓ 80% Tare Offset
- ✓ 3-Way Isolation
- ✓ NEMA 4 (IP65) Enclosure
- ✓ High/Low Setpoint-Ready User Plug-In Relays

The JBOX-4800 is an AC- or DC-powered summing transmitter for up to 4 load cells, with user-selectable output options of 0 to 20 mA, 4 to 20 mA, 0 to 10 Vdc, or 2 to 10 Vdc. It has a built-in excitation supply capable of delivering up to 120 mA from 5 Vdc to 10 Vdc. Three-way isolation is standard: input to output and power. Designed with industrial weighing applications in mind, this J-box has a large tare offset (80% of a 3 mV signal @ 10V excitation). The board is wired and socketed for high and low setpoint/alarms. To activate them, the user buys the relays and plugs them in.

### SPECIFICATIONS

**Accuracy:**  $\leq \pm 0.1\%$   
**Temperature Range:** 10 to 35°C (50 to 95°F)  
**Total Temperature Coefficient:** 0.0025%/°C typical  
**Isolation (AC or DC, 3-Way):**  
 AC to Input or Output: 750 Vac  
 DC to Input or Output: 300 Vdc/500 pf  
**Amplifier:**  
 Input Range: 5 to 50 mV FS  
 Linearity:  $\pm 0.01$  FS  
 Temp Coeff.: 0.0015%/°C typical  
**Input Noise:** 0.1 to 10 Hz, 2 mV p-p  
**Tare Adjustment (3 Ranges):** -3 to 6.5 mV, 6.5 to 16 mV, 16 to 25 mV  
**Common-Mode Rejection Ratio:** 100 dB  
**Common-Mode Input Voltage:** 5 Vdc  
**Test Output Signal:** Adds 8 mA or 4V to signal  
**Loop Resistance (Current Output):** 0 to 1000  $\Omega$

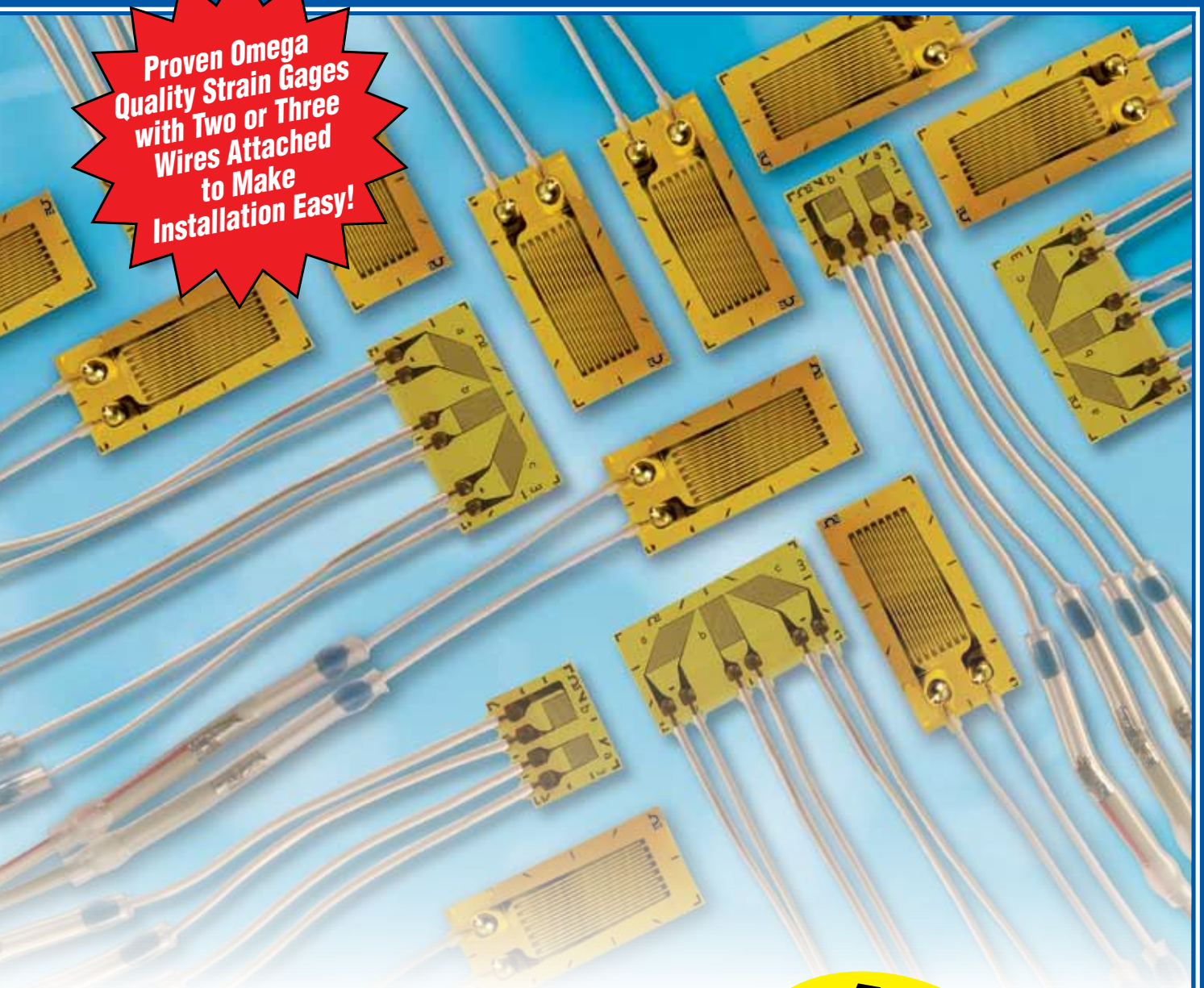
**Maximum Current Load (Voltage Output):** 5 mA  
**Frequency Response:** -3 dB @ 10 Hz  
**Response Time:** 35 ms (10 to 90%)  
**Bridge Supply:** 5 to 10 Vdc @ 120 mA  
**Line Regulation:** <0.01% typical 0.002%  
**Output Noise:** <1 mVrms 120 Hz bandwidth  
**AC Power:** 115V (90 to 130V), 230V (180 to 260V)  
**DC Power:** 11 to 30V, 8 W  
**Weight:** 4.7 kg (10.5 lb)  
**Dimensions:**  
**NEMA 4 (IP65) Box:** 254 L x 203 W x 102 mm H (10 x 8 x 4")  
**Total:** 318 x 229 x 112 mm (12.5 x 9 x 4.4")

| To Order  |                             |
|-----------|-----------------------------|
| MODEL NO. | DESCRIPTION                 |
| JBOX-4800 | 4-input summing transmitter |

Ordering Example: JBOX-4800, AC/DC-powered summing transmitter.

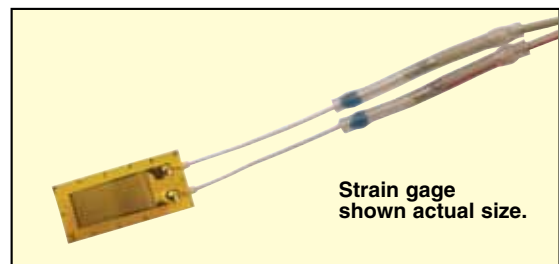
**PRE-WIRED STRAIN GAGES**

**Proven Omega  
Quality Strain Gages  
with Two or Three  
Wires Attached  
to Make  
Installation Easy!**



- ✓ No Soldering at the Measuring Point
- ✓ Each Gage has 50 mm of PTFE Cable before Transitioning to AWG 28 Leads to Prevent Leads from Adhering During Installation
- ✓ Short, Medium and Long Grid Linear Gages
- ✓ Short and Medium Grid XY Gages (T-Rosettes)
- ✓ Short and Medium Grid 0°/45°/90° Planar Rosettes
- ✓ Rugged Polyimide Carrier
- ✓ Fully Encapsulated Gages for Protection from the Environment

**Fast  
Delivery!**



Strain gage shown actual size.

# BDE WIDER STRAIN GAGES

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## PRECISION LINEAR PATTERN

### KFH Series

2- or 3-Wire Models

120 or 350 Ω

0.6 to 20 mm Grid Lengths

- ✓ Pre-Wired for Fast Installation
- ✓ No Soldering at Measurement End
- ✓ Broad Temperature Range
- ✓ 2- or 3-Wire Models
- ✓ Clear Alignment Marks

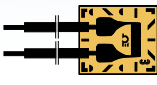
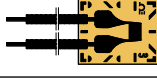
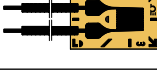




- ✓ Bonds with Hot or Cold Cure Adhesives
- ✓ PTFE Wire at Attachment End Prevents Sticking During Installation

Linear pattern precision gages with miniature and medium length grids are for general purpose and stress analysis applications. Available with either two 1-meter leads or three 3-meter leads and 120 or 350 Ω resistance. All models are compensated for steel.



Strain gage shown larger than actual size.

To Order Visit [omega.com/kfh](http://omega.com/kfh) for Pricing and Details

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch) |         |         |        | MAX V*<br>(Vrms) | TEMP COMP | TERMINATION AND LEAD LENGTH |
|---|------------------------|------------------------|----------------------|---------|---------|--------|------------------|-----------|-----------------------------|
|   |                        |                        | GRID                 |         | CARRIER |        |                  |           |                             |
|   |                        |                        | A                    | B       | C       | D      |                  |           |                             |
|  Shown larger than actual size, 0.3 mm   | <b>0.3 mm GRID</b>     |                        |                      |         |         |        |                  |           |                             |
|   | KFH-03-120-C1-11L1M2R  | 120                    | 0.3                  | 1.96    | 4.5     | 3.9    | 1.5              | ST        | Two 1 m leads               |
|   | KFH-03-120-C1-11L3M2R  | 120                    | (0.012)              | (0.077) | (0.18)  | (0.15) | 1.5              | ST        | Three 3 m leads             |
|  Shown larger than actual size, 0.6 mm | <b>0.6 mm GRID</b>     |                        |                      |         |         |        |                  |           |                             |
|   | KFH-06-120-C1-11L1M2R  | 120                    | 0.6                  | 1.1     | 4.8     | 3.9    | 1.5              | ST        | Two 1 m leads               |
|   | KFH-06-120-C1-11L3M3R  | 120                    | (0.024)              | (0.043) | (0.19)  | (0.15) | 1.5              | ST        | Three 3 m leads             |
|  Shown larger than actual size, 1.5 mm | <b>1.5 mm GRID</b>     |                        |                      |         |         |        |                  |           |                             |
|   | KFH-1.5-120-C1-11L1M2R | 120                    | 1.5                  | 1.5     | 5.8     | 3.9    | 2.5              | ST        | Two 1 m leads               |
|   | KFH-1.5-120-C1-11L3M3R | 120                    | (0.059)              | (0.059) | (0.23)  | (0.15) | 2.5              | ST        | Three 3 m leads             |
| Shown actual size, 3 mm<br>            | <b>3 mm GRID</b>       |                        |                      |         |         |        |                  |           |                             |
|   | KFH-3-120-C1-11L1M2R   | 120                    | 3.0                  | 2.0     | 7.4     | 3.9    | 4                | ST        | Two 1 m leads               |
|   | KFH-3-120-C1-11L3M3R   | 120                    |                      |         |         |        | 4                | ST        | Three 3 m leads             |
|   | KFH-3-350-C1-11L1M2R   | 350                    | (0.118)              | (0.079) | (0.29)  | (0.15) | 9                | ST        | Two 1 m leads               |
|   | KFH-3-350-C1-11L3M3R   | 350                    |                      |         |         |        | 9                | ST        | Three 3 m leads             |
| Shown actual size, 6 mm<br>            | <b>6 mm GRID</b>       |                        |                      |         |         |        |                  |           |                             |
|   | KFH-6-120-C1-11L1M2R   | 120                    | 6.0                  | 2.0     | 10.5    | 3.9    | 8                | ST        | Two 1 m leads               |
|   | KFH-6-120-C1-11L3M3S   | 120                    |                      |         |         |        | 8                | ST        | Three 3 m leads             |
|   | KFH-6-350-C1-11L1M2R   | 350                    | (0.24)               | (0.079) | (0.41)  | (0.15) | 15               | ST        | Two 1 m leads               |
|   | KFH-6-350-C1-11L3M3R   | 350                    |                      |         |         |        | 15               | ST        | Three 3 m leads             |
| Shown actual size, 10 mm<br>           | <b>10 mm GRID</b>      |                        |                      |         |         |        |                  |           |                             |
|   | KFH-10-120-C1-11L1M2R  | 120                    | 10                   | 3.0     | 14.8    | 4.8    | 14               | ST        | Two 1 m leads               |
|   | KFH-10-120-C1-11L3M3R  | 120                    | (0.39)               | (0.12)  | (0.58)  | (0.19) | 14               | ST        | Three 3 m leads             |
| Shown actual size, 20 mm<br>           | <b>20 mm GRID</b>      |                        |                      |         |         |        |                  |           |                             |
|   | KFH-20-120-C1-11L1M2R  | 120                    | 20                   | 3.0     | 25.2    | 4.8    | 7                | ST        | Two 1 m leads               |
|   | KFH-20-120-C1-11L3M3R  | 120                    | (0.79)               | (0.12)  | (0.99)  | (0.19) | 7                | ST        | Three 3 m leads             |

### ACCESSORIES

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| TT300     | Complete heat cure adhesive kit                           |
| SG496     | 1 oz methyl-based cyanoacrylate (approximately 750 gages) |
| SG401     | 0.1 oz ethyl-based cyanoacrylate (approximately 50 gages) |

\* Maximum permitted bridge energizing voltage (Vrms)

Ordering Examples: KFH-1.5-120-C1-11L1M2S, a linear 1.5 mm grid, 120 Ω, with two 1 m (3.3') leads.

KFH-3-350-C1-11L3M3S, a linear 3 mm grid, 350 Ω, with three 3 m (9.9') leads.

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# DDE WIDER STRAIN GAGES

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## PRECISION PLANAR X-Y PATTERN

### KFH Series

2- or 3-Wire Models

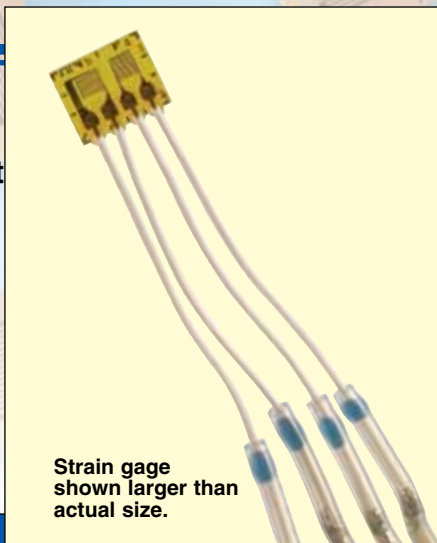
120 or 350 Ω

0.6 to 6 mm Grid Lengths

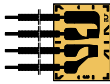
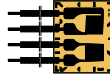


- ✓ Pre-Wired for Fast Installation
- ✓ No Soldering at Measurement End
- ✓ Broad Temperature Range
- ✓ 2- or 3-Wire Models
- ✓ Clear Alignment Marks

- ✓ Bonds with Hot or Cold Cure Adhesives
- ✓ PTFE Wire at Attachment End Prevents Sticking During Installation

The planar XY pattern allows precision strain measurement by eliminating the errors often associated with a stacked XY pattern. These gages are available with either two 1-meter leads or three 3-meter leads per grid and are compensated for steel.



To Order Visit [omega.com/kfh](http://omega.com/kfh) for Pricing and Details

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 10  | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch) |         |         |        | MAX V*<br>(VRMS) | TEMP<br>COMP | TERMINATION AND<br>LEAD LENGTH<br>PER GRID |
|---|-------------------------|------------------------|----------------------|---------|---------|--------|------------------|--------------|--|
|   |                         |                        | GRID                 |         | CARRIER |        |                  |              |  |
|   |                         |                        | A                    | B       | C       | D      |                  |              |  |
|  Shown larger than actual size, 0.6 mm  | <b>0.6 mm GRID</b>      |                        |                      |         |         |        |                  |              |  |
|   | KFH-06-120-D16-11L1M2S  | 120                    | 0.6                  | 1.0     | 5.1     | 6.9    | 1.5              | ST           | Two 1 m leads                              |
|   | KFH-06-120-D16-11L3M3S  | 120                    | (0.024)              | (0.039) | (0.20)  | (0.27) | 1.5              | ST           | Three 3 m leads                            |
|  Shown larger than actual size, 1.5 mm | <b>1.5 mm GRID</b>      |                        |                      |         |         |        |                  |              |  |
|   | KFH-1.5-120-D16-11L1M2S | 120                    | 1.5                  | 1.6     | 5.8     | 6.9    | 3                | ST           | Two 1 m leads                              |
|   | KFH-1.5-120-D16-11L3M3S | 120                    | (0.059)              | (0.063) | (0.23)  | (0.27) | 3                | ST           | Three 3 m leads                            |
| Shown actual size, 3 mm<br>            | <b>3 mm GRID</b>        |                        |                      |         |         |        |                  |              |  |
|   | KFH-3-120-D16-11L1M2S   | 120                    | 3.0                  | 3.2     | 7.5     | 9.4    | 5.5              | ST           | Two 1 m leads                              |
|   | KFH-3-120-D16-11L3M3S   | 120                    |                      |         |         |        | 5.5              | ST           | Three 3 m leads                            |
|   | KFH-3-350-D16-11L1M2S   | 350                    | (0.12)               | (0.13)  | (0.30)  | (0.37) | 10               | ST           | Two 1 m leads                              |
|   | KFH-3-350-D16-11L3M3S   | 350                    | (0.12)               | (0.13)  | (0.30)  | (0.37) | 10               | ST           | Three 3 m leads                            |
| Shown actual size, 6 mm<br>            | <b>6 mm GRID</b>        |                        |                      |         |         |        |                  |              |  |
|   | KFH-6-120-D16-11L1M2S   | 120                    | 6.0                  | 6.3     | 11      | 16     | 11               | ST           | Two 1 m leads                              |
|   | KFH-6-120-D16-11L3M3S   | 120                    |                      |         |         |        | 11               | ST           | Three 3 m leads                            |
|   | KFH-6-350-D16-11L1M2S   | 350                    | (0.24)               | (0.25)  | (0.43)  | (0.63) | 20               | ST           | Two 1 m leads                              |
|   | KFH-6-350-D16-11L3M3S   | 350                    | (0.24)               | (0.25)  | (0.43)  | (0.63) | 20               | ST           | Three 3 m leads                            |

### ACCESSORIES

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| TT300     | Complete heat cure adhesive kit                           |
| SG496     | 1 oz methyl-based cyanoacrylate (approximately 750 gages) |
| SG401     | 0.1 oz ethyl-based cyanoacrylate (approximately 50 gages) |

\* Maximum permitted bridge energizing voltage (Vrms)

Ordering Examples: **KFH-1.5-120-D16-11L1M2S**, a linear 1.5 mm grid, 120 Ω, with two 1 m (3.3') leads per grid.

**KFH-3-350-D16-11L3M3S**, a linear 3 mm grid, 350 Ω, with three 3 m (9.8') leads per grid

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# **DDE WIDER STRAIN GAGES**

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## **PLANAR 0°/45°/90° ROSETTE PATTERN**

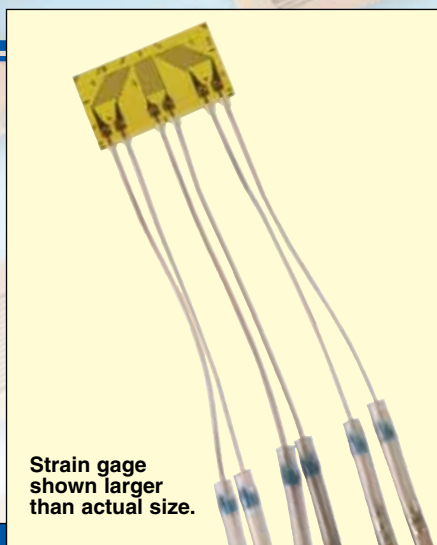
### **KFH Series**

**2- or 3-Wire Models**  
**120 or 350 Ω**  
**0.6 to 6 mm Grid Lengths**





- ✓ Pre-Wired for Fast Installation
- ✓ No Soldering at Measurement End
- ✓ Broad Temperature Range
- ✓ 2- or 3-Wire Models
- ✓ Clear Alignment Marks

- ✓ Bonds with Hot or Cold Cure Adhesives
- ✓ PTFE Wire at Attachment End Prevents Sticking During Installation

The planar rosette pattern allows precision strain measurement by eliminating the errors often associated with a stacked pattern. These gages are available with either two 1-meter leads or three 3-meter leads per grid and are compensated for steel.



**To Order Visit [omega.com/kfh](http://omega.com/kfh) for Pricing and Details**

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 10  | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch) |                |                |                | MAX V*<br>(VRMS) | TEMP COMP | TERMINATION AND LEAD LENGTH PER GRID |
|---|-------------------------|------------------------|----------------------|----------------|----------------|----------------|------------------|-----------|--------------------------------------|
|   |                         |                        | GRID                 |                | CARRIER        |                |                  |           |                                      |
|   |                         |                        | A                    | B              | C              | D              |                  |           |                                      |
|  Shown larger than actual size, 0.6 mm | <b>0.6 mm GRID</b>      |                        |                      |                |                |                |                  |           |                                      |
|   | KFH-06-120-D17-11L1M2S  | 120                    | 0.6<br>(0.024)       | 1.1<br>(0.043) | 4.8<br>(0.19)  | 9.9<br>(0.39)  | 1.6              | ST        | Two 1 m leads                        |
|   | KFH-06-120-D17-11L3M3S  | 120                    |                      |                |                |                | 1.6              | ST        | Three 3 m leads                      |
|  Shown larger than actual size, 1.5 mm | <b>1.5 mm GRID</b>      |                        |                      |                |                |                |                  |           |                                      |
|   | KFH-1.5-120-D17-11L1M2S | 120                    | 1.5<br>(0.059)       | 1.5<br>(0.059) | 5.8<br>(0.23)  | 10.2<br>(0.40) | 2.5              | ST        | Two 1 m leads                        |
|   | KFH-1.5-120-D17-11L3M3S | 120                    |                      |                |                |                | 2.5              | ST        | Three 3 m leads                      |
| Shown actual size, 3 mm<br>            | <b>3 mm GRID</b>        |                        |                      |                |                |                |                  |           |                                      |
|   | KFH-3-120-D17-11L1M2S   | 120                    | 3.0<br>(0.12)        | 2.0<br>(0.079) | 7.4<br>(0.29)  | 13.9<br>(0.55) | 3                | ST        | Two 1 m leads                        |
|   | KFH-3-120-D17-11L3M3S   | 120                    |                      |                |                |                | 3                | ST        | Three 3 m leads                      |
|   | KFH-3-350-D17-11L1M2S   | 350                    |                      |                |                |                | 5.5              | ST        | Two 1 m leads                        |
|   | KFH-3-350-D17-11L3M3S   | 350                    |                      |                |                |                | 5.5              | ST        | Three 3 m leads                      |
| Shown actual size, 6 mm<br>            | <b>6 mm GRID</b>        |                        |                      |                |                |                |                  |           |                                      |
|   | KFH-6-120-D17-11L1M2S   | 120                    | 6.0<br>(0.24)        | 2.0<br>(0.079) | 10.5<br>(0.41) | 18.7<br>(0.74) | 7.5              | ST        | Two 1 m leads                        |
|   | KFH-6-120-D17-11L3M3S   | 120                    |                      |                |                |                | 7.5              | ST        | Three 3 m leads                      |
|   | KFH-6-350-D17-11L1M2S   | 350                    |                      |                |                |                | 13               | ST        | Two 1 m leads                        |
|   | KFH-6-350-D17-11L3M3S   | 350                    |                      |                |                |                | 13               | ST        | Three 3 m leads                      |

### **ACCESSORIES**

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| TT300     | Complete heat cure adhesive kit                           |
| SG496     | 1 oz methyl-based cyanoacrylate (approximately 750 gages) |
| SG401     | 0.1 oz ethyl-based cyanoacrylate (approximately 50 gages) |

\* Maximum permitted bridge energizing voltage (Vrms)

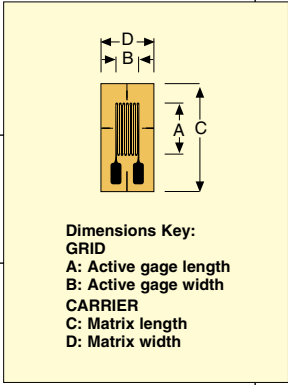
Ordering Examples: **KFH-1.5-120-D17-11L1M2S**, a linear 1.5 mm grid, 120 Ω, with two 1 m (3.3') leads per grid.

**KFH-3-350-D17-11L3M3S**, a linear 3 mm grid, 350 Ω, with three 3 m (9.8') leads per grid.



**SPECIFICATIONS**

|  |   |   |
|--|---|---|
| <b>Strain Gage Construction</b><br><b>Measuring Grid</b><br>Material<br>Thickness<br><b>Carrier</b><br>Material<br>Thickness<br><b>Connections</b>   | µm (microinch)<br><br><br>µm (microinch)  | Foil strain gage with embedded measuring grid<br><br>Constantan<br>3.8 or 5 (150 or 197), depending upon strain gage type<br><br>Polyimide<br>45 ± 10 (1.772 ± 394)<br><br>PTFE wire, Ø - 0.051 mm <sup>2</sup> , approximately 50 mm long, connected to AWG 28 ribbon cables (PVC insulated) through solder sleeves in 2- or 3-wire configurations   |
| <b>Nominal Resistance<sup>1</sup></b><br><b>Resistance Tolerance<sup>1</sup></b><br>with 0.6 mm and 1.5 mm grid length<br><b>Gage Factor</b><br><b>Gage Factor Tolerance</b><br>with 0.6 mm and 1.5 mm grid length<br>Temperature coefficient of gage factor<br>Nominal value of gage factor temperature coefficient | Ω<br>%<br>%<br>%<br>%<br>1/K [1/°F]   | 120 or 350 depending upon gage<br>±0.35<br>±1<br>approximately 2 (stated on package)<br>±1<br>±1.5<br>(115 ± 10) x 10 <sup>-6</sup> [(64 ± 5.5) x 10 <sup>-6</sup> ]<br>Specified on each package   |
| <b>Reference Temperature</b><br><b>Operating Temperature Range</b><br>for static measurement (zero point related)<br>for dynamic measurement (not zero point related)  | °C (°F)<br>°C (°F)<br>°C (°F)   | 23<br>PTFE cable<br>-10 to 155 (-14 to 320)<br>-10 to 155 (-14 to 320)  |
| <b>Transverse Sensitivity</b><br>for linear 3 mm 120Ω gage   | %   | ±0.2  |
| <b>Temperature Response</b><br>Temperature response as required, adapted to coefficient of thermal expansion<br>α for aluminum<br>α for plastic material<br>α for austenitic steel<br>α for titanium<br>α for molybdenum<br>α for quartz<br>Tolerance of temperature response  | 1/K [1/°F]<br>1/K [1/°F]<br>1/K [1/°F]<br>1/K [1/°F]<br>1/K [1/°F]<br>1/K [1/°F]<br>1/K [1/°F]<br>°C (°F) | Specified on each package<br><br>10.8 x 10 <sup>-6</sup> (6.0 x 10 <sup>-6</sup> )<br>23 x 10 <sup>-6</sup> (12.8 x 10 <sup>-6</sup> )<br>65 x 10 <sup>-6</sup> (36.1 x 10 <sup>-6</sup> )<br>16 x 10 <sup>-6</sup> (8.9 x 10 <sup>-6</sup> )<br>9 x 10 <sup>-6</sup> (5.0 x 10 <sup>-6</sup> )<br>5.4 x 10 <sup>-6</sup> (3.0 x 10 <sup>-6</sup> )<br>0.05 x 10 <sup>-6</sup> (0.3 x 10 <sup>-6</sup> )<br>-10 to 120 (-14 to 248) |
| <b>Mechanical Hysteresis</b><br>1) at reference temperature and strain $\epsilon = 1000 \mu\text{m/m}$ (microstrain) on linear 3 mm 120Ω gage<br>at 1 <sup>st</sup> load cycle and adhesive SG496<br>at 3 <sup>rd</sup> load cycle and adhesive SG496  | µm/m (microstrain)<br>µm/m (microstrain)  | 1<br>0.5  |
| <b>Maximum Elongation</b><br>at reference temperature on linear 3 mm 120Ω gage<br>Absolute strain value for positive direction<br>Absolute strain value for negative direction   | µm/m (microstrain)<br>µm/m (microstrain)  | 20,000 ± 2%<br>25,000 ± 2.5%  |
| <b>Fatigue Life</b><br>at reference temperature on linear 3 mm 120Ω gage<br><b>Achievable Number of Load Cycles <math>L_w</math> at Alternating Strain <math>\epsilon_w = \pm 1000 \mu\text{m/m}</math> and</b><br>zero point variation ≤ 300<br>zero point variation ≤ 30   | µm/m (microstrain)<br>µm/m (microstrain)  | >1 x 10 <sup>7</sup> (test was stopped)<br>5 x 10 <sup>6</sup>  |
| <b>Minimum Radius of Curvature, Longitudinal and Transverse, at Reference Temperature</b><br>within measuring grid area<br>within solder tab area<br><b>Applicable Bonding Materials</b><br><b>Cold Cure Adhesives</b><br><b>Heat Cure Adhesives</b>   | mm (inch)<br>mm (inch)  | 0.3 (0.012)<br>10 (0.394)<br>SG496, SG401<br>TT300  |



# CANISTER-STYLE COMPRESSION

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## LOAD CELLS

### STANDARD AND METRIC MODELS

#### Compression

0-500 lb to 0-2 M lb

0-250 to 0-10,000 kgf

LC1011-1K, connector style, shown actual size, see next page for dimensions.

### LC1001/LCM1001 Series LC1011/LCM1011 Series



Standard

- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ 5-Point NIST-Traceable Calibration (Standard)
- ✓ Canister Design Ideal for Axial Compression Applications
- ✓ Heavy-Duty, Environmentally Sealed Case for Harsh Environments
- ✓ Dual-Bridge Models Available



LC1011/LCM1011 models with twist-lock connector.

#### SPECIFICATIONS

**Excitation:** 10 Vdc (15 Vdc maximum)

**Output:** 2 mV/V  $\pm 0.25\%$

**5-Point Calibration (in Compression):**

0%, 50%, 100%, 50%, 0% calibrated to full scale up to 300,000 lb; load cells over 300,000 lb calibrated at 300,000 lb. For a full scale calibration over 300,000 lb, specify option “-FS” after model number (consult Sales for price and delivery).

**Protection Class:** IP67

**Linearity:**  $\pm 0.05\%$  FSO

**Hysteresis:**  $\pm 0.03\%$  FSO

**Repeatability:**  $\pm 0.02\%$  FSO

**Zero Balance:**  $\pm 1\%$  full scale

**Operating Temp Range:** -46 to 94°C (-50 to 200°F).

**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:**  $\pm 0.0018\%$  full scale/°C

**Span:**  $\pm 0.0018\%$  rdg/°C

**Safe Overload:** 150% of rated capacity

**Ultimate Overload:** 300% of rated capacity

**Input Resistance:** 350  $\pm 10 \Omega$

**Output Resistance:** 350  $\pm 10 \Omega$

**Full Scale Deflection:** 0.18 to 0.50 mm (0.007 to 0.020") typical

**Construction:**

**Metric and Standard Ranges**

<500,000 lb: 17-4 PH stainless steel

Ranges  $\geq 500,000$  lb: High-alloy steel

**Electrical:**

**LC1001/LCM1001:** 4.8 m (15')

4-conductor shielded PVC cable

**LC1011/LCM1011:** PTIH-10-6P (or equivalent)

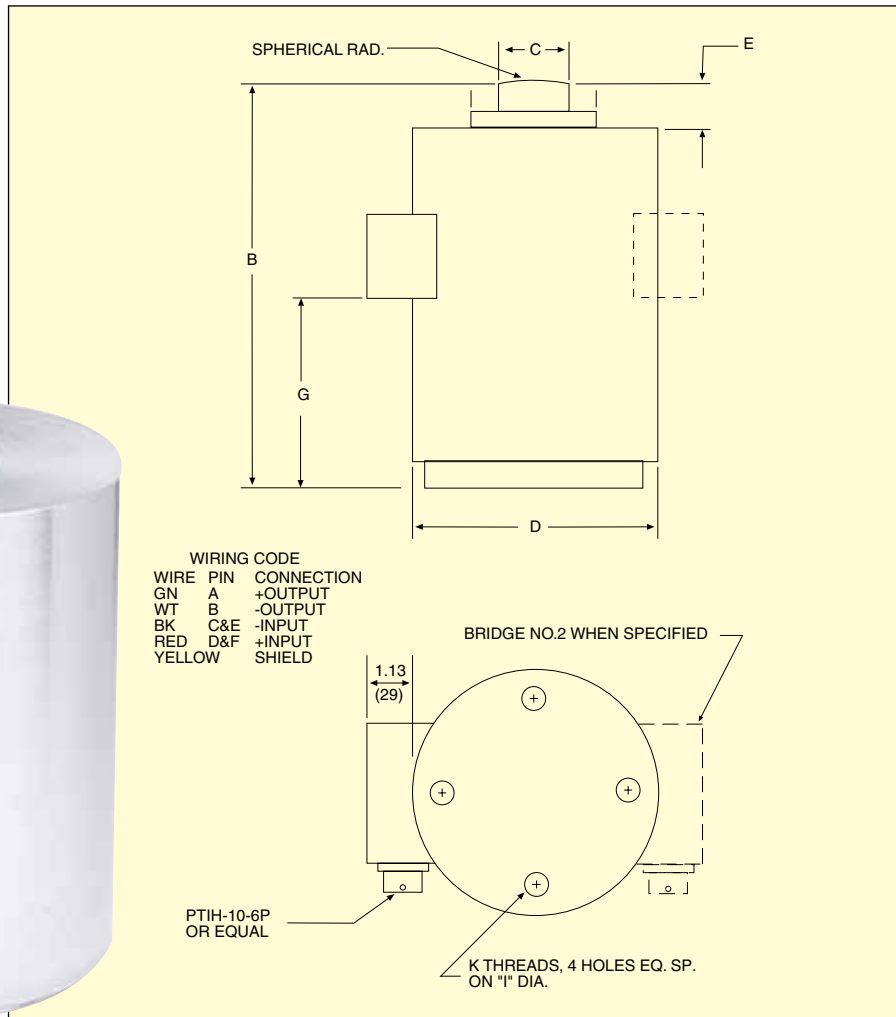
**Mating Connector:** PT06F10-6S-R, (sold separately)

**Cable Assembly with Twist-Lock Connector:** CA-6PC24-3-015 (sold separately)

# HEAVY-DUTY CANISTER STYLE COMPRESSION LOAD CELLS

**Models Available with Built-In Amplifiers!**

LC1011-10K, connector style, shown smaller than actual size.



## Dimensions: mm (inch)

| CAPACITY<br>kgf (lb)       | B             | C             | D              | E            | G             | I<br>±.005     | K (THREAD)                                   | WEIGHT<br>kg (lb) |
|----------------------------|---------------|---------------|----------------|--------------|---------------|----------------|--|-------------------|
| 250 to 1K<br>(500 to 2.5K) | 116<br>(4.6)  | 32<br>(1.25)  | 89<br>(3.50)   | 6<br>(0.25)  | 32<br>(1.25)  | 60<br>(2.375)  | M10 x 1.5 x 3/8 DP<br>3/8-24 UNF-2B x 3/8 DP | 2.7<br>(6)        |
| 2K to 5K<br>(5K to 10K)    | 151<br>(5.9)  | 32<br>(1.25)  | 89<br>(3.50)   | 19<br>(0.75) | 46<br>(1.81)  | 60<br>(2.375)  | M10 x 1.5 x 3/8 DP<br>3/8-24 UNF-2B x 3/8 DP | 4.5<br>(10)       |
| 10K<br>(20K to 50K)        | 191<br>(7.5)  | 32<br>(1.25)  | 114<br>(4.50)  | 19<br>(0.75) | 77<br>(3.44)  | 60<br>(2.375)  | M10 x 1.5 x 3/8 DP<br>3/8-24 UNF-2B x 3/8 DP | 9<br>(20)         |
| (100,000)                  | 232<br>(9.1)  | 44<br>(1.75)  | 141<br>(5.56)  | 27<br>(1.06) | 121<br>(4.75) | 102<br>(4.000) | 1/2-20 UNF-2B x 1/2 DP                       | 88<br>(40)        |
| (200,000)                  | 295<br>(11.6) | 64<br>(2.50)  | 168<br>(6.63)  | 27<br>(1.06) | 159<br>(6.25) | 140<br>(5.500) | 5/8-18 UNF-2B x 1 DP                         | 43<br>(95)        |
| (300,000)                  | 356<br>(14)   | 76<br>(3.00)  | 219<br>(8.63)  | 33<br>(1.31) | 194<br>(7.63) | 140<br>(5.500) | 3/4-16 UNF-2B x 1 1/4 DP                     | 48<br>(105)       |
| (400,000)                  | 356<br>(14)   | 89<br>(3.50)  | 219<br>(8.63)  | 33<br>(1.31) | 194<br>(7.63) | 140<br>(5.500) | 3/4-16 UNF-2B x 1 1/4 DP                     | 64<br>(140)       |
| (500,000)                  | 356<br>(14)   | 89<br>(3.50)  | 219<br>(8.63)  | 22<br>(0.88) | 194<br>(7.63) | 89<br>(3.500)  | 1/2-20 UNF-2B x 3/4 DP                       | 77<br>(170)       |
| (1,000,000)                | 356<br>(14)   | 140<br>(5.50) | 219<br>(8.63)  | 22<br>(0.88) | 140<br>(5.50) | 114<br>(4.500) | 5/8-18 UNF-2B x 1.0 DP                       | 115<br>(250)      |
| (2,000,000)                | 406<br>(16)   | 178<br>(7.00) | 273<br>(10.75) | 25<br>(1.00) | 152<br>(6.00) | 140<br>(5.500) | 1-14 UNS-2B x 1 1/4 DP                       | 182<br>(400)      |

## POPULAR OPTIONS (Additional Cost)

0 to 5 Vdc Output: (≥5000 kg) “-5V”

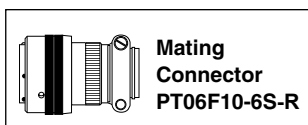
Overload Stops: “-OL”

Dual Bridge: “-DUAL”

Extended Temperature Range:

-45 to 93°C (-50 to 200°F) “-TC1”

-45 to 177°C (-50 to 350°F) “-TC2”



| <b>To Order Visit <a href="http://omega.com/lc1001">omega.com/lc1001</a> for Pricing and Details</b> |           |                    |                        |                          |                               |                              |
|--|-----------|--------------------|------------------------|--------------------------|-------------------------------|------------------------------|
| <b>Canister-Style Compression Load Cells</b>   |           |                    |                        |                          | <b>Accessories</b>            |                              |
| <b>CAPACITY</b>  |           | <b>CABLE STYLE</b> | <b>CONNECTOR STYLE</b> | <b>COMPATABLE METERS</b> | <b>BASE PLATE** MODEL NO.</b> | <b>TOP PLATE** MODEL NO.</b> |
| <b>kgf</b>   | <b>lb</b> |                    |                        |                          |                               |                              |
| <b>STANDARD MODELS</b>   |           |                    |                        |                          |                               |                              |
| 227  | 500       | LC1001-500         | LC1011-500             | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 455  | 1000      | LC1001-1K          | LC1011-1K              | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 1134   | 2500      | LC1001-2.5K        | LC1011-2.5K            | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 2269   | 5000      | LC1001-5K          | LC1011-5K              | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 4537   | 10 K      | LC1001-10K         | LC1011-10K             | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 9074   | 20 K      | LC1001-20K         | LC1011-20K             | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 22,686   | 50 K      | LC1001-50K         | LC1011-50K             | DP41-W, DP41-S           | LC1000-BP4                    | LC1000-TP4                   |
| 45,372   | 100 K     | LC1001-100K        | LC1011-100K            | DP41-W, DP41-S           | LC1000-BP6                    | LC1000-TP6                   |
| 90,744   | 200 K     | LC1001-200K        | LC1011-200K            | DP41-W, DP41-S           | LC1000-BP8                    | LC1000-TP8                   |
| 136,116  | 300 K     | LC1001-300K        | LC1011-300K            | DP41-W, DP41-S           | LC1000-BP9                    | LC1000-TP9                   |
| 226,860  | 500 K     | LC1001-500K        | LC1011-500K            | DP41-W, DP41-S           | n/a                           | n/a                          |
| 453,721  | 1 M       | LC1001-1M          | LC1011-1M              | DP41-W, DP41-S           | n/a                           | n/a                          |
| 746,483  | 2 M       | LC1001-2M          | LC1011-2M              | DP41-W, DP41-S           | n/a                           | n/a                          |
| <b>METRIC MODELS</b>   |           |                    |                        |                          |                               |                              |
| 250  | 551       | LCM1001-250        | LCM1011-250            | DP41-B, DP41-S           | LCM1000-BP4                   | LCM1000-TP4                  |
| 500  | 1102      | LCM1001-500        | LCM1011-500            | DP41-B, DP41-S           | LCM1000-BP4                   | LCM1000-TP4                  |
| 1000   | 2205      | LCM1001-1K         | LCM1011-1K             | DP41-B, DP41-S           | LCM1000-BP4                   | LCM1000-TP4                  |
| 2000   | 4409      | LCM1001-2K         | LCM1011-2K             | DP41-B, DP41-S           | LCM1000-BP4                   | LCM1000-TP4                  |
| 5000   | 11,023    | LCM1001-5K         | LCM1011-5K             | DP41-B, DP41-S           | LCM1000-BP4                   | LCM1000-TP4                  |
| 10,000   | 22,046    | LCM1001-10K        | LCM1011-10K            | DP41-B, DP41-S           | LCM1000-BP4                   | LCM1000-TP4                  |

**ACCESSORY**

| <b>MODEL NO.</b> | <b>DESCRIPTION</b>  |
|------------------|---|
| PT06F10-6S-R     | Mating connector for LC1011/LCM1011 series load cells                         |
| CA-6PC24-3-015   | Cable assembly with twist-lock connector for LC1011/LCM1011 series load cells |



LC1000-BP4, base plates shown smaller than actual size.

Visit [omega.com/lc1000-tp](http://omega.com/lc1000-tp) for top mounting plates.

Visit [omega.com/lc1000-bp](http://omega.com/lc1000-bp) for base plates.

Visit [omega.com](http://omega.com) for compatible meters.

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Base plates and top plates referenced are carbon steel.

To order CSA-approved Intrinsically Safe version, add suffix “-CSA” to model number (no extra charge).

To order dual-bridge load cell, add suffix “-DUAL” to model number.

**Ordering Examples:** LC1001-100K, 100,000 lb capacity cable-style load cell.

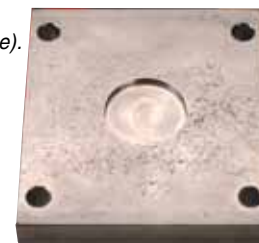
LC1000-BP6, accompanying base plate. LC1000-TP6, accompanying top plate.

LCM1001-10K, 10 ton capacity cable-style load cell, LCM1000-BP4, accompanying base plate.

LCM1000-TP4, accompanying top plate.

LCM1011-500-Dual, dual-bridge 500 kgf capacity connector-style load cell.

PT06F10-6S-R, mating connector (not included).



LC1000-TP4, top plates shown smaller than actual size.

# BEAM LOAD CELLS HIGH ACCURACY, ECONOMICAL PRICE STANDARD AND METRIC MODELS

**Tension/Compression**  
0-25 lb to 0-40,000 lb  
0-10 kgf to 0-10,000 kgf

## LC101/LCM101 Series LC111/LCM111 Series

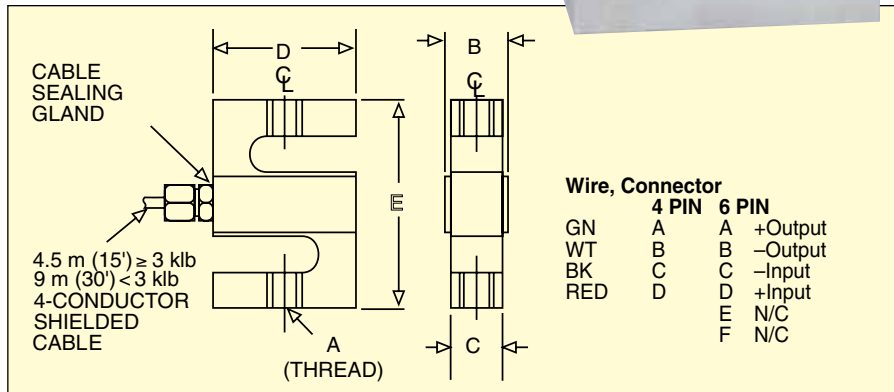
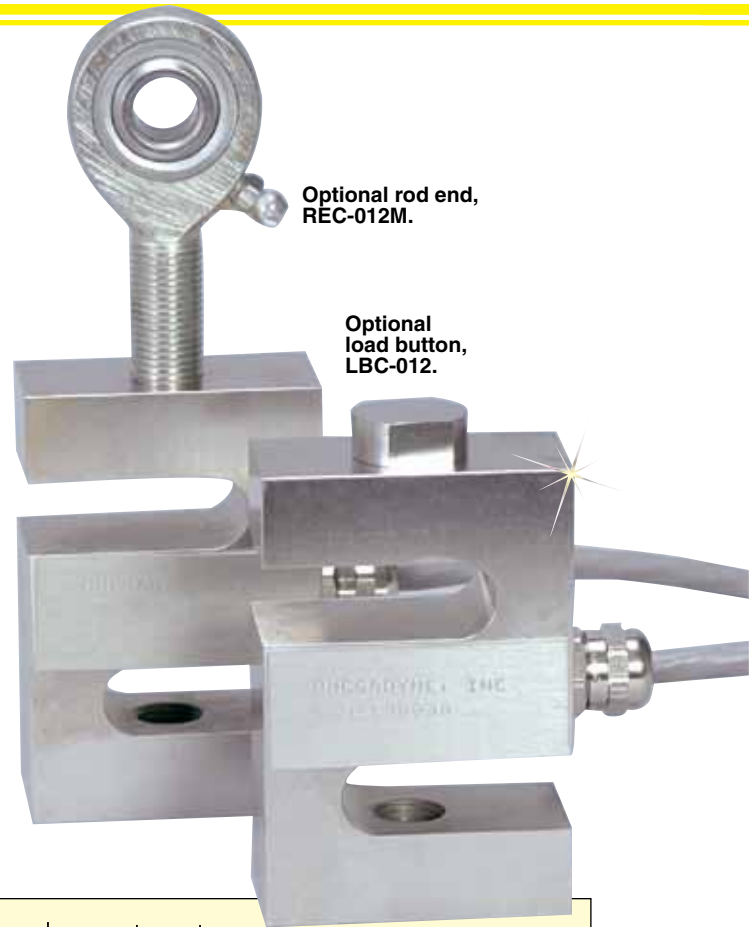


- ✓ All Stainless Steel for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ 5-Point Calibration Provided (in Tension)

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum  
**Output:** 3 mV/V ±0.0075 mV/V  
**Linearity:** ±0.03% FSO (0.1% 40 K)  
**Hysteresis:** ±0.02% FSO (0.1% 40 K)  
**Repeatability:** ±0.01% FSO (0.05% 40 K)  
**Zero Balance:** ±1% FSO  
**Operating Temp Range:**  
 -40 to 93°C (-40 to 200°F)  
**Compensated Temp Range:**  
 17 to 71°C (60 to 160°F)  
**Thermal Effects:**  
 Zero: 0.002% FSO/°C  
 Span: 0.002% FSO/°C  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Input Resistance:** 350 ±10 Ω  
**Output Resistance:** 350 ±10 Ω  
**Full Scale Deflection:** 0.010 to 0.020"  
**Construction:** 17-4 PH stainless steel  
**Electrical (LC101/LCM101)**  
**(4-Conductor Shielded Cable):**  
 <100 kgf/250 lb: 9 m (30') 24 AWG  
 250 to 1000 kgf/250 to 2000 lb:  
 9 m (30') 20 AWG  
 ≥1500 kgf/3000 lb: 4.5 m (15') 20 AWG  
**Mating Connector (LC111/LCM111):**  
 ≤100 kgf/200 lb: PT06F8-4S-R,  
 sold separately  
 ≥250 kgf/250 lb: PT06F10-6S-R,  
 sold separately

**STANDARD**  
LC101-2K  
shown slightly  
smaller than  
actual size.



### Dimensions: mm (inch)

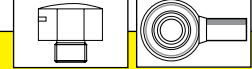
| CAPACITY     | A          | B         | C         | D         | E         | WEIGHT kg (lb) |
|--------------|------------|-----------|-----------|-----------|-----------|----------------|
| <b>lb</b>    |            |           |           |           |           |                |
| 25 to 200    | 1/4-28     | 19 (0.75) | 13 (0.50) | 38 (1.5)  | 64 (2.5)  | 0.45 (1.0)     |
| 250 to 2.5K  | 1/2-20     | 32 (1.25) | 25 (1.0)  | 51 (2.0)  | 76 (3.0)  | 1.1 (2.5)      |
| 3K to 5K     | 5/8-18     | 32 (1.25) | 25 (1.0)  | 51 (2.5)  | 89 (3.5)  | 1.6 (3.5)      |
| 10K to 20K   | 1-14       | 44 (1.75) | 38 (1.5)  | 76 (3.0)  | 108 (4.3) | 2.0 (4.5)      |
| 25K to 30K   | 1-14       | 57 (2.25) | 51 (2.0)  | 102 (4.0) | 108 (4.3) | 4 (9)          |
| 40K          | 1 1/4-12   | 83 (3.25) | 76 (3.0)  | 102 (4.0) | 140 (5.5) | 6 (13)         |
| <b>kgf</b>   |            |           |           |           |           |                |
| 10 to 100    | M6 x 1.00  | 19 (0.75) | 13 (0.50) | 38 (1.5)  | 64 (2.5)  | 0.45 (1.0)     |
| 250 to 1000  | M12 x 1.75 | 32 (1.25) | 25 (1.0)  | 51 (2.0)  | 76 (3.0)  | 1.1 (2.5)      |
| 1500 to 2000 | M16 x 2.0  | 32 (1.25) | 25 (1.0)  | 51 (2.5)  | 89 (3.5)  | 1.6 (3.5)      |
| 5K to 10K    | M24 x 2.00 | 44 (1.75) | 38 (1.5)  | 76 (3.0)  | 108 (4.3) | 2.0 (4.5)      |

# ALL STAINLESS STEEL "S" BEAM LOAD CELLS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

HIGH ACCURACY, ECONOMICAL PRICE

STANDARD AND METRIC MODELS



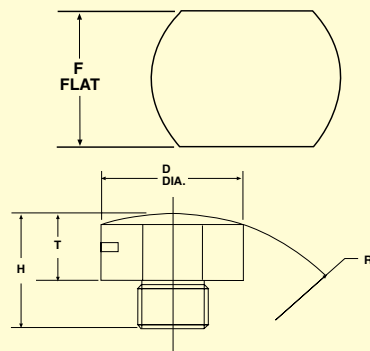
## STANDARD LOAD BUTTONS

| MODEL NO. | THREAD |
|-----------|--------|
| LBC-014   | ¼-28   |
| LBC-012   | ½-20   |
| LBC-058   | ⅝-18   |
| LBC-100   | 1-14   |
| LBC-114   | 1¼-12  |

## METRIC LOAD BUTTONS

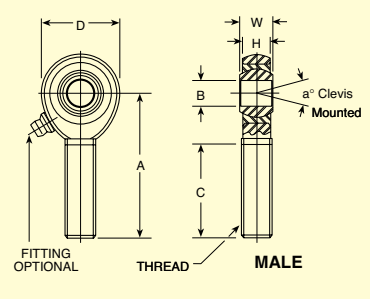
| MODEL NO. | THREAD     |
|-----------|------------|
| MLBC-M6   | M6 x 1.0   |
| MLBC-M12  | M12 x 1.75 |
| MLBC-M16  | M16 x 2.0  |
| MLBC-M24  | M24 x 2.0  |

Load Button Dimensions



Visit us online for dimensions.

Rod End Dimensions



## To Order

| CAPACITY               |        | MODEL       |             | COMPATIBLE METERS*       | LOAD BUTTON | ROD END    |
|------------------------|--------|-------------|-------------|--------------------------|-------------|------------|
| lb                     | kgf    | CABLE       | CONNECTOR   |                          | MODEL NO.   | MODEL NO.  |
| <b>STANDARD MODELS</b> |        |             |             |                          |             |            |
| 25                     | —      | LC101-25    | LC111-25    | DP41-S, DP25B-S          | LBC-014     | REC-014M   |
| 50                     | —      | LC101-50    | LC111-50    | DP41-S, DP25B-S          | LBC-014     | REC-014M   |
| 100                    | —      | LC101-100   | LC111-100   | DP41-S, DP25B-S          | LBC-014     | REC-014M   |
| 200                    | —      | LC101-200   | LC111-200   | DP41-S, DP25B-S          | LBC-014     | REC-014M   |
| 250                    | —      | LC101-250   | LC111-250   | DP41-S, DP25B-S          | LBC-012     | REC-012M   |
| 500                    | —      | LC101-500   | LC111-500   | DP41-S, DP25B-S          | LBC-012     | REC-012M   |
| 1000                   | —      | LC101-1K    | LC111-1K    | DP41-S, DP25B-S          | LBC-012     | REC-012M   |
| 2000                   | —      | LC101-2K    | LC111-2K    | DP41-S, DP25B-S          | LBC-012     | REC-012M   |
| 3000                   | —      | LC101-3K    | LC111-3K    | DP41-S, DP25B-S          | LBC-058     | REC-058M   |
| 5000                   | —      | LC101-5K    | LC111-5K    | DP41-S, DP25B-S          | LBC-058     | REC-058M   |
| 10,000                 | —      | LC101-10K   | LC111-10K   | DP41-S, DP25B-S          | LBC-100     | REC-100M   |
| 20,000                 | —      | LC101-20K   | LC111-20K   | DP41-S, DP25B-S          | LBC-100     | REC-100M   |
| 25,000                 | —      | LC101-25K   | LC111-25K   | DP41-S, DP25B-S          | LBC-100     | REC-100M-1 |
| 30,000                 | —      | LC101-30K   | LC111-30K   | DP41-S, DP25B-S          | LBC-100     | REC-100M-1 |
| 40,000                 | —      | LC101-40K   | LC111-40K   | DP41-S, DP25B-S          | LBC-114     | REC-114M   |
| <b>METRIC MODELS</b>   |        |             |             |                          |             |            |
| —                      | 10     | LCM101-10   | LCM111-10   | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M   |
| —                      | 25     | LCM101-25   | LCM111-25   | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M   |
| —                      | 50     | LCM101-50   | LCM111-50   | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M   |
| —                      | 100    | LCM101-100  | LCM111-100  | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M   |
| —                      | 250    | LCM101-250  | LCM111-250  | iSeries, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M  |
| —                      | 500    | LCM101-500  | LCM111-500  | iSeries, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M  |
| —                      | 1000   | LCM101-1K   | LCM111-1K   | iSeries, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M  |
| —                      | 1500   | LCM101-1.5K | LCM111-1.5K | iSeries, DP41-S, DP25B-S | MLBC-M16    | MREC-M16M  |
| —                      | 2000   | LCM101-2K   | LCM111-2K   | iSeries, DP41-S, DP25B-S | MLBC-M16    | MREC-M16M  |
| —                      | 5000   | LCM101-5K   | LCM111-5K   | iSeries, DP41-S, DP25B-S | MLBC-M24    | MREC-M24M  |
| —                      | 10,000 | LCM101-10K  | LCM111-10K  | iSeries, DP41-S, DP25B-S | MLBC-M24    | MREC-M24M  |

## ACCESSORIES

| MODEL NO.       | DESCRIPTION   |
|-----------------|---|
| PT06F8-4S-R     | Mating connector for LC111/LCM111 series load cells, 200 lb, <100 kg                  |
| PT06F10-6S-R    | Mating connector for LC111/LCM111 series load cells, 250 lb, >250 kg                  |
| CA-4PC24-2A-015 | LC111/LCM111 series load cells, 200 lb, < 100 kg, cable assembly with 4 pin connector |
| CA-4PC24-2-015  | LC111/LCM111 series load cells, 250 lb, > 250 kg, cable assembly with 6 pin connector |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

To order connector style, change model number to LC111, no extra charge. Mating connector sold separately.

Ordering Examples: LC111-200, 200 lb capacity connector-style load cell.

LCM111-100, 100 kgf capacity connector-style load cell. PT06F8-4S-R, mating connector, REC-014M, matching rod end, LBC-014, matching load button.

LC101-5K, 5000 lb capacity cable-style load cell. REC-058M, matching rod end.

## ROD ENDS

| To Order      |            |             |            |               |             |            |             |    |                | Dimensions: mm (inch) |
|---------------|------------|-------------|------------|---------------|-------------|------------|-------------|----|----------------|-----------------------|
| MALE ROD ENDS | THREAD     | B           | W          | H             | A           | D          | C           | a° | STATIC LOAD lb |                       |
| REC-014M      | ¼-28 UNF   | 5 (0.190)   | 8 (0.312)  | 6 (0.250)     | 40 (1.562)  | 19 (0.750) | 25 (1.000)  | 10 | 2158           |                       |
| REC-012M      | ½-20 UNF   | 11 (0.4375) | 14 (0.562) | 11 (0.437)    | 62 (2.438)  | 33 (1.312) | 38 (1.500)  | 12 | 23,452         |                       |
| REC-058M      | ⅝-18 UNF   | 13 (0.5000) | 16 (0.625) | 13 (0.500)    | 67 (2.625)  | 38 (1.500) | 41 (1.625)  | 10 | 31,390         |                       |
| REC-100M      | 1-14 UNF   | 25 (1.000)  | 35 (1.375) | 25 (1.000)    | 105 (4.125) | 70 (2.750) | 545 (2.120) | 14 | 43,541         |                       |
| REC-114M      | 1¼-12 UNF  | 32 (1.250)  | 28 (1.093) | 24 (0.937)    | 105 (4.125) | 70 (2.750) | 54 (2.125)  | 7  | 44,500         |                       |
| MREC-M6M      | M6 x 1.0   | 6 (0.236)   | 9 (0.354)  | 7 (0.275)     | 36 (1.417)  | 19 (0.748) | 22 (0.866)  | 13 | 17,720         |                       |
| MREC-M12M     | M12 x 1.75 | 12 (0.472)  | 16 (0.630) | 12 (0.472)    | 54 (2.126)  | 30 (1.181) | 33 (1.300)  | 17 | 44,490         |                       |
| MREC-M16M     | M16 x 2.0  | 16 (0.630)  | 21 (0.826) | 14.25 (0.561) | 66 (2.598)  | 38 (1.496) | 40 (1.575)  | 23 | 76,291         |                       |
| MREC-M24M     | M24 x 2.0  | 25 (0.984)  | 31 (1.220) | 22 (0.866)    | 95 (3.740)  | 60 (2.362) | 57 (2.244)  | 19 | 251,780        |                       |

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

LOAD CELLS



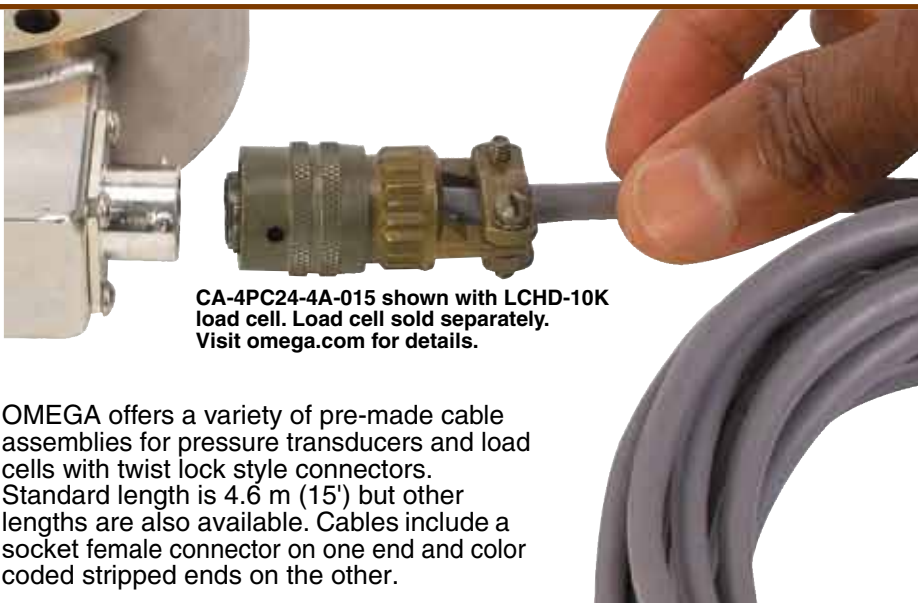
# CABLE ASSEMBLIES WITH TWIST LOCK CONNECTORS FOR LOAD CELLS AND PRESSURE TRANSDUCERS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)



## CA Series

- ✓ Ready Made Cable Assemblies
- ✓ Includes Twist Lock Mating Connector
- ✓ 4.6 m (15') Length Standard, Other Lengths Available
- ✓ PVC or FEP Insulation



CA-4PC24-4A-015 shown with LCHD-10K load cell. Load cell sold separately. Visit [omega.com](http://omega.com) for details.

### Wiring Code 1

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Black | - Input    |

### Wiring Code 2

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Green | + Output   |
| B      | White | - Output   |
| C      | Black | - Input    |
| D      | Red   | + Input    |

### Wiring Code 3

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Green | + Output   |
| B      | White | - Output   |
| C      | Black | - Input    |
| D      | Red   | + Input    |
| E      | Blue  | Shunt      |
| F      | Brown | Shunt      |

### Wiring Code 4

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Blue  | + Input    |
| C      | Black | - Input    |
| D      | Brown | - Input    |
| E      | White | - Output   |
| F      | Green | + Output   |

### Wiring Code 5

| SOCKET | COLOR | CONNECTION        |
|--------|-------|-------------------|
| A      | Red   | + Input           |
| B      | Green | + Output          |
| C      | White | - Output          |
| D      | Black | - Input           |
| E      | Blue  | Shunt/Temp Sensor |
| F      | Brown | Shunt/Temp Sensor |

### Wiring Code 6

| SOCKET | COLOR | CONNECTION |
|--------|-------|------------|
| A      | Red   | + Input    |
| B      | Green | + Output   |
| C      | White | - Output   |
| D      | Black | - Input    |

OMEGA offers a variety of pre-made cable assemblies for pressure transducers and load cells with twist lock style connectors. Standard length is 4.6 m (15') but other lengths are also available. Cables include a socket female connector on one end and color coded stripped ends on the other.

| CA-            | 2          | PC         | 24  | -1          | -015        |
|----------------|------------|------------|-----|-------------|-------------|
| Cable Assembly | # of Wires | Insulation | AWG | Wiring Code | Length (ft) |

To Order Visit [omega.com/ca\\_series](http://omega.com/ca_series) for Pricing and Details

| MODEL NO.       | WIRES | INSULATION | PRODUCT USED ON  |
|-----------------|-------|------------|--|
| CA-2PC24-1-015  | 2     | PVC        | All with 2 wire 4 to 20 mA output                            |
| CA-2TE22-1-015  | 2     | FEP        | All with 2 wire 4 to 20 mA output                            |
| CA-4PC24-2-015  | 4     | PVC        | LC111, LC113B, LC511, LC315, LC213, LC214, PX103-5V, PX41-5V |
| CA-4PC24-2A-015 | 4     | PVC        | LC111 < 250 lbs, LC113B ≤ 300 lbs.                           |
| CA-4TE24-2-015  | 4     | FEP        | PX35   |
| CA-6PC24-3-015  | 6*    | PVC        | LC1011, LC1112, LC1113, LC411, LC412, LC711, LC712           |
| CA-6TE24-3-015  | 6*    | FEP        | PX01/02/03-V/ 5T/ 10T<br>PX80, PX81, PX91-5T                 |
| CA-6PC24-4-015  | 6*    | PVC        | LCHD 5 to 5000 lbs, PX610, PX61, PX931                       |
| CA-4PC24-4-015  | 4     | PVC        | LCHD 5 to 5000 lbs, PX610, PX61, PX931 (without sense)       |
| CA-6PC24-4A-015 | 6*    | PVC        | LCHD >5000 lbs   |
| CA-4PC24-4A-015 | 4     | PVC        | LCHD >5000 lbs (without sense)                               |
| CA-6TE24-5-015  | 6*    | FEP        | PX32   |
| CA-4TE24-6-015  | 4     | FEP        | PX5000-V, PX5500-V   |
| CA-4PC24-6-015  | 4     | PVC        | PX101  |
| CA-6PC24-5-015  | 6*    | PVC        | PX5500-5T/ 10T<br>PX6000-V / 5T                              |

\* Note: 6 conductor cables only required when using them on a product that has an internal shunt or input sensing leads.

Ordering Examples: PX01C1-100GI 0 to 100 psi, 4 to 20 mA pressure transducer and CA-2TE22-1-015, 4.6 m (15') 2 conductor FEP cable. LC412-10K low profile 10,000 pound load cell and CA-6PC24-3-015 4.6 m (15') 6 conductor PVC cable.

ACCESSORIES

# LOAD CELLS

## HIGH ACCURACY, ECONOMICAL PRICE

### STANDARD AND METRIC MODELS

**Tension/Compression**  
**Calibrated in Tension**  
**0-25 lb to 0-1000 lb**  
**0-11 kgf to 0-455 kgf**

### LC105/LCM105 Series

### LC115/LCM115 Series



- ✓ Aluminum—for Light Weight and Durability
- ✓ 5-Point Calibration Provided (in Tension)



Low ranges **standard/metric**  
LC105-25 shown actual size.



REC-012M, rod end  
sold separately.

High ranges **standard/metric**  
LC105-500 shown actual size.

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 3 mV/V  $\pm 0.0075$  mV/V

**Linearity:**  $\pm 0.03\%$  FSO

**Hysteresis:**

$\pm 0.05\%$  FSO ( $\leq 250$  lbs or 100 kgf)

$\pm 0.02\%$  FSO ( $> 250$  lbs or 100 kgf)

**Repeatability:**  $\pm 0.01\%$  FSO

**Zero Balance:**  $\pm 1\%$  FSO

**Operating Temp Range:** -40 to 93°C (-40 to 200°F)

**Compensated Temp Range:** 17 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** 0.002% FSO/°C

**Span:** 0.002% rda/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:**  $350 \pm 5 \Omega$

**Full Scale Deflection:** 0.25 to 0.50 mm (0.010 to 0.020")

**Construction:** Aluminum

**Electrical (4-Conductor Shielded Cable):**

$\leq 100$  kgf/200 lb: 9 m (30') 24 AWG

$> 100$  kgf/200 lb: 9 m (30') 20 AWG

**LC115 Mating Connector:**

PT06F10-6S-R (sold separately)

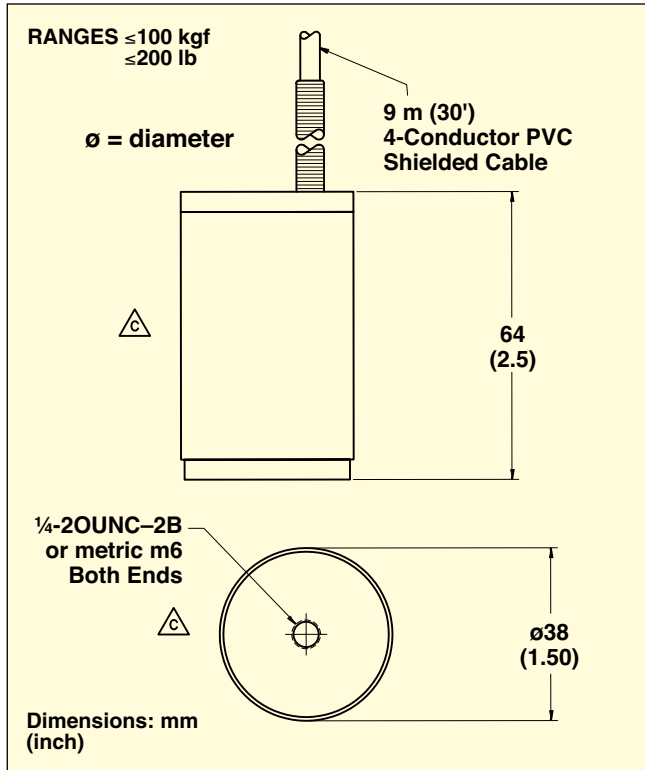
**LC115 Cable Assembly with Twist-Lock Connector:**

CA-4PC24-2-015 (sold separately)

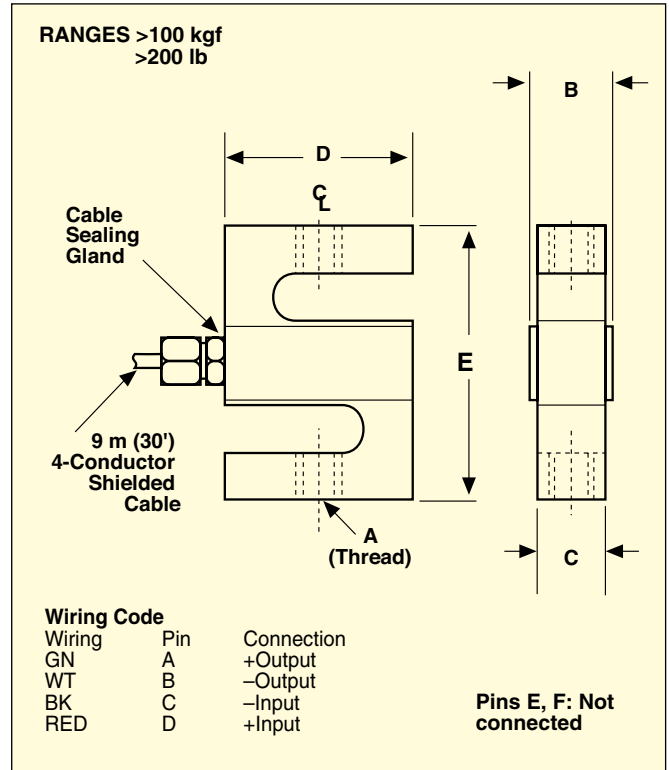
**Protection Class:** IP65



**Low Ranges**

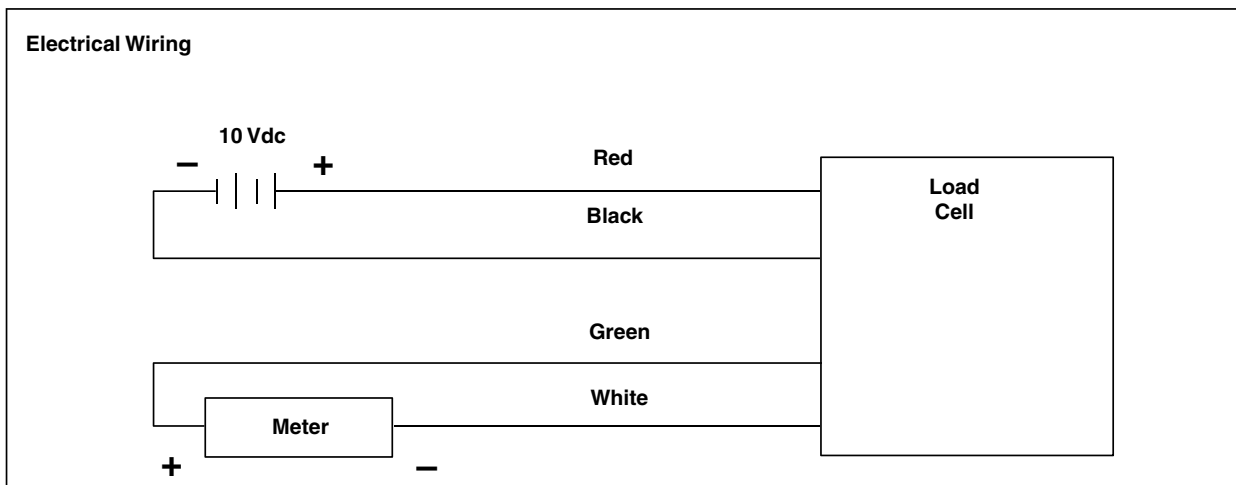


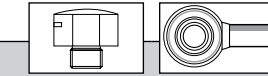
**High Ranges**



**Dimensions: mm (inch)**

| Capacity         | A                     | B         | C        | D        | E        | Weight<br>kg (lb) |
|------------------|-----------------------|-----------|----------|----------|----------|-------------------|
| 250 to 1000 (lb) | $\frac{1}{2}$ -20 UNF | 32 (1.25) | 25 (1.0) | 51 (2.0) | 76 (3.0) | 0.5 (1.1)         |
| 250 to 500 (kgf) | M12 x 1.75-6H         | 32 (1.25) | 25 (1.0) | 51 (2.0) | 76 (3.0) | 0.5 (1.1)         |





**To Order**

| Capacity               |     | Cable†<br>Model No. | Compatible Meters*      | Load Button | Rod End   |
|------------------------|-----|---------------------|-------------------------|-------------|-----------|
| lb                     | kgf |                     |                         | Model No.   | Model No. |
| <b>STANDARD MODELS</b> |     |                     |                         |             |           |
| 25                     | 11  | LC105-25            | DPiS, DP41-S, DP25B-S   | —           | —         |
| 50                     | 23  | LC105-50            | DPiS, DP41-S, DP25B-S   | —           | —         |
| 100                    | 45  | LC105-100           | DPiS, DP41-S, DP25B-S   | —           | —         |
| 200                    | 91  | LC105-200           | DPiS, DP41-S, DP25B-S   | —           | —         |
| 250                    | 114 | LC105-250†          | DPiS, DP41-S, DP25B-S   | LBC-012     | REC-012M  |
| 500                    | 227 | LC105-500†          | DPiS, DP41-S, DP25B-S   | LBC-012     | REC-012M  |
| 1000                   | 455 | LC105-1K†           | DPiS, DP41-S, DP25B-S   | LBC-012     | REC-012M  |
| <b>METRIC MODELS</b>   |     |                     |                         |             |           |
| 22                     | 10  | LCM105-10           | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 55                     | 25  | LCM105-25           | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 110                    | 50  | LCM105-50           | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 220                    | 100 | LCM105-100          | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 551                    | 250 | LCM105-250†         | DP41-B, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |
| 1102                   | 500 | LCM105-500†         | DP41-B, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

† Connector style available: change model number from LC105 to LC115, or from LCM105 to LCM115, no additional charge.

Ordering Examples: LC105-100, ±100 lb capacity load cell.

LCM105-250, 250 kgf capacity load cell. REC-012M, matching rod end. PT06F10-6S, mating connector (sold separately).

**Accessories**

| Model No.      | Description   |
|----------------|---|
| PT06F10-6S-R   | Mating connector for LC115/LCM115 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist lock connector for LC115/LCM115 series load cells |

**1/8 DIN STRAIN METERS WITH OPTIONAL RELAYS AND ANALOG OUTPUT**

**DP25B Series**



- ✓ Relay Output with Adjustable Deadband
- ✓ Isolated or Non-Isolated Analog Output
- ✓ Totally Programmable Color Display
- ✓ Low-Voltage Power Options

The OMEGA™ DP25B Series meters have the biggest, brightest display of any 1/8 DIN panel meter. The user can select the display color: **RED**, **AMBER**, or **GREEN**.

Along with the 4-digit, 9-segment display, these low-cost panel meters/controllers provide unparalleled accuracy in signal conditioning. Additional features include microprocessor-based operation; dual 5 A SPDT relays (optional); and isolated or non-isolated

**PATENTED**



DP25B shown smaller than actual size.

analog output in ranges of 0 to 10 Vdc, 0 to 20 mA, or 4 to 20 mA, which can be used for retransmission of the display value or as a proportional control output.

Because they accept a wide range of DC voltage and current inputs, the DP25B-E strain meters can handle most process and strain applications. Features include easy front-panel scaling to virtually any engineering units, a remote tare function for weighing applications, and a hardware lockout to prevent unauthorized changes in setup. In addition, the DP25B-E meters feature built-in excitation in 4 user-selectable voltages, which makes them compatible with most transducers and transmitters.

## High Accuracy, Miniature, S-Beam Load Cells

- **Our smallest S-beam yet!**
- **High linearity at low capacities**
- **5-Point NIST traceable calibration included**
- **Precision tension and compression force measurement**
- **Durable, anti-corrosive, stainless steel construction for rugged environments**
- **Ultra low capacities, down to 10 lbs., and even smaller models coming soon!**



### Specifications

#### Overview

The LC107 series is our smallest s-beam load cell. These load cells are so small, that they are shorter than a paperclip - they are only 1.25"x0.5"x1.1". The LC107 products are compact, lightweight load cells. They are designed to measure ultra low tension and compression forces without sacrificing accuracy. Linearity is often the trade-off made in exchange for the small size of miniature load cells. However, the LC107 has a high linearity of 0.1%, even at the lowest 10lb capacity. They are also temperature compensated, and NIST calibrated in tension for superior performance. They have a 300% overload protection and stainless-steel construction to increase durability and longevity. These miniature s-beam load cells are well suited for space-constrained areas requiring high accuracy. Potential applications include scales, other weigh assemblies, assembly machinery, packaging machinery, test equipment, feedback for machine control, and many more.

|                                      |  |
|--------------------------------------|--|
| <b>Output</b>                        | >= 10lbs.: 2 mV/V ±10% FSO<br>< 10lbs.: 2 mV/V ±25% FSO        |
| <b>Excitation</b>                    | 5 Vdc Nominal, 15 Vdc Maximum to 5 Vdc Nominal, 12 Vdc Maximum |
| <b>Linearity</b>                     | ±0.1% FSO  |
| <b>Hysteresis</b>                    | ±0.1% FSO  |
| <b>Repeatability</b>                 | ±0.05% FSO   |
| <b>Zero Balance</b>                  | ±1.0% FSO  |
| <b>Operating Temperature Range</b>   | -40 to 93°C (-40 to 200°F)                                     |
| <b>Compensated Temperature Range</b> | 15 to 71°C (60 to 160°F)                                       |
| <b>Thermal Effects - Zero</b>        | ±0.009% FSO/°C (±0.005% FSO/°F)                                |
| <b>Thermal Effects - Span</b>        | ±0.009% FSO/°C (±0.005% FSO/°F)                                |
| <b>Safe Overload</b>                 | 150% of capacity   |
| <b>Ultimate Overload</b>             | 300% of capacity   |
| <b>Ingress Protection</b>            | IP40   |
| <b>Construction Materials</b>        | Stainless Steel with Aluminum Side Cover                       |

## High Accuracy, Miniature, S-Beam Load Cells



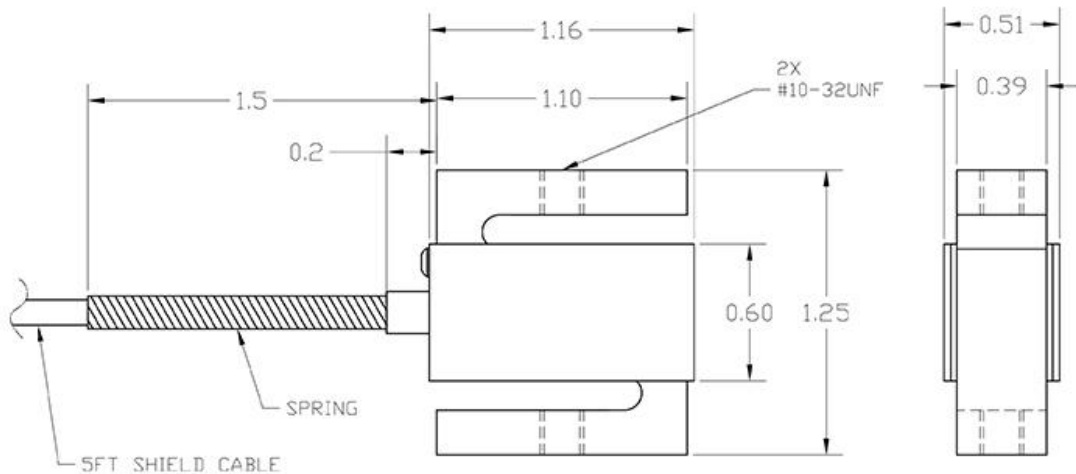
### Installation Precautions

When handling and installing unit, hold it by the blue side cover to ensure that it is not overloaded. There is a 150% safe overload and 300% ultimate overload built-in as a safeguard. However, these ultra-low capacities still require careful handling to avoid overload.

### Calibration

Units are calibrated in tension and come with a 5-Point NIST calibration certificate. They can also be return to the factory for recalibration. Calibration options include tension only (standard) , tension and compression, and compression only. Consult sales for these additional calibration options.

### Dimensional Drawing



# 10 mm (0.75") DIAMETER SUBMINIATURE TENSION OR COMPRESSION LOAD CELLS STANDARD AND METRIC MODELS

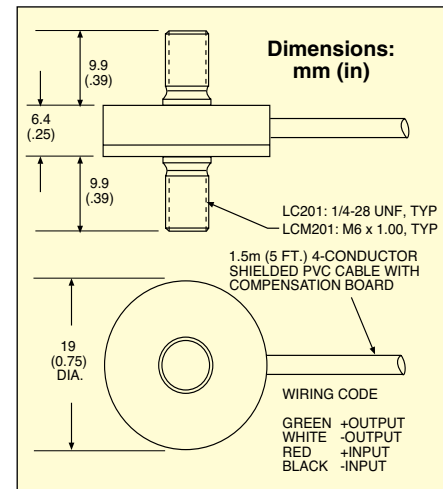
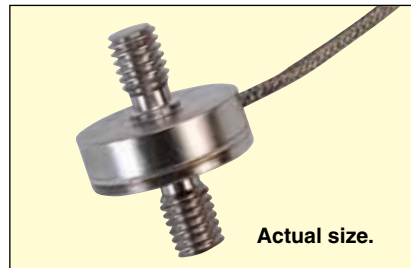
**Tension/Compression  
Calibrated in Tension  
0-25 lb to 0-300 lb  
0-100 to 0-500 N**

1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kg = 2204 lb

**STANDARD**  
LC201-50,  
shown larger  
than actual size.

**METRIC**  
LCM201-200N,  
shown larger than  
actual size.

## LC201/LCM201 Series



- Subminiature Package for Robotic Applications, 19 mm (0.75") Diameter
- Dual Mounting Studs for Easy Installation
- 5-Point Calibration Provided

**Thermal Effects:**  
Zero: 0.018% FSO/°C  
Span: 0.018% FSO/°C

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±10 Ω  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor shielded cable with compensation board

OMEGA's LC201/LCM201 Series subminiature load cells are designed for the demanding environment of industrial automation and robotics. With a diameter of only 19 mm (0.75") and all stainless steel construction, they can fit into small systems. They deliver high accuracy and long-term reliability in a subminiature package.

## SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc max

**Output:** 2 mV/V nominal

**Accuracy:** ±1.0% FSO linearity, hysteresis, repeatability combined  
**5-Point Calibration (in Tension):** 0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:** -54 to 121°C (-65 to 250°F)

**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

**Protection Class:** IP54

## STANDARD MODELS

| CAPACITY |      | MODEL NO. | COMPATIBLE METERS | ROD END  |
|----------|------|-----------|-------------------|----------|
| lb       | N    |           |                   |          |
| 25       | 111  | LC201-25  | DP41-S, DP25B-S   | REC-014F |
| 50       | 222  | LC201-50  | DP41-S, DP25B-S   | REC-014F |
| 75       | 334  | LC201-75  | DP41-S, DP25B-S   | REC-014F |
| 100      | 445  | LC201-100 | DP41-S, DP25B-S   | REC-014F |
| 300      | 1334 | LC201-300 | DP41-S, DP25B-S   | REC-014F |

## METRIC MODELS

| CAPACITY |     | MODEL NO.   | COMPATIBLE METERS | ROD END  |
|----------|-----|-------------|-------------------|----------|
| N        | lb  |             |                   |          |
| 100      | 22  | LCM201-100N | DP41-S, DP25B-S   | MREC-M6F |
| 200      | 45  | LCM201-200N | DP41-S, DP25B-S   | MREC-M6F |
| 300      | 67  | LCM201-300N | DP41-S, DP25B-S   | MREC-M6F |
| 500      | 112 | LCM201-500N | DP41-S, DP25B-S   | MREC-M6F |

Comes complete with 5-point NIST traceable calibration and 59 kΩ shunt data.

**Ordering Examples:** LC201-25, 25 lb capacity subminiature universal load cell.

LCM201-500N, 500 N capacity subminiature universal load cell.

# MINIATURE INDUSTRIAL LOAD CELLS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## STUD MOUNT STYLE, 25 mm (1") TO 35 mm (1.38") DIAMETER

### STANDARD AND METRIC MODELS

**Tension/Compression  
Calibrated in Tension**  
**0-50 lb to 0-10,000 lb**  
**0-22 kg to 0-4537 kg**  
**0-100 to 0-50,000 N**

### LC202/LCM202 Series



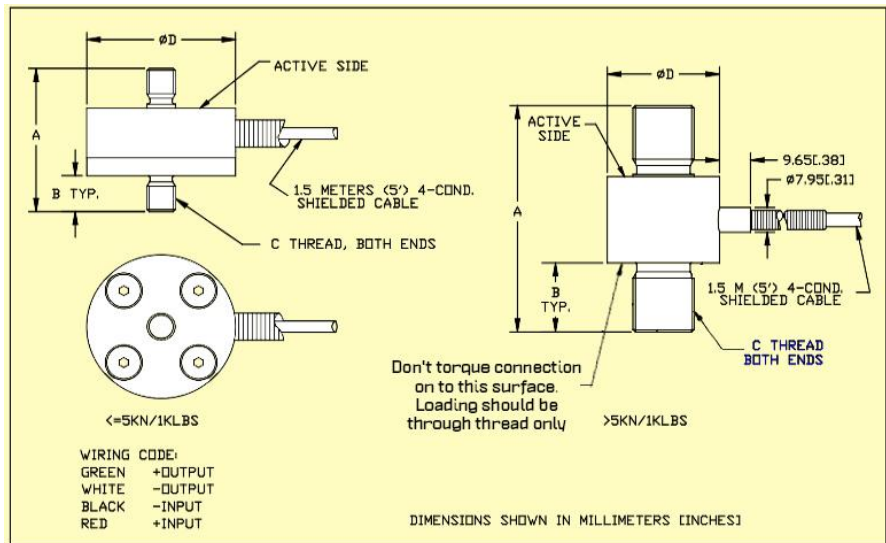
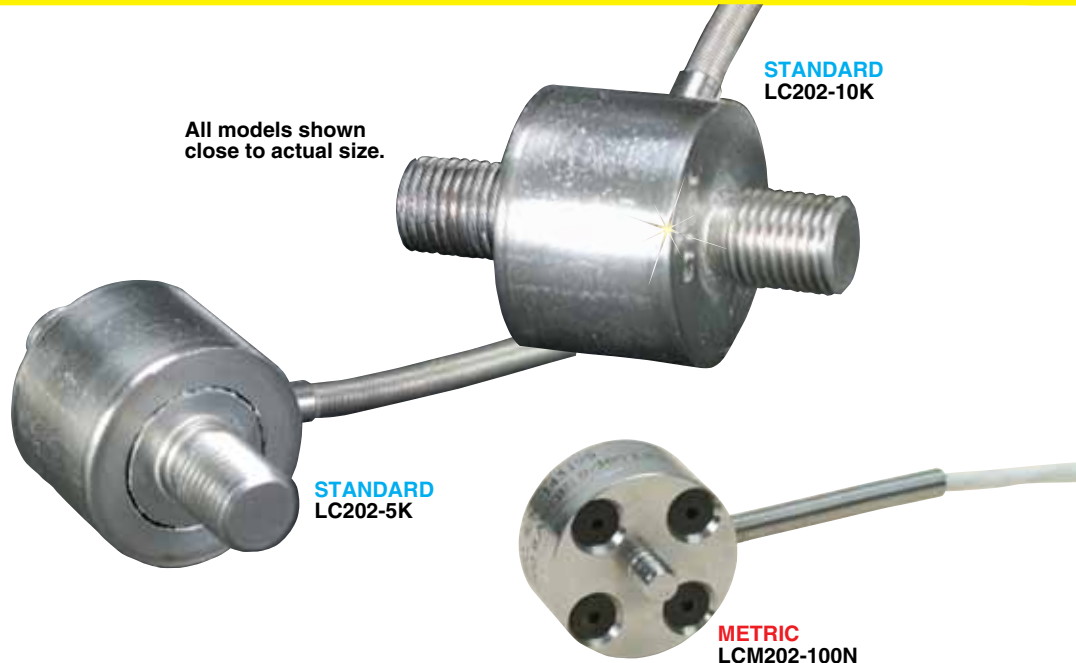
- Miniature Package for Test Stands and Difficult Locations
- Heavy-Duty Construction
- Dual Mounting Studs for Easy Installation
- 5-Point Calibration

OMEGA's LC202/LCM202 Series compact load cells have ranges of 50 to 10,000 lb and accuracy of 0.25%. The all stainless steel construction and rugged design ensure long life in industrial and commercial applications.

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc max  
**Output:** 2 mV/V nominal  
**Accuracy:** ±0.25% FSO linearity, hysteresis, repeatability combined  
**5-Point Calibration:**  
 0%, 50%, 100%, 50%, 0%  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:**  
 -54 to 121°C (-65 to 250°F)  
**Compensated Temp Range:**  
 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
**Zero:** 0.009% FSO/°C  
**Span:** 0.009% FSO/°C

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±10 Ω  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor cable  
**Protection Class:** IP65



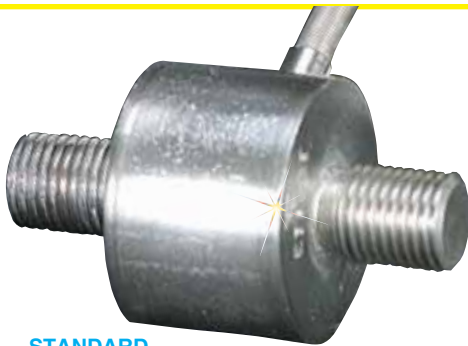
### STANDARD Dimensions: mm (in)

| CAPACITY (lb)  | A         | B          | C THREAD     | D         |
|----------------|-----------|------------|--------------|-----------|
| 50 to 500      | 25 (1.00) | 6.3 (0.25) | 10-32 UNF-2A | 25 (1.00) |
| 1000           | 33 (1.31) | 9.7 (0.38) | ¼-28 UNF-2A  | 25 (1.00) |
| 2000 to 3000   | 44 (1.75) | 13 (0.50)  | ⅜-24 UNF-2A  | 25 (1.00) |
| 4000 to 5000   | 57 (2.23) | 16 (0.63)  | ½-20 UNF-2A  | 32 (1.25) |
| 7500 to 10,000 | 73 (2.89) | 22 (0.88)  | ¾-16 UNF-2A  | 35 (1.38) |

### METRIC Dimensions: mm (in)

| CAPACITY (N) | A         | B          | C THREAD        | D         |
|--------------|-----------|------------|-----------------|-----------|
| 100-2000     | 25 (1.00) | 6.3 (0.25) | M5 x 0.8 - 6g   | 25 (1.00) |
| 5000         | 33 (1.31) | 9.7 (0.38) | M6 x 1.00 - 6g  | 25 (1.00) |
| 10,000       | 44 (1.75) | 13 (0.50)  | M10 x 1.5 - 6g  | 25 (1.00) |
| 20,000       | 57 (2.23) | 16 (0.63)  | M12 x 1.75 - 6g | 32 (1.25) |
| 50,000       | 73 (2.89) | 22 (0.88)  | M20 x 1.5 - 6g  | 35 (1.38) |

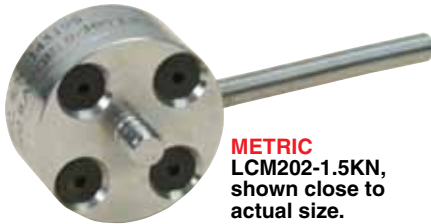
**STANDARD MODELS**



**STANDARD**  
LC202-10K, shown close to actual size.



**METRIC**  
LCM202-20KN, shown close to actual size.



**METRIC**  
LCM202-1.5KN, shown close to actual size.

| CAPACITY |        | MODEL NO.  | COMPATIBLE METERS*    |
|----------|--------|------------|-----------------------|
| lb       | N      |            |                       |
| 50       | 222    | LC202-50   | DPiS, DP41-S, DP25B-S |
| 100      | 445    | LC202-100  | DPiS, DP41-S, DP25B-S |
| 300      | 1334   | LC202-300  | DPiS, DP41-S, DP25B-S |
| 500      | 2224   | LC202-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 4448   | LC202-1K   | DPiS, DP41-S, DP25B-S |
| 2000     | 8896   | LC202-2K   | DPiS, DP41-S, DP25B-S |
| 3000     | 13,344 | LC202-3K   | DPiS, DP41-S, DP25B-S |
| 5000     | 22,240 | LC202-5K   | DPiS, DP41-S, DP25B-S |
| 7500     | 33,360 | LC202-7.5K | DPiS, DP41-S, DP25B-S |
| 10,000   | 44,480 | LC202-10K  | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration.

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC202-100, 100 lb capacity miniature universal load cell.

LC202-1K, 1000 lb capacity miniature universal load cell.

**METRIC MODELS**

| CAPACITY |        | MODEL NO.    | COMPATIBLE METERS*    |
|----------|--------|--------------|-----------------------|
| N        | lb     |              |                       |
| 100      | 22     | LCM202-100N  | DPiS, DP41-S, DP25B-S |
| 200      | 45     | LCM202-200N  | DPiS, DP41-S, DP25B-S |
| 300      | 67     | LCM202-300N  | DPiS, DP41-S, DP25B-S |
| 500      | 112    | LCM202-500N  | DPiS, DP41-S, DP25B-S |
| 1000     | 225    | LCM202-1KN   | DPiS, DP41-S, DP25B-S |
| 1500     | 337    | LCM202-1.5KN | DPiS, DP41-S, DP25B-S |
| 2000     | 450    | LCM202-2KN   | DPiS, DP41-S, DP25B-S |
| 5000     | 1124   | LCM202-5KN   | DPiS, DP41-S, DP25B-S |
| 10,000   | 2248   | LCM202-10KN  | DPiS, DP41-S, DP25B-S |
| 20,000   | 4496   | LCM202-20KN  | DPiS, DP41-S, DP25B-S |
| 50,000   | 11,241 | LCM202-50KN  | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration.

\* Visit us online for compatible meters.

**Ordering Examples:** LCM202-100N, 100 N capacity miniature universal load cell.

LCM202-1KN, 1000 N capacity miniature universal load cell.

**STRAIN GAGE/BRIDGE  
TRANSDUCER-SIGNAL  
CONDITIONERS**



- ✓ Unipolar/Bipolar  
30 mV to 100 mV
- ✓ 13-Bit Resolution
- ✓ 10 Vdc Excitation
- ✓ 0.2% FS Accuracy
- ✓ 1800 Vdc Isolation

The iDRN-ST and iDRX-ST signal conditioners provide highly accurate, stable, isolated measurement for strain gage transducers such as load cells, torque transducers, non-amplified pressure transducers, and other bridge based transducers. Both models can accept signals from 30 to 100 mV full scale and provide 10 Vdc reference voltage which may be used for transducer excitation.



LOAD CELLS  
**F**

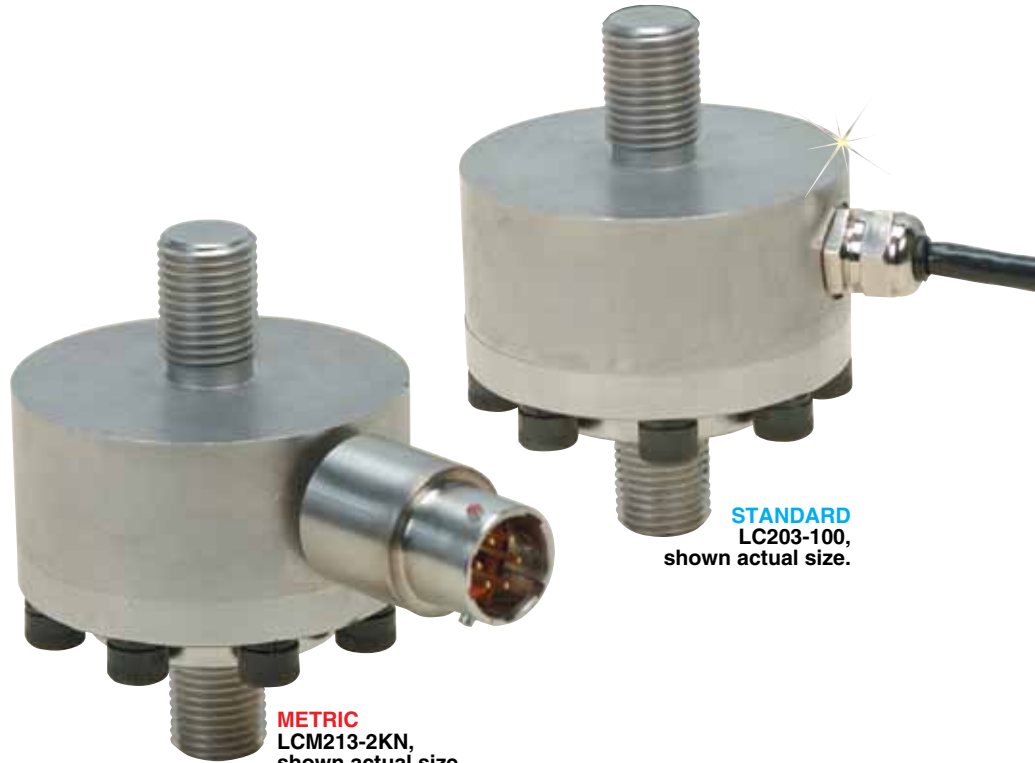
# LOAD CELLS 51 mm (2") DIAMETER,

## DUAL STUD MOUNT STYLE STANDARD AND METRIC MODELS

**Tension/Compression  
 Calibrated in Tension  
 0-25 lb to 0-10,000 lb  
 0-11 kgf to 0-4537 kgf**

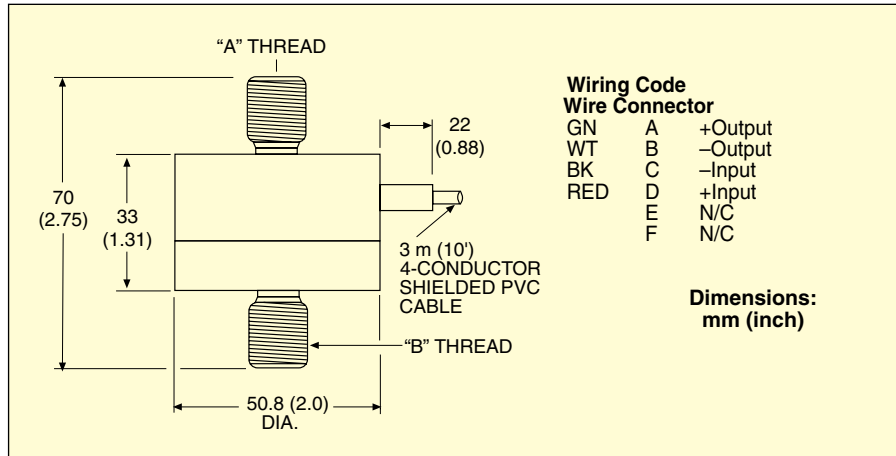
1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

### LC203/LCM203 Series LC213/LCM213 Series



- ✓ 1.0% Interchangeability for Scale Applications
- ✓ Hermetically Sealed
- ✓ Miniature Package for Test Stands and Difficult Locations
- ✓ Heavy-Duty Construction
- ✓ 5-Point Calibration

OMEGA's LC203/LCM203 Series comprises high-accuracy, miniature, low-profile industrial load cells that come with a stud at each end for easy in-line mounting. The tough, corrosion-resistant steel construction and high-accuracy strain gages make them suitable for most industrial weighing applications.



### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum  
**Output:** 2 mV/V ±1.0%

**5-Point Calibration (in Tension):**  
 0%, 50%, 100%, 50%, 0%

**Linearity:** ±0.15% FSO

**Hysteresis:** ±0.1% FSO

**Repeatability:** ±0.05% FSO

**Zero Balance:** ±2% FSO

**Deflection:** 0.025 to 0.075 mm (0.001 to 0.003")

**Dimensions: mm (inch)**

| MODEL         | A THREAD   | B THREAD   |
|---------------|------------|------------|
| LC203         | ½-20 UNF   | ½-20 UNF   |
| LCM203        | M12 x 1.75 | M12 x 1.75 |
| Thread Length | 19 (0.75)  | 17 (0.69)  |

**Protection Class:** IP65

**Operating Temp Range:**  
 -46 to 107°C (-50 to 225°F)

**Compensated Temp Range:**  
 16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** 0.006% FSO/°C

**Span:** 0.009% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 Ω minimum

**Output Resistance:** 350 ±10 Ω

**Construction:** Stainless steel

**Electrical:** 3 m (10') 4-conductor PVC shielded cable

**LC213/LCM213 Mating Connector:**  
 PT06F10-6S-R (sold separately)



# HIGH-ACCURACY MINIATURE UNIVERSAL LOAD CELLS

## 51 mm (2") DIAMETER, DUAL STUD MOUNT STYLE

**STANDARD**  
LC203-100

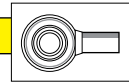


### STANDARD MODELS

| To Order |      |            |            |                       |
|----------|------|------------|------------|-----------------------|
| CAPACITY |      | MODEL NO.  |            | COMPATIBLE METERS**   |
| lb       | kgf  | CABLE      | CONNECTOR  |                       |
| 25       | 11   | LC203-25   | LC213-25   | DPiS, DP41-S, DP25B-S |
| 50       | 23   | LC203-50   | LC213-50   | DPiS, DP41-S, DP25B-S |
| 100      | 45   | LC203-100  | LC213-100  | DPiS, DP41-S, DP25B-S |
| 200      | 91   | LC203-200  | LC213-200  | DPiS, DP41-S, DP25B-S |
| 300      | 136  | LC203-300  | LC213-300  | DPiS, DP41-S, DP25B-S |
| 500      | 227  | LC203-500  | LC213-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 455  | LC203-1K   | LC213-1K   | DPiS, DP41-S, DP25B-S |
| 2000     | 909  | LC203-2K   | LC213-2K   | DPiS, DP41-S, DP25B-S |
| 2500     | 1134 | LC203-2.5K | LC213-2.5K | DPiS, DP41-S, DP25B-S |
| 5000     | 2269 | LC203-5K   | LC213-5K   | DPiS, DP41-S, DP25B-S |
| 8000     | 3630 | LC203-8K   | LC213-8K   | DPiS, DP41-S, DP25B-S |
| 10,000   | 4537 | LC203-10K  | LC213-10K  | DPiS, DP41-S, DP25B-S |

### ACCESSORIES

| MODEL NO.      | DESCRIPTION  |
|----------------|--|
| REC-012F       | Rod end for LC203/LC213  |
| PT06F10-6S-R   | Mating connector for LC213 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist-lock connector for LC213 series load cells |



Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
DPiS meter suitable for one direction measurement only.

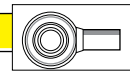
**Ordering Examples:** LC203-500, 500 lb capacity cable style, dual stud mount load cell.  
LC213-2K, 2000 lb capacity connector style, dual stud mount load cell, PT06F10-6S-R, mating connector.

### METRIC MODELS

| To Order |        |             |             |                        |
|----------|--------|-------------|-------------|------------------------|
| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS**    |
| N        | lb     | CABLE       | CONNECTOR   |                        |
| 100      | 22     | LCM203-100N | LCM213-100N | DPiS, DP41-S, DP25B-S  |
| 200      | 45     | LCM203-200N | LCM213-200N | DPiS, DP41-S, DP25B-S  |
| 500      | 112    | LCM203-500N | LCM213-500N | DPiS, DP41-S, DP25B-S  |
| 1000     | 225    | LCM203-1KN  | LCM213-1KN  | DPiS, DP41-S, DP25B-S  |
| 2000     | 450    | LCM203-2KN  | LCM213-2KN  | DPiS, DP41-S, DP25B-S  |
| 5000     | 1124   | LCM203-5KN  | LCM213-5KN  | DPiS, DP41-S, DP25B-S  |
| 10,000   | 2248   | LCM203-10KN | LCM213-10KN | DPiS, DP41-S, DP25B-S  |
| 20,000   | 4496   | LCM203-20KN | LCM213-20KN | DPiS, DP41-S, DP25B-S* |
| 50,000   | 11,241 | LCM203-50KN | LCM213-50KN | DPiS, DP41-S, DP25B-S* |

### ACCESSORIES

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| MREC-M12F      | Rod end for LCM203/LCM213   |
| PT06F10-6S-R   | Mating connector for LCM213 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist-lock connector for LCM213 series load cells |



Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
\* 4-digit meters. \*\* Visit [omega.com](http://omega.com) for compatible meters.

**Ordering Examples:** LCM203-500N, 500 Newton capacity dual stud-mount load cell.  
MREC-M12F, accessory rod end.

**METRIC**  
LCM213-2KN



All models shown slightly smaller than actual size.

**METRIC**  
LCM203-100



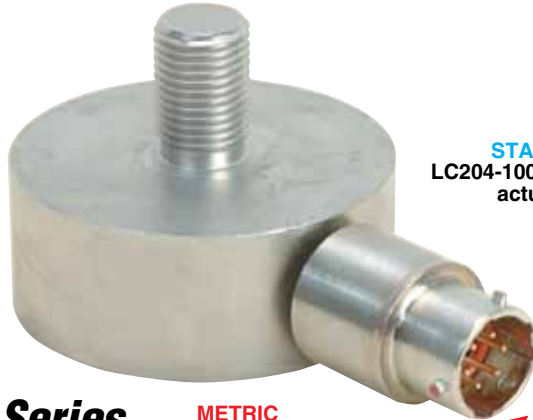
**CELLS SURFACE MOUNT STYLE**



**51 mm (2") DIAMETER STANDARD AND METRIC MODELS**

**Tension/Compression  
 Calibrated in Tension  
 0-25 lb to 0-10,000 lb  
 0-100 to 0-50,000 N**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb



**STANDARD**  
 LC204-100 shown  
 actual size.



**Cable style**  
 LC204/LCM204 units.

**LC204/LCM204 Series  
 LC214/LCM214 Series**

**METRIC**  
 LCM214-100N  
 shown actual size.

**Twist-lock connector**  
 LC214/LCM214 units.



**Bottom view of all units,**  
 Shown smaller than actual size.



Standard

- ✓ FM Intrinsically Safe
- ✓ 1.0% Interchangeability for Scale Applications
- ✓ Miniature Package for Test Stands and Difficult Locations
- ✓ Designed to be Mounted on a Flat Surface
- ✓ 5-Point Calibration

OMEGA's LC204/LCM204 Series load cells are designed to be surface mounted with the load applied through the mounting stud. The high linearity (0.15%) and all stainless steel construction make them ideal for industrial and commercial weighing and for force measuring applications.

**SPECIFICATIONS**

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 2 mV/V ±1.0%

**5-Point Calibration (in Tension):**  
 0%, 50%, 100%, 50%, 0%

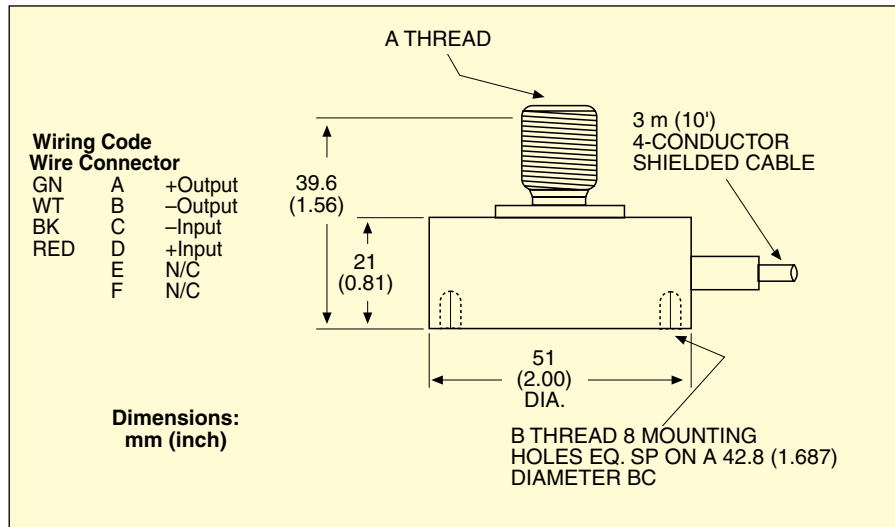
**Linearity:** ±0.15% FSO

**Hysteresis:** ±0.1% FSO

**Repeatability:** ±0.05% FSO

**Zero Balance:** ±2% FSO

**Operating Temp Range:**  
 -46 to 107°C (-50 to 225°F)



**Dimensions:** mm (inch)

| MODEL         | A THREAD                   | B THREAD                       |
|---------------|----------------------------|--------------------------------|
| LC204/LC214   | ½-20 UNF-2A<br>19 (0.75) L | 10-32 UNF<br>6.3 (0.25) DP min |
| LCM204/LCM214 | M12 x 1.75<br>19 (0.75) L  | M5 x 0.8<br>6.3 (0.25) DP min  |

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Protection Class:** IP65

**Thermal Effects:**

Zero: 0.0045% FSO/°F

Span: 0.009% FSO/°F

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 Ω minimum

**Output Resistance:** 350 ±10 Ω

**Construction:** Stainless steel

**Electrical:** 3 m (10') 4-conductor shielded cable

**LC214/LCM214 Mating Connector:**  
 PT06F10-6S-R (sold separately)

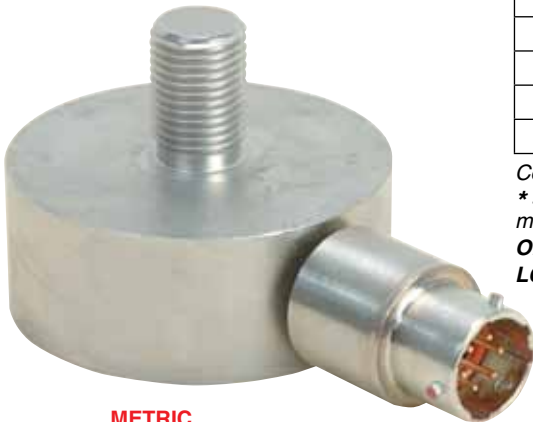
**LC214/LCM214 Cable Assembly with Twist Lock Connector:**  
 CA 1BC21 2 015 (sold separately)



**STANDARD**  
LC204-100 shown  
actual size.



Bottom view of all units,  
shown smaller than actual size.



**METRIC**  
LCM214-100N  
shown actual size.

### STANDARD MODELS

| To Order |        |            |            |                       |
|----------|--------|------------|------------|-----------------------|
| CAPACITY |        | MODEL NO.  |            | COMPATIBLE METERS**   |
| lb       | N      | CABLE      | CONNECTOR  |                       |
| 25       | 111    | LC204-25   | LC214-25   | DPiS, DP41-S, DP25B-S |
| 50       | 222    | LC204-50   | LC214-50   | DPiS, DP41-S, DP25B-S |
| 100      | 445    | LC204-100  | LC214-100  | DPiS, DP41-S, DP25B-S |
| 200      | 890    | LC204-200  | LC214-200  | DPiS, DP41-S, DP25B-S |
| 300      | 1334   | LC204-300  | LC214-300  | DPiS, DP41-S, DP25B-S |
| 500      | 2224   | LC204-500  | LC214-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 4448   | LC204-1K   | LC214-1K   | DPiS, DP41-S, DP25B-S |
| 2000     | 8897   | LC204-2K   | LC214-2K   | DPiS, DP41-S, DP25B-S |
| 2500     | 11,121 | LC204-2.5K | LC214-2.5K | DPiS, DP41-S, DP25B-S |
| 5000     | 22,242 | LC204-5K   | LC214-5K   | DPiS, DP41-S, DP25B-S |
| 8000     | 35,587 | LC204-8K   | LC214-8K   | DPiS, DP41-S, DP25B-S |
| 10,000   | 44,484 | LC204-10K  | LC214-10K  | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC204-25, 25 lb capacity surface mount load cell.

LC204-1K, 1000 lb capacity surface mount load cell.

### METRIC MODELS

| To Order |        |             |             |                        |
|----------|--------|-------------|-------------|------------------------|
| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS**    |
| N        | lb     | CABLE       | CONNECTOR   |                        |
| 100      | 22     | LCM204-100N | LCM214-100N | DPiS, DP41-S, DP25B-S  |
| 200      | 45     | LCM204-200N | LCM214-200N | DPiS, DP41-S, DP25B-S  |
| 500      | 112    | LCM204-500N | LCM214-500N | DPiS, DP41-S, DP25B-S  |
| 1000     | 225    | LCM204-1KN  | LCM214-1KN  | DPiS, DP41-S, DP25B-S  |
| 2000     | 450    | LCM204-2KN  | LCM214-2KN  | DPiS, DP41-S, DP25B-S  |
| 5000     | 1124   | LCM204-5KN  | LCM214-5KN  | DPiS, DP41-S, DP25B-S  |
| 10,000   | 2248   | LCM204-10KN | LCM214-10KN | DPiS, DP41-S, DP25B-S  |
| 20,000   | 4496   | LCM204-20KN | LCM214-20KN | DPiS, DP41-S, DP25B-S* |
| 50,000   | 11,241 | LCM204-50KN | LCM214-50KN | DPiS, DP41-S, DP25B-S* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

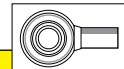
\* 4-digit meter. \*\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCM204-100, 100 N capacity surface-mount load cell.

LCM204-5KN, 5000 N capacity surface-mount load cell.

### ACCESSORIES

| MODEL NO.    | DESCRIPTION   |
|--------------|---|
| REC-012F     | Rod end for LC204/LC214 Series                      |
| MREC-M12F    | Rod end for LCM204/LCM214 Series                    |
| PT06F10-6S-R | Mating connector for LC214/LCM214 series load cells |



# STAINLESS STEEL COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS

### Compression

0-25 lb to 0-1000 lb

0-100 to 0-5000 N

1 Newton = 0.2248 lb

1 daNewton = 10 Newtons

1 lb = 454 g

1 t = 1000 kg = 2204 lb

### LC302/LCM302 Series



- ✓ Small 19 mm (0.75") Dia.
- ✓ Low 13 mm (0.5") Profile
- ✓ Robotic and Test Bench Applications
- ✓ Built-In Load Button for Easy Installation
- ✓ 5-Point Traceable Calibration Provided

The LC302/LCM302 Series load cells are only 19 mm (¾") in diameter and fit in the smallest places. Their high ±0.5% accuracy and small package solve many industrial force measurement applications. The all stainless steel construction and high-quality strain gage ensure long-term reliability.

### SPECIFICATIONS

**Excitation:** 5 Vdc, 15 Vdc max

**Output:** 1 mV/V (nominal)

**Accuracy:** ±0.5% FSO linearity, hysteresis, repeatability combined

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-54 to 107°C (-65 to 225°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

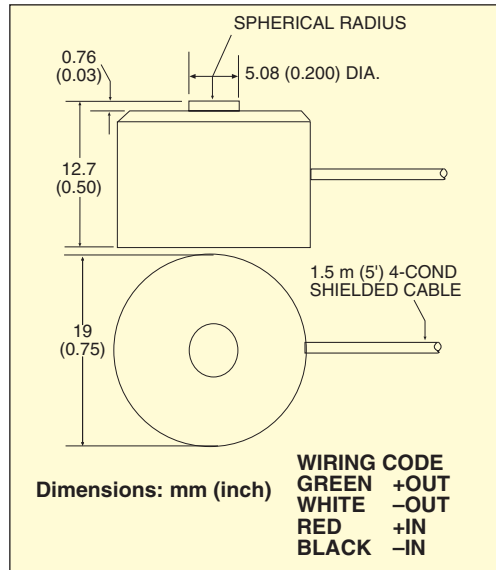
**Compensation Temp:**

**Zero:** 0.009% FSO/°C

**Span:** 0.036% FSO/°C

**Safe Overload:** 150% of capacity

**Protection Class:** IP54



**Deflection:** 0.03 to 0.08 mm (0.001 to 0.003")

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Construction:** Stainless steel

**Electrical Connection:** 1.5 m (5')

4-conductor insulated cable with temperature compensation board

### STANDARD MODELS

| To Order |      |           |                       |
|----------|------|-----------|-----------------------|
| CAPACITY |      | MODEL NO. | COMPATIBLE METERS     |
| lb       | N    |           |                       |
| 25       | 111  | LC302-25  | DPiS, DP41-S, DP25B-S |
| 50       | 222  | LC302-50  | DPiS, DP41-S, DP25B-S |
| 100      | 445  | LC302-100 | DPiS, DP41-S, DP25B-S |
| 250      | 1112 | LC302-250 | DPiS, DP41-S, DP25B-S |
| 500      | 2224 | LC302-500 | DPiS, DP41-S, DP25B-S |
| 1000     | 4448 | LC302-1K  | DPiS, DP41-S, DP25B-S |

### METRIC MODEL

| CAPACITY |      | MODEL NO.   | COMPATIBLE METERS        |
|----------|------|-------------|--------------------------|
| N        | lb   |             |                          |
| 100      | 22.5 | LCM302-100N | iSeries, DP41-S, DP25B-S |
| 200      | 45   | LCM302-200N | iSeries, DP41-S, DP25B-S |
| 500      | 112  | LCM302-500N | iSeries, DP41-S, DP25B-S |
| 1000     | 225  | LCM302-1KN  | iSeries, DP41-S, DP25B-S |
| 2000     | 450  | LCM302-2KN  | iSeries, DP41-S, DP25B-S |
| 5000     | 1124 | LCM302-5KN  | iSeries, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

**Ordering Examples:** LC302-25, 25 lb capacity load cell.

LC302-100, 100 lb capacity load cell.

LCM302-100N, 100 Newton capacity load cell.

LCM302-2KN, 2000 N capacity load cell.

# COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS



### Compression

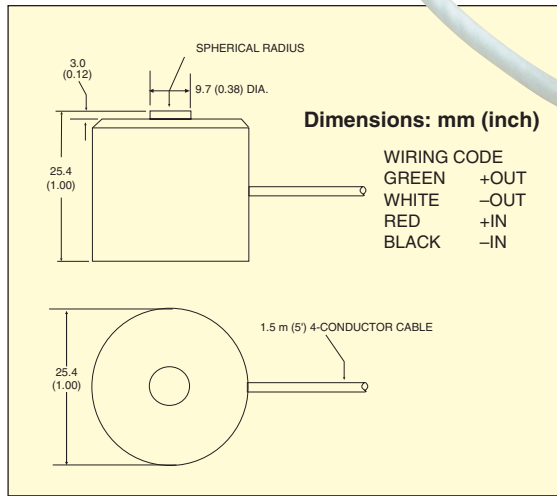
**0-100 lb to 0-10,000 lb**  
**0-500 to 0-50,000 N**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

## LC304/LCM304 Series



- ✓ Heavy-Duty Design
- ✓ Built-In Load Button for Easy Installation
- ✓ Miniature 25 mm (1") Diameter and 25 mm (1") High Case
- ✓ 5-Point Calibration Provided



LC304-1K, shown actual size.

**Deflection:** 0.025 to 0.076 mm (0.001 to 0.003")  
**Protection Class:** IP65  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor cable

### STANDARD MODELS

OMEGA's LC304/LCM304 Series load cells offer the highest output of all miniature load cells. Their small 25 mm (1") diameter makes it easy to mount them in a pocket or on a flat surface. The rugged stainless steel case and high-quality construction ensure reliability.

| To Order |        |            |                          |
|----------|--------|------------|--------------------------|
| CAPACITY |        | MODEL NO.  | COMPATIBLE METERS        |
| lb       | N      |            |                          |
| 100      | 445    | LC304-100  | iSeries, DP41-S, DP25B-S |
| 500      | 2224   | LC304-500  | iSeries, DP41-S, DP25B-S |
| 1000     | 4448   | LC304-1K   | iSeries, DP41-S, DP25B-S |
| 3000     | 13,345 | LC304-3K   | iSeries, DP41-S, DP25B-S |
| 5000     | 22,242 | LC304-5K   | iSeries, DP41-S, DP25B-S |
| 7500     | 33,363 | LC304-7.5K | iSeries, DP41-S, DP25B-S |
| 10,000   | 44,484 | LC304-10K  | iSeries, DP41-S, DP25B-S |

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum  
**Output:** 2 mV/V nominal  
**Accuracy:** ±0.5% FSO linearity, hysteresis, repeatability combined  
**5-Point Calibration:** 0%, 50%, 100%, 50%, 0%  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
 Zero: 0.009% FSO/°C  
 Span: 0.036% FSO/°C

### METRIC MODELS

| CAPACITY |        | MODEL NO.   | COMPATIBLE METERS        |
|----------|--------|-------------|--------------------------|
| N        | lb     |             |                          |
| 500      | 112    | LCM304-500N | DP41-S, DP25B-S, iSeries |
| 2000     | 450    | LCM304-2KN  | DP41-S, DP25B-S, iSeries |
| 5000     | 1124   | LCM304-5KN  | DP41-S, DP25B-S, iSeries |
| 10,000   | 2248   | LCM304-10KN | DP41-S, DP25B-S, iSeries |
| 20,000   | 4496   | LCM304-20KN | DP41-S, DP25B-S, iSeries |
| 50,000   | 11,240 | LCM304-50KN | DP41-S, DP25B-S, iSeries |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

**Ordering Examples:** LC304-100, 100 lb capacity load cell.

LC304-5K, 5000 lb capacity load cell.

LCM304-5KN, 5000 N capacity load cell.

# 51 mm (2") MINIATURE STAINLESS STEEL

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## COMPRESSION LOAD CELL WITH MOUNTING HOLES STANDARD AND METRIC MODELS

**LC305/LCM305 (Cable Style)**  
**LC315/LCM315 (Connector Style)**  
**Compression**  
**0-25 lb to 0-20,000 lb**  
**0-100 to 50,000 N**

### LC305/LC315 Series LCM305/LCM315



Standard

- ✓ 0.25% Interchangeability
- ✓ Built-In Load Button for Easy Installation
- ✓ 5-Point Calibration

OMEGA's LC305/LCM305 Series consists of heavy-duty miniature (2" diameter) compression load cells. A small size and a low profile make these cells ideal for test benches, prototype structures, and industrial weighing applications.

#### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 2 mV/V ( $\pm 1\%$ )

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Linearity:**  $\pm 0.15\%$  FSO

**Hysteresis:** <20k lbs  $\pm 0.10\%$  FSO

>20k lbs  $\pm 0.15\%$  FSO

**Repeatability:**  $\pm 0.05\%$  FSO

**Zero Balance:**  $\pm 2\%$  FSO

**Deflection:** 0.025 to 0.075 mm  
(0.001 to 0.003")

**Operating Temp Range:**  
-46 to 107°C (-50 to 225°F)

**Compensated Temp Range:**  
16 to 71°C (60 to 160°F)

**Thermal Effects:**  
Zero:  $0.0025\%$  FSO/°F

LC305-1K, shown actual size.



Available with cable or twist-lock connector.

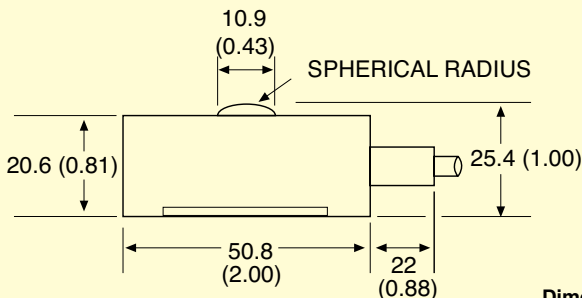
LCM315-2KN, shown actual size.



Bottom view of all models shows mounting holes.

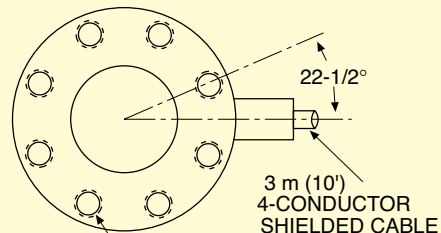


**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Protection Class:** IP65  
**Input Resistance:** 360  $\Omega$  minimum  
**Output Resistance:** 350  $\Omega \pm 10 \Omega$   
**Construction:** Stainless steel  
**Electrical:** 3 m (10') 4-conductor, color-coded, shielded PVC cable; LC315 mating connector, PT06F10-6S, (sold separately)



Dimensions:  
mm (inch)

| Wiring Code    |   |         |
|----------------|---|---------|
| Wire Connector |   |         |
| GN             | A | +Output |
| WT             | B | -Output |
| BK             | C | -Input  |
| RED            | D | +Input  |
|                | E | N/C     |
|                | F | N/C     |



LC305: 10-32 UNF x 10.2 (0.40) DP  
 LCM305: M5 x 0.8 x 10.2 (0.40) DP  
 8 MOUNTING HOLES EQ. SP  
 ON A 42.8 (1.687) DIAMETER

**STANDARD MODELS**



LC315-500, shown actual size.

LC315/LCM315 models with twist-lock connector.

Bottom view of all models shows mounting holes.



LC305/LCM305 models with 3 m (10') cable.



LCM305-2KN, shown actual size.

| CAPACITY |        | MODEL NO.  |            | COMPATIBLE METERS      |
|----------|--------|------------|------------|------------------------|
| lb       | N      | CABLE      | CONNECTOR  |                        |
| 25       | 111    | LC305-25   | LC315-25   | DPiS, DP41-S, DP25B-S  |
| 50       | 222    | LC305-50   | LC315-50   | DPiS, DP41-S, DP25B-S  |
| 100      | 445    | LC305-100  | LC315-100  | DPiS, DP41-S, DP25B-S  |
| 200      | 890    | LC305-200  | LC315-200  | DPiS, DP41-S, DP25B-S  |
| 300      | 1334   | LC305-300  | LC315-300  | DPiS, DP41-S, DP25B-S  |
| 500      | 2224   | LC305-500  | LC315-500  | DPiS, DP41-S, DP25B-S  |
| 1000     | 4448   | LC305-1K   | LC315-1K   | DPiS, DP41-S, DP25B-S  |
| 2000     | 8896   | LC305-2K   | LC315-2K   | DPiS, DP41-S, DP25B-S  |
| 2500     | 11,120 | LC305-2.5K | LC315-2.5K | DPiS, DP41-S, DP25B-S  |
| 5000     | 22,240 | LC305-5K   | LC315-5K   | DPiS, DP41-S, DP25B-S  |
| 8000     | 35,584 | LC305-8K   | LC315-8K   | DPiS, DP41-S, DP25B-S  |
| 10,000   | 44,480 | LC305-10K  | LC315-10K  | DPiS, DP41-S, DP25B-S  |
| 20,000   | 88,960 | LC305-20K  | LC315-20K  | DPiS, DP41-S, DP25B-S* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
\* 4-digit meter.

Ordering Examples: LC305-1K, 1000 lb capacity cable-style load cell.

LC315-20K, 20,000 lb capacity connector-style load cell, and PT06F10-6S, mating connector (sold separately).

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS        |
|----------|--------|-------------|-------------|--------------------------|
| N        | lb     | CABLE       | CONNECTOR   |                          |
| 100      | 22.5   | LCM305-100N | LCM315-100N | iSeries, DP41-S, DP25B-S |
| 200      | 45     | LCM305-200N | LCM315-200N | iSeries, DP41-S, DP25B-S |
| 500      | 112    | LCM305-500N | LCM315-500N | iSeries, DP41-S, DP25B-S |
| 1000     | 225    | LCM305-1KN  | LCM315-1KN  | iSeries, DP41-S, DP25B-S |
| 2000     | 450    | LCM305-2KN  | LCM315-2KN  | iSeries, DP41-S, DP25B-S |
| 5000     | 1124   | LCM305-5KN  | LCM315-5KN  | iSeries, DP41-S, DP25B-S |
| 10,000   | 2248   | LCM305-10KN | LCM315-10KN | iSeries, DP41-S, DP25B-S |
| 20,000   | 4496   | LCM305-20KN | LCM315-20KN | iSeries, DP41-S, DP25B-S |
| 50,000   | 11,240 | LCM305-50KN | LCM315-50KN | iSeries, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

Ordering Example: LCM315-10KN, 10,000 N capacity connector-style load cell.  
PT06F10-6S, mating connector, sold separately.

**ACCESSORY**

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| PT06F10-6S     | Mating connector for LC315/LCM315 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist-lock connector for LC315/LCM315 series load cells |

**Compatible Meters/Controllers for LC305 Series Load Cells**

The iSeries is available in 1/32, 1/16, and 1/8 DIN programmable process controllers with serial and embedded Internet/Ethernet communications (Order EI Option CNI16D). The iSeries features programmable color displays, free software and ActiveX Controls, selectable full autotune PID control, and NEMA 4 (IP65) rated front bezel.

Ordering Examples: DPiS8, strain/process (monitor only), 1/8 DIN, CNI8, strain/process controller with 2 control outputs.



LOAD CELLS  
F

# “TOP HAT” LOAD CELL

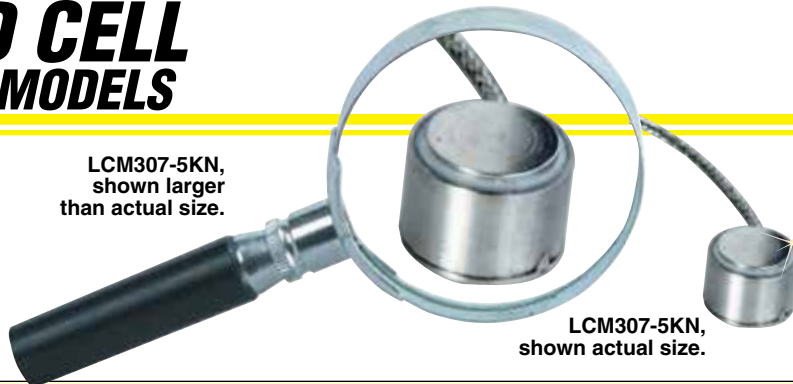
## STANDARD AND METRIC MODELS

### Compression

**0-250 lb to 0-100,000 lb**  
**0-1 to 0-500 kN**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

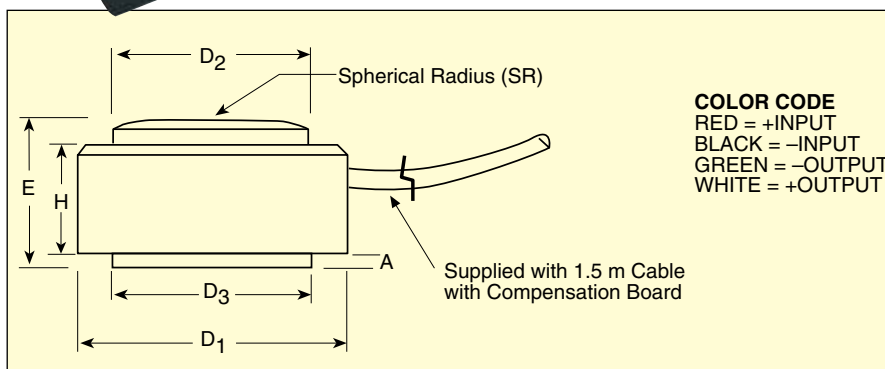
LCM307-5KN,  
 shown larger  
 than actual size.



### LC307/LCM307 Series



Standard



Small in size but not in performance, Series LC307/LCM307 top hat load cells are designed for applications with minimum space and high-capacity loads up to 100,000 lb. Rugged all stainless steel construction and high-performance strain gages ensure superior linearity and stability. Temperature compensation is done by a miniature circuit board in the load cell's cable. These cells are designed to be mounted on a smooth, flat surface.

### SPECIFICATIONS

**Excitation:** 5 Vdc  
**Output:** 1.75 mV/V nominal  
**Accuracy:** 0.75% FS BFSL (includes linearity, hysteresis and repeatability)  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 121°C (-65 to 250°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

### Thermal Effects:

**Span:** ±0.018% rdg/°C  
**Zero:** ±0.018% FSO/°C  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Bridge Resistance:** 350 Ω minimum  
**Full Scale Deflection:** 0.001 to 0.003"  
**Electrical Connection:** 1.5 m (5') 4-conductor cable with compensation board  
**Protection Class:** IP54

### STANDARD Dimensions: mm (inch)

| CAPACITY (lb) | D1          | D2          | D3          | E           | H           | A          |
|---------------|-------------|-------------|-------------|-------------|-------------|------------|
| 250           | 12.7 (0.5)  | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 500           | 12.7 (0.5)  | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 1000          | 12.7 (0.5)  | 10.2 (0.40) | 6.1 (0.24)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 2000          | 12.7 (0.5)  | 10.2 (0.40) | 7.1 (0.28)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 3000          | 12.7 (0.5)  | 10.2 (0.40) | 7.6 (0.30)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 5000          | 16 (0.63)   | 13.5 (0.53) | 13.5 (0.53) | 15.2 (0.60) | 13.5 (0.53) | 0.4 (0.02) |
| 7500          | 22.2 (0.88) | 19.3 (0.76) | 12.7 (0.50) | 16 (0.63)   | 14 (0.55)   | 0.4 (0.02) |
| 10,000        | 22.2 (0.88) | 19.3 (0.76) | 14 (0.55)   | 16 (0.63)   | 14 (0.55)   | 0.4 (0.02) |
| 50,000        | 44.5 (1.75) | 31.8 (1.25) | 25.4 (1.00) | 35.1 (1.38) | 31.4 (1.23) | 0.4 (0.02) |
| 100,000       | 50.8 (2.00) | 38.1 (1.50) | 30.5 (1.20) | 41.4 (1.63) | 37.3 (1.47) | 0.8 (0.03) |

### METRIC Dimensions: mm (inch)

| CAPACITY (kN) | D1          | D2          | D3          | E           | H           | A          |
|---------------|-------------|-------------|-------------|-------------|-------------|------------|
| 1             | 12.7 (0.50) | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 2             | 12.7 (0.50) | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 5             | 12.7 (0.50) | 10.2 (0.40) | 6.1 (0.24)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 10            | 12.7 (0.50) | 10.2 (0.40) | 7.1 (0.28)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 20            | 16 (0.63)   | 13.5 (0.53) | 13.5 (0.53) | 15.2 (0.6)  | 13.5 (0.53) | 0.4 (0.02) |
| 50            | 22.2 (0.88) | 19.3 (0.76) | 14 (0.55)   | 16 (0.63)   | 14 (0.55)   | 0.4 (0.02) |
| 200           | 44.5 (1.75) | 31.8 (1.25) | 25.4 (1.00) | 35.1 (1.38) | 31.4 (1.23) | 0.4 (0.02) |
| 500           | 50.8 (2.00) | 38.1 (1.50) | 30.5 (1.20) | 41.4 (1.63) | 37.3 (1.47) | 0.8 (0.03) |



**STANDARD MODELS**

| <b>To Order</b> |           |                   |                            |
|-----------------|-----------|-------------------|----------------------------|
| <b>CAPACITY</b> |           | <b>MODEL NO.</b>  | <b>COMPATIBLE METERS**</b> |
| <b>lb</b>       | <b>kN</b> |                   |                            |
| 250             | 1.11      | <b>LC307-250</b>  | DPiS, DP41-S, DP25B-S      |
| 500             | 2.22      | <b>LC307-500</b>  | DPiS, DP41-S, DP25B-S      |
| 1000            | 4.45      | <b>LC307-1K</b>   | DPiS, DP41-S, DP25B-S      |
| 2000            | 8.90      | <b>LC307-2K</b>   | DPiS, DP41-S, DP25B-S      |
| 3000            | 13.3      | <b>LC307-3K</b>   | DPiS, DP41-S, DP25B-S      |
| 5000            | 22.2      | <b>LC307-5K</b>   | DPiS, DP41-S, DP25B-S      |
| 7500            | 33.4      | <b>LC307-7.5K</b> | DPiS, DP41-S, DP25B-S      |
| 10,000          | 44.5      | <b>LC307-10K</b>  | DPiS, DP41-S, DP25B-S      |
| 50,000          | 222       | <b>LC307-50K</b>  | DPiS, DP41-S, DP25B-S*     |
| 100,000         | 445       | <b>LC307-100K</b> | DPiS, DP41-S, DP25B-S*     |

LCM307-500, shown larger than actual size.

**METRIC MODELS**

| <b>CAPACITY</b> |           | <b>MODEL NO.</b>    | <b>COMPATIBLE METERS</b> |
|-----------------|-----------|---------------------|--------------------------|
| <b>kN</b>       | <b>lb</b> |                     |                          |
| 1               | 225       | <b>LCM307-1KN</b>   | DPiS, DP41-S, DP25B-S    |
| 2               | 450       | <b>LCM307-2KN</b>   | DPiS, DP41-S, DP25B-S    |
| 5               | 1124      | <b>LCM307-5KN</b>   | DPiS, DP41-S, DP25B-S    |
| 10              | 2248      | <b>LCM307-10KN</b>  | DPiS, DP41-S, DP25B-S    |
| 20              | 4496      | <b>LCM307-20KN</b>  | DPiS, DP41-S, DP25B-S    |
| 50              | 11,240    | <b>LCM307-50KN</b>  | DPiS, DP41-S, DP25B-S    |
| 200             | 44,960    | <b>LCM307-200KN</b> | DPiS, DP41-S, DP25B-S    |
| 500             | 112,400   | <b>LCM307-500KN</b> | DPiS, DP41-S, DP25B-S    |

Comes complete with 5-point NIST-traceable calibration and 90 kΩ shunt data.

\* 4-digit meter.

**Ordering Examples:** **LC307-5K**, 5000 lb capacity top hat load cell.

**LC307-500**, 500 lb capacity top hat load cell.

**LCM307-50KN**, 50 kN capacity top hat load cell.

**LCM307-10KN**, 10 kN capacity top hat load cell.

# MAKE IT WIRELESS! ADD WIRELESS CAPABILITY TO YOUR PROCESS MEASUREMENT SYSTEM!



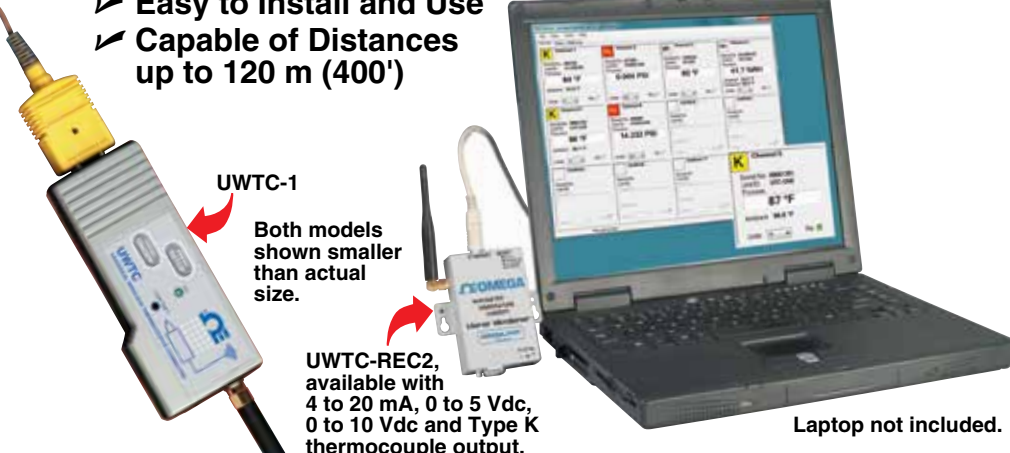
WRS232-USB wireless transmitter, shown close to actual size.

**Wireless Connections From Your Sensor to Your Instrumentation:**

- ✓ Thermocouple, RTD, Infrared Temperature, Humidity, pH, as well as Process Voltage/Current
- ✓ Easy to Install and Use
- ✓ Capable of Distances up to 120 m (400')

**Wireless Communications From Your Instrument to a PC:**

- ✓ Convert the RS232 Signal on Your Meter, Controller or PLC
- ✓ Works with any PC with a USB Port
- ✓ Easy to Install with Seamless Operation
- ✓ Capable of Distances up to 120 m (400')



UWTC-1

Both models shown smaller than actual size.

UWTC-REC2, available with 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc and Type K thermocouple output.

Laptop not included.

# MINIATURE COMPRESSION LOAD CELL WITH THREADED CENTER HOLE

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## Compression

0-250 lb to 0-2000 lb

0-114 kg to 0-909 kg

1 Newton = 0.2248 lb

1 daNewton = 10 Newtons

1 lb = 454 g

1 t = 1000 kg = 2204 lb

## LC321 Series



- ✓ Miniature Package for Robotic Applications, 38 mm (1.5") Diameters
- ✓ Threaded Center Hole for Easy Installation
- ✓ 5-Point Calibration Provided
- ✓ Ultra-Low Profile

OMEGA's LC321 Series compression load cells offer a broad load range, a threaded center hole, and an ultra-low profile for easy installation. Their all stainless steel construction and rugged design ensure long life and high reliability in industrial environments.

## SPECIFICATIONS

Output: 2 mV/V

Excitation: 10 Vdc, 15 Vdc maximum

Accuracy:  $\pm 2.0\%$  FSO linearity, hysteresis, repeatability combined

5-Point Calibration: 0%, 50%, 100%, 50%, 0%

Zero Balance:  $\pm 2\%$  FSO

Operating Temp Range: -54 to 121°C (-65 to 250°F)

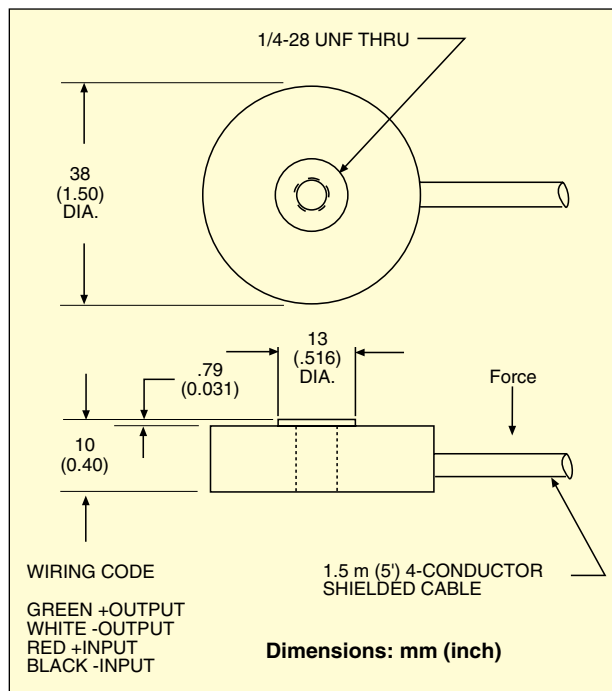
Compensated Temp Range: 16 to 71°C (60 to 160°F)

Thermal Effects:

Zero: 0.005% FSO/°F

Span: 0.010% rdg/°F

Protection Class: IP65



**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 360  $\Omega$  minimum

**Output Resistance:** 350  $\pm 5 \Omega$

**Construction:** Stainless steel

**Electrical:** 1.5 m (5') 4-conductor shielded cable

| To Order |     |           |                       |
|----------|-----|-----------|-----------------------|
| CAPACITY |     | MODEL NO. | COMPATIBLE METERS*    |
| lb       | kg  |           |                       |
| 250      | 114 | LC321-250 | DPiS, DP41-S, DP25B-S |
| 500      | 227 | LC321-500 | DPiS, DP41-S, DP25B-S |
| 750      | 341 | LC321-750 | DPiS, DP41-S, DP25B-S |
| 1000     | 455 | LC321-1K  | DPiS, DP41-S, DP25B-S |
| 2000     | 909 | LC321-2K  | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 k $\Omega$  shunt data.

\* Visit us online for compatible meters.

**Ordering Examples:** LC321-750, 750 lb capacity subminiature compression load cell.

LC201-1K, 1000 lb capacity subminiature compression load cell.

# COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS

**Models Available  
 with Dual Bridge or  
 Built-In Amplifiers!**

**LC401 (Cable Style)  
 LC411 (Connector Style)  
 Compression  
 0-50 lb to 0-400,000 lb  
 0-25 kg to 0-5000 kgf**



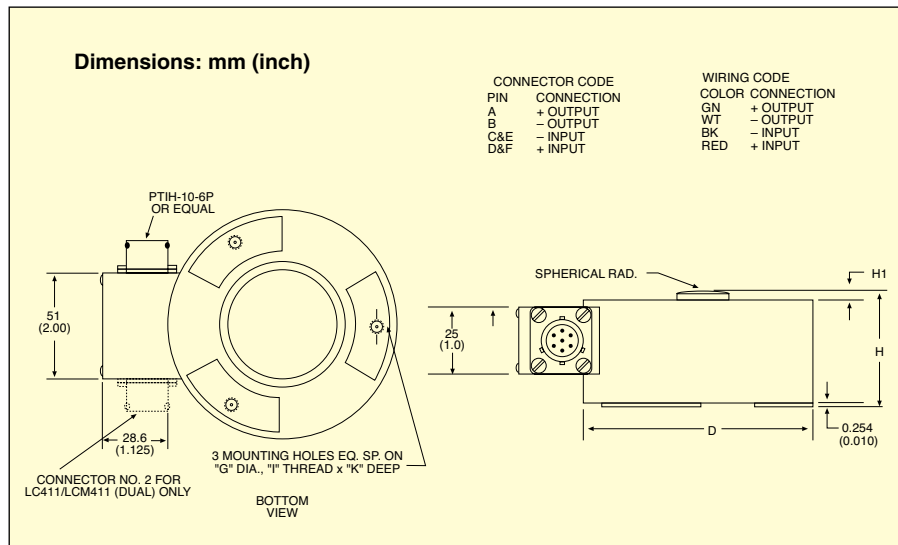
PT06F10-6S-R,  
 mating connector  
 required. Sold  
 separately.

LC411-20K connector style,  
 shown actual size.

### LC401/LCM401 Series LC411/LCM411 Series



- ✓ Dual-Bridge Models Available
- ✓ Models Available with Built-In 5V Amplifiers
- ✓ All Stainless Steel for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ 5-Point Calibration Provided



Dimensions: mm (inch)

| CAPACITY               |                  | D           | H          | H1         | K          | G           | I             |
|------------------------|------------------|-------------|------------|------------|------------|-------------|---------------|
| lb                     | kg               |             |            |            |            |             |               |
| <b>STANDARD MODELS</b> |                  |             |            |            |            |             |               |
| 50 to 10,000           | 23 to 4537       | 66 (2.62)   | 32 (1.25)  | 2.3 (0.09) | 6.4 (0.25) | 56 (2.188)  | 6-40 UNF-2    |
| 15,000 to 25,000       | 6806 to 11,343   | 83 (3.25)   | 41 (1.62)  | 2.3 (0.09) | 6.4 (0.25) | 69 (2.719)  | 10-32 UNF-2   |
| 50,000 to 75,000       | 22,686 to 34,029 | 127 (5.00)  | 64 (2.50)  | 3.0 (0.12) | 6.4 (0.25) | 105 (4.125) | 5/16-24 UNF-2 |
| 100,000                | 45,372           | 152 (6.00)  | 89 (3.50)  | 3.8 (0.15) | 9.4 (0.37) | 124 (4.875) | 7/16-20 UNF-2 |
| 200,000                | 90,744           | 203 (8.00)  | 121 (4.75) | 4.6 (0.18) | 13 (0.50)  | 164 (6.438) | 5/8-18 UNF-2  |
| 300,000                | 136,116          | 229 (9.00)  | 121 (4.75) | 4.6 (0.18) | 16 (0.63)  | 191 (7.500) | 3/4-16 UNF-2  |
| 400,000                | 181,488          | 254 (10.00) | 121 (4.75) | 6.4 (0.25) | 19 (0.75)  | 216 (8.500) | 7/8-14 UNF-2  |
| <b>METRIC MODELS</b>   |                  |             |            |            |            |             |               |
| 55 to 11.023           | 25 to 5000       | 66 (2.62)   | 32 (1.25)  | 2.3 (0.09) | 6.4 (0.25) | 56 (2.188)  | M4 x 0.7      |

**STANDARD MODELS**

**SPECIFICATIONS**

**Excitation:** 10 Vdc (15 Vdc maximum)

**Output:** 3 mV/V ±0.25%

**5-Point Calibration:** Calibrated at 0%, 50%, 100%, 50%, 0%.

**Note:** Models >300,000 lb are calibrated to 300,000 lb. Full scale calibration above 300,000 lb within ±1% available.

**Linearity:**

>3000 lb: 0.10% FSO

≤3000 lb: 0.13% FSO

**Hysteresis:**

>3000 lb: 0.10% FSO

≤3000 lb: 0.12 % FSO

**Repeatability:** 0.05% FSO

**Zero Balance:** ±1% FSO

**Operating Temp Range:**

-54 to 107°C (-65 to 225°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** 0.0045% FSO/°C

**Span:** 0.006% FSO/°C

**Safe Overload:** 150% full scale capacity

**Ultimate Overload:** 300% full scale capacity

**Bridge Resistance:** 350 ±5Ω

**FS Deflection:** 0.001 to 0.003" typical

**Construction:** 17-4 PH stainless steel

**Electrical Connection:**

**LC401:** 4.8 m (15') 4-conductor shielded PVC cable

**LC411:** PTIH-10-6P twist-lock connector (or equivalent)

**Mating Connector:** PT06F10-6S-R (sold separately)

**Cable Assembly with Twist-Lock**

**Connector:** CA-6PC24-3-015 (sold separately)

**Protection Class:** IP65

**POPULAR OPTIONS (Additional Cost)**

0 to 5 Vdc Output: (≥5000 kg) “-5V”

Overload Stops: “-OL”

Dual Bridge: “-DUAL”

Extended Temperature Range:

-45 to 93°C (-50 to 200°F) “-TC1”

-45 to 163°C (-50 to 325°F) “-TC2”

**To Order**

| CAPACITY |         | MODEL NO.  |            | COMPATIBLE METERS**      |
|----------|---------|------------|------------|--------------------------|
| lb       | kgf     | CABLE      | CONNECTOR  |                          |
| 50       | 23      | LC401-50   | LC411-50   | DP41-B, DP41-S, DP25B-S  |
| 100      | 45      | LC401-100  | LC411-100  | DP41-B, DP41-S, DP25B-S  |
| 250      | 114     | LC401-250  | LC411-250  | DP41-B, DP41-S, DP25B-S  |
| 500      | 227     | LC401-500  | LC411-500  | DP41-B, DP41-S, DP25B-S  |
| 1000     | 455     | LC401-1K   | LC411-1K   | DP41-B, DP41-S, DP25B-S  |
| 1500     | 682     | LC401-1.5K | LC411-1.5K | DP41-B, DP41-S, DP25B-S  |
| 2000     | 909     | LC401-2K   | LC411-2K   | DP41-B, DP41-S, DP25B-S  |
| 3000     | 1361    | LC401-3K   | LC411-3K   | DP41-B, DP41-S, DP25B-S  |
| 5000     | 2269    | LC401-5K   | LC411-5K   | DP41-B, DP41-S, DP25B-S  |
| 10,000   | 4537    | LC401-10K  | LC411-10K  | DP41-B, DP41-S, DP25B-S  |
| 15,000   | 6806    | LC401-15K  | LC411-15K  | DP41-B, DP41-S, DP25B-S* |
| 20,000   | 9074    | LC401-20K  | LC411-20K  | DP41-B, DP41-S, DP25B-S* |
| 25,000   | 11,343  | LC401-25K  | LC411-25K  | DP41-B, DP41-S, DP25B-S* |
| 50,000   | 22,686  | LC401-50K  | LC411-50K  | DP41-B, DP41-S, DP25B-S* |
| 75,000   | 34,029  | LC401-75K  | LC411-75K  | DP41-B, DP41-S, DP25B-S* |
| 100,000  | 45,372  | LC401-100K | LC411-100K | DP41-B, DP41-S, DP25B-S* |
| 200,000  | 90,744  | LC401-200K | LC411-200K | DP41-B, DP41-S, DP25B-S* |
| 300,000  | 136,116 | LC401-300K | LC411-300K | DP41-B, DP41-S, DP25B-S* |
| 400,000  | 181,488 | LC401-400K | LC411-400K | DP41-B, DP41-S, DP25B-S* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter.

To order dual-bridge models, add suffix “-DUAL” to model number and additional cost to price. To order optional 0 to 5 V output, add suffix “-5V” to model number and additional cost to price.

**Note:** Models >300,000 lb are calibrated at 300,000 lb. Full scale calibration above 300,000 lb within ±1% available. Add suffix “-FS” to the model number; consult Sales for price and availability.

**Ordering Examples:** LC401-1K, 1000 lb capacity cable-style load cell.

LC411-10K-DUAL, 10,000 lb capacity connector-style load cell with dual-bridge option, PT06F10-6S-R, mating connector (2 required on dual models), sold separately.

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS**      |
|----------|--------|-------------|-------------|--------------------------|
| kgf      | lb     | CABLE       | CONNECTOR   |                          |
| 25       | 55     | LCM401-25   | LCM411-25   | iSeries, DP41-S, DP25B-S |
| 50       | 110    | LCM401-50   | LCM411-50   | iSeries, DP41-S, DP25B-S |
| 100      | 220    | LCM401-100  | LCM411-100  | iSeries, DP41-S, DP25B-S |
| 150      | 331    | LCM401-150  | LCM411-150  | iSeries, DP41-S, DP25B-S |
| 250      | 551    | LCM401-250  | LCM411-250  | iSeries, DP41-S, DP25B-S |
| 500      | 1102   | LCM401-500  | LCM411-500  | iSeries, DP41-S, DP25B-S |
| 750      | 1653   | LCM401-750  | LCM411-750  | iSeries, DP41-S, DP25B-S |
| 1000     | 2205   | LCM401-1K   | LCM411-1K   | iSeries, DP41-S, DP25B-S |
| 1500     | 3307   | LCM401-1.5K | LCM411-1.5K | iSeries, DP41-S, DP25B-S |
| 2500     | 5512   | LCM401-2.5K | LCM411-2.5K | iSeries, DP41-S, DP25B-S |
| 5000     | 11,023 | LCM401-5K   | LCM411-5K   | iSeries, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

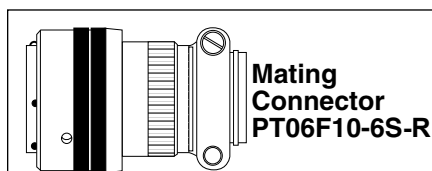
To order dual-bridge models, add suffix “-DUAL” to model number and additional cost to price. To order optional 0 to 5 V output, add suffix “-5V” to model number and additional cost to price.

**Ordering Examples:** LCM401-500, 500 kgf capacity cable-style load cell;

LCM401-2.5K-DUAL, 2500 kgf capacity cable-style dual-bridge load cell. PT06F10-6S-R, mating connector (2 required on dual-bridge models), sold separately.

**ACCESSORY**

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| PT06F10-6S-R   | Mating connector for LC411/LCM411 series load cells                         |
| CA-6PC24-3-015 | Cable assembly with twist-lock connector for LC411/LCM411 series load cells |



# LOW-PROFILE LOAD CELLS

## STANDARD AND METRIC MODELS

**Tension/Compression**  
 50 lb to 750,000 lb, 25 kgf to 10,000 kgf

### LC402/LCM402 Series LC412/LCM412 Series



- ✓ Industrial Weighing
- ✓ All Stainless Steel for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ 5 Point NIST Traceable Calibration Included



### SPECIFICATIONS

**Excitation:** 10 Vdc (15 Vdc maximum)

**Output:** 3 mV/V  $\pm$ 0.25%

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0% in compression.

Units ordered with optional tension plate calibrated in tension.

**Linearity:** 0.10% FSO

**Hysteresis:** 0.10% FSO

**Repeatability:** 0.05% FSO

**Zero Balance:**  $\pm$ 1% FSO

**Operating Temperature Range:**

LC402/LCM402: -54 to 121°C

(-65 to 250°F)

LC412/LCM412: -54 to 127°C

(-65 to 260°F)

**Compensated Temperature Range:**

16 to 71°C (60 to 160°F)

**Protection Class:** IP65

**Thermal Effects:**

**Zero:** 0.0045% FSO/°C

**Span:** 0.0045% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

for ranges  $\leq$ 400,000 lb;

200% of capacity for ranges  $>$ 400,000 lb

**Bridge Resistance:** 350  $\pm$ 10  $\Omega$

**Full Scale Deflection:** 0.025 to

0.075 mm (0.001 to 0.003") typical

**Construction:** 17-4 PH stainless steel

**Electrical Connection:**

LC402/LCM402: 4.8 m (15')

4-conductor shielded PVC cable

LC412/LCM412: DT02H-10-6P

connector (or equivalent)

### POPULAR OPTIONS (Additional Cost)

0 to 5 Vdc Output: ( $\geq$ 5000 kg) **"-5V"**

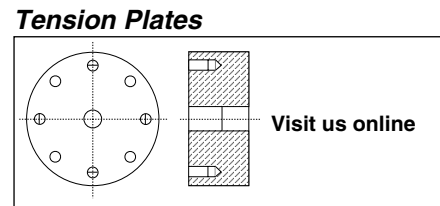
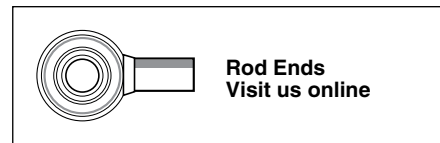
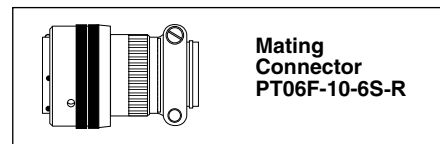
Overload Stops: **"-OL"**

Dual Bridge: **"-DUAL"**

Extended Temperature Range:

-45 to 93°C (-50 to 200°F) **"-TC1"**

-45 to 163°C (-50 to 325°F) **"-TC2"**

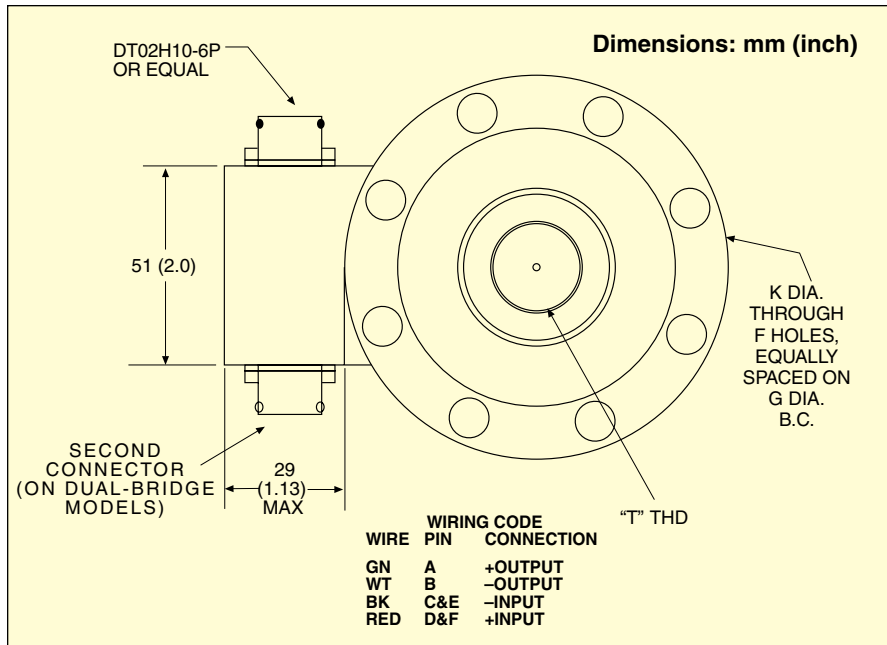


# "PANCAKE" STYLE HIGH-ACCURACY

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## LOW-PROFILE LOAD CELLS

## STANDARD AND METRIC MODELS



### STANDARD LOAD BUTTONS

| MODEL      | THREAD   |
|------------|----------|
| LBC-038    | 3/8-24   |
| LBC-012    | 1/2-20   |
| LBC-034    | 3/4-16   |
| LBC-100    | 1-14     |
| LBC-112    | 1 1/2-12 |
| LBC-200-12 | 2-12     |

\* Consult Engineering.

### METRIC LOAD BUTTONS

| MODEL NO. | THREAD     |
|-----------|------------|
| MLBC-M10  | M10 x 1.5  |
| MLBC-M12  | M12 x 1.75 |
| MLBC-M20  | M20 x 1.5  |
| MLBC-M24  | M24 x 2.0  |

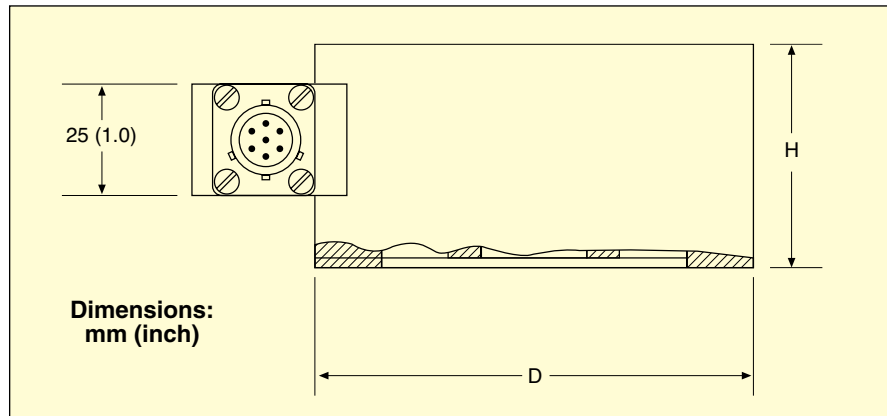
### STANDARD MALE ROD ENDS

| MODEL NO. | THREAD UNF-3A |
|-----------|---------------|
| REC-038M  | 3/8-24        |
| REC-012M  | 1/2-20        |
| REC-034M  | 3/4-16        |
| REC-100M  | 1-14          |
| REC-112M  | 1 1/2-12      |

### METRIC MALE ROD ENDS

| MODEL NO. | THREAD     |
|-----------|------------|
| MREC-M10M | M10 x 1.5  |
| MREC-M12M | M12 x 1.75 |
| MREC-M20M | M20 x 1.5  |
| MREC-M24M | M24 x 2.0  |

Visit us online for load button and rod end dimensions



Dimensions: mm (inch)

| CAPACITY               | D DIA.     | H HEIGHT   | F  | G           | K            | T          | WEIGHT kg (lb) |
|------------------------|------------|------------|----|-------------|--------------|------------|----------------|
| <b>STANDARD MODELS</b> |            |            |    |             |              |            |                |
| 50 to 300 lb           | 76 (3.00)  | 38 (1.50)  | 8  | 57 (2.25)   | 6.7 (0.266)  | 3/8-24     | 1.1 (2.5)      |
| 500 to 3K lb           | 89 (3.50)  | 38 (1.50)  | 8  | 73 (2.875)  | 6.7 (0.266)  | 1/2-20     | 1.4 (3)        |
| 5000 to 10K lb         | 95 (3.75)  | 38 (1.50)  | 8  | 83 (3.25)   | 6.7 (0.266)  | 3/4-16     | 2.3 (5)        |
| 15K to 25K lb          | 102 (4.00) | 51 (2.00)  | 8  | 89 (3.50)   | 10.3 (0.406) | 1-14       | 3.4 (7.5)      |
| 30K to 50K lb          | 178 (7.00) | 76 (3.00)  | 8  | 143 (5.625) | 13.5 (0.531) | 1 1/2-12   | 15 (33)        |
| 75K lb                 | 203 (8.00) | 89 (3.50)  | 8  | 171 (6.750) | 16.7 (0.656) | 1 3/4-12   | 23 (50)        |
| 100K lb                | 241 (9.50) | 102 (4.00) | 8  | 203 (8.00)  | 19.8 (0.781) | 2-12       | 37 (81)        |
| 150K to 200K lb        | 279 (11.0) | 102 (4.00) | 12 | 235 (9.25)  | 26 (1.030)   | 2 1/2-12   | 46 (102)       |
| 300K to 400K lb        | 279 (11.0) | 102 (4.00) | 12 | 235 (9.25)  | 26 (1.030)   | 3-12       | 46 (102)       |
| 500K lb                | 305 (12.0) | 102 (4.00) | 12 | 280 (10.25) | 29 (1.156)   | 3 1/2-8    | 52 (115)       |
| 750K lb                | 330 (13.0) | 114 (4.50) | 12 | 279 (11.00) | 33 (1.281)   | 4-8        | 61 (135)       |
| <b>METRIC MODELS</b>   |            |            |    |             |              |            |                |
| 25 to 100 kgf          | 76 (3.00)  | 38 (1.50)  | 8  | 57 (2.25)   | 6.7 (0.266)  | M10 x 1.5  | 1.1 (2.5)      |
| 250 to 1500 kgf        | 89 (3.50)  | 38 (1.50)  | 8  | 73 (2.875)  | 6.7 (0.266)  | M12 x 1.75 | 1.4 (3)        |
| 2.5K to 5K kgf         | 95 (3.75)  | 38 (1.50)  | 8  | 83 (3.25)   | 6.7 (0.266)  | M20 x 1.5  | 2.3 (5)        |
| 7.5K to 10K kgf        | 102 (4.00) | 51 (2.00)  | 8  | 89 (3.50)   | 10.3 (0.406) | M24 x 2.0  | 3.4 (7.5)      |

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

**STANDARD MODELS**

| To Order |         |            |            | TENSION BASE PLATE      |               |
|----------|---------|------------|------------|-------------------------|---------------|
| CAPACITY |         | MODEL NO.  |            | COMPATIBLE METERS*      | MODEL NO.     |
| lb       | kgf     | CABLE      | CONNECTOR  |                         |               |
| 50       | 23      | LC402-50   | LC412-50   | DPiS, DP41-S, DP25B-S   | LC412-TP225   |
| 100      | 45      | LC402-100  | LC412-100  | DPiS, DP41-S, DP25B-S   | LC412-TP225   |
| 250      | 114     | LC402-250  | LC412-250  | DPiS, DP41-S, DP25B-S   | LC412-TP225   |
| 500      | 227     | LC402-500  | LC412-500  | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 1000     | 455     | LC402-1K   | LC412-1K   | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 2000     | 909     | LC402-2K   | LC412-2K   | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 3000     | 1361    | LC402-3K   | LC412-3K   | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 5000     | 2269    | LC402-5K   | LC412-5K   | DPiS, DP41-S, DP25B-S   | LC412-TP325   |
| 10,000   | 4537    | LC402-10K  | LC412-10K  | DPiS, DP41-S, DP25B-S   | LC412-TP325   |
| 15,000   | 6806    | LC402-15K  | LC412-15K  | DPiS, DP41-S, DP25B-S** | LC412-TP350   |
| 20,000   | 9074    | LC402-20K  | LC412-20K  | DPiS, DP41-S, DP25B-S** | LC412-TP350   |
| 25,000   | 11,343  | LC402-25K  | LC412-25K  | DPiS, DP41-S, DP25B-S** | LC412-TP350   |
| 50,000   | 22,686  | LC402-50K  | LC412-50K  | DPiS, DP41-S, DP25B-S** | LC412-TP563   |
| 75,000   | 34,029  | LC402-75K  | LC412-75K  | DPiS, DP41-S, DP25B-S** | LC412-TP675   |
| 100,000  | 45,372  | LC402-100K | LC412-100K | DPiS, DP41-S, DP25B-S** | LC412-TP800   |
| 200,000  | 90,744  | LC402-200K | LC412-200K | DPiS, DP41-S, DP25B-S** | LC412-TP925   |
| 300,000  | 136,116 | LC402-300K | LC412-300K | DPiS, DP41-S, DP25B-S** | LC412-TP925-3 |
| 400,000  | 181,488 | LC402-400K | LC412-400K | DPiS, DP41-S, DP25B-S** | LC412-TP925-3 |
| 500,000  | 226,860 | LC402-500K | LC412-500K | DPiS, DP41-S, DP25B-S** | LC412-TP1025  |
| 750,000  | 340,290 | LC402-750K | LC412-750K | DPiS, DP41-S, DP25B-S** | LC412-TP1100  |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

DPiS suitable for one direction measurement only. \* Visit us online for compatible meters. \*\* 4-digit meter.

To order dual-bridge models, add suffix “-DUAL” to the model number. Consult sales for price and availability.

**Note:** Models >300,000 lb are calibrated at 300,000 lb. Full scale calibration above 300,000 lb within ±1% available; add suffix “-FS” to the model number and consult Sales for price and delivery.

**Ordering Examples:** LC412-10K-DUAL, dual-bridge 10,000 lb capacity connector-style load cell.

PT06F10-6S-R, mating connector, 2 required (sold separately), LC412-TP325, optional tension plate.

LC412-20K-5V, 20,000 lb capacity connector-style load cell with optional 0 to 5 Vdc output, PT06F10-6S-R, mating connector (sold separately), LC412-TP350, optional tension plate.

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS*        | TENSION BASE PLATE MODEL NO. |
|----------|--------|-------------|-------------|---------------------------|------------------------------|
| kgf      | lb     | CABLE       | CONNECTOR   |                           |                              |
| 25       | 55     | LCM402-25   | LCM412-25   | DP41-B, DP41-S, DP25B-S   | LCM412-TP225                 |
| 50       | 110    | LCM402-50   | LCM412-50   | DP41-B, DP41-S, DP25B-S   | LCM412-TP225                 |
| 100      | 220    | LCM402-100  | LCM412-100  | DP41-B, DP41-S, DP25B-S   | LCM412-TP225                 |
| 250      | 551    | LCM402-250  | LCM412-250  | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                 |
| 500      | 1102   | LCM402-500  | LCM412-500  | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                 |
| 1000     | 2205   | LCM402-1K   | LCM412-1K   | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                 |
| 1500     | 3307   | LCM402-1.5K | LCM412-1.5K | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                 |
| 2500     | 5512   | LCM402-2.5K | LCM412-2.5K | DP41-B, DP41-S, DP25B-S   | LCM412-TP325                 |
| 5000     | 11,023 | LCM402-5K   | LCM412-5K   | DP41-B, DP41-S, DP25B-S   | LCM412-TP325                 |
| 7500     | 16,535 | LCM402-7.5K | LCM412-7.5K | DP41-B, DP41-S, DP25B-S   | LCM412-TP350                 |
| 10,000   | 22,046 | LCM402-10K  | LCM412-10K  | DP41-B, DP41-S, DP25B-S** | LCM412-TP350                 |

**ACCESSORIES**

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| PT06F10-6S-R   | Mating connector for LC412/LCM412 load cells                                |
| CA-6PC24-3-015 | Cable assembly with twist-lock connector for LC412/LCM412 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data. \* Visit us online for compatible meters. \*\* 4-digit meter.

To order dual-bridge models, add suffix “-DUAL” to model number. Consult sales for price and availability.

**Ordering Examples:** LCM412-10K-DUAL, dual-bridge 10,000 kgf capacity connector-style load cell.

PT06F10-6S-R, mating connector, 2 required (sold separately). LCM412-TP350, optional tension plate, LCM402-100, 100 kgf capacity cable-style load cell, LCM412-TP325, optional tension plate.

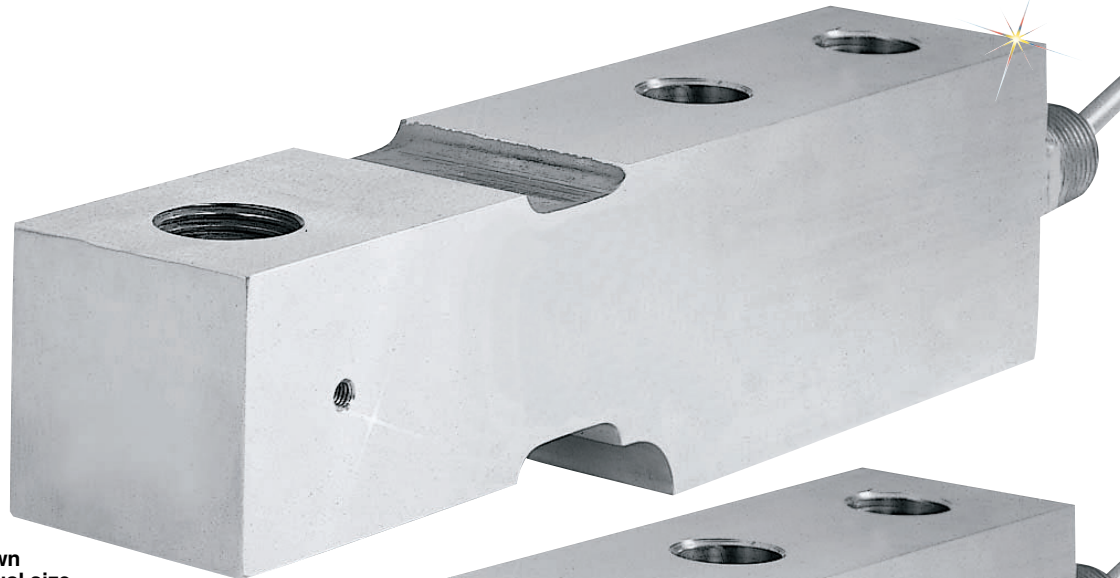
# Steel Cantilever Beams

## Standard and Metric Models

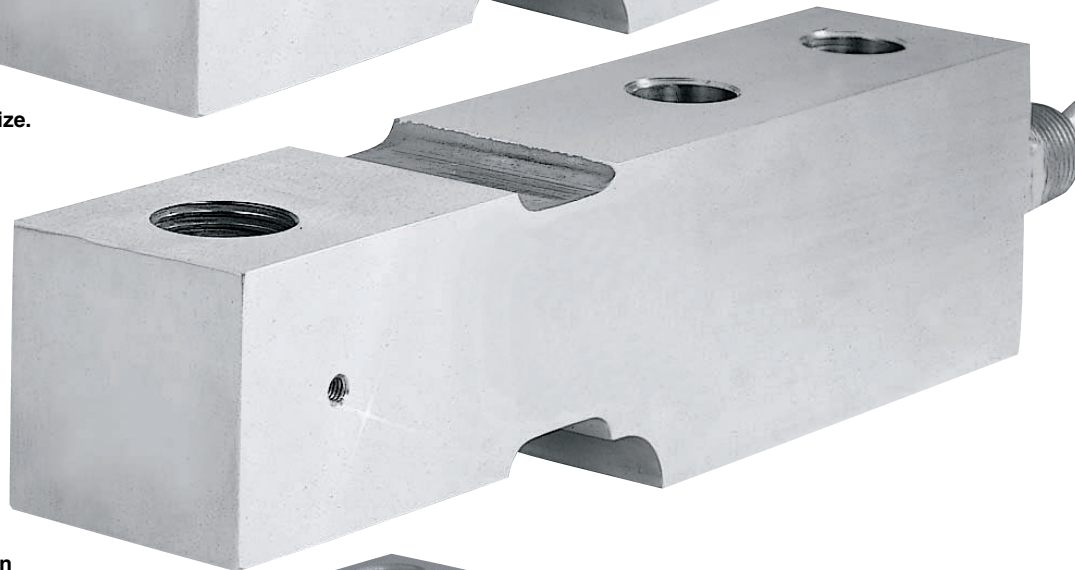
LC501/LCM501 Series  
LC511/LCM511 Series



Standard



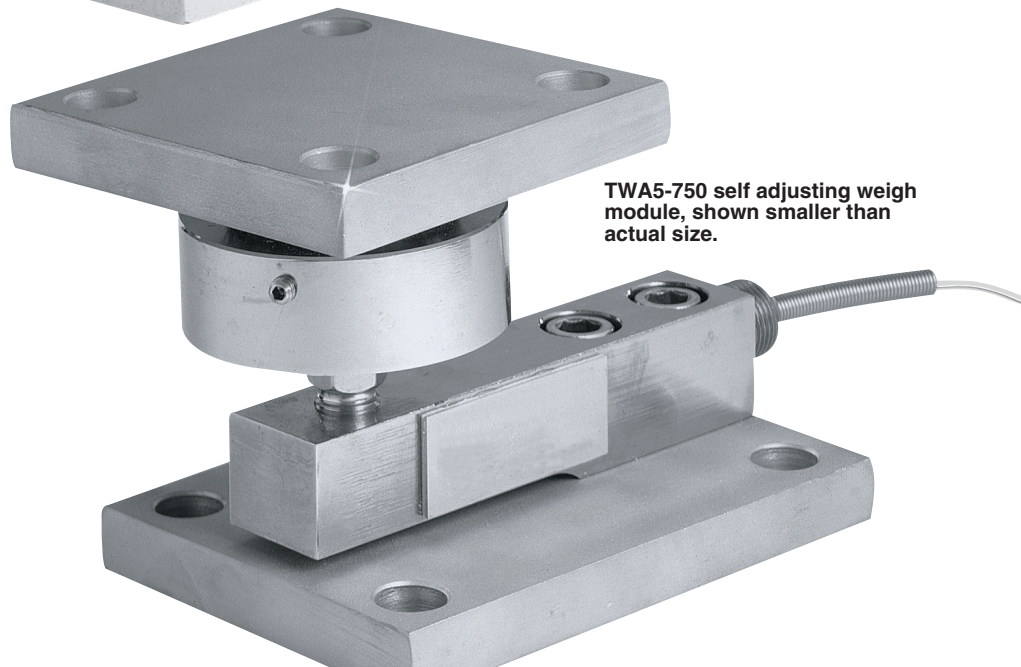
STANDARD  
LC501-20K, shown  
smaller than actual size.



METRIC  
LCM501-10K, shown  
smaller than actual size.

Tension/Compression  
0-50 lb to 0-30,000 lb-  
Standard Models  
0-25 kgf to 0-10,000 kgf-  
Metric Models

- ✓ All Stainless Steel Construction for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Cell Applications
- ✓ 5-Point Calibration Provided



TWA5-750 self adjusting weigh  
module, shown smaller than  
actual size.



## SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 3 mV/V  $\pm 0.25\%$

**5-Point Calibrated (in Compression):**

0%, 50%, 100%, 50%, 0%

**Linearity:**  $\pm 0.03\%$  FSO

**Hysteresis:**  $\pm 0.02\%$  FSO

**Repeatability:**  $\pm 0.02\%$  FSO

**Zero Balance:**  $\pm 1\%$  FSO

**Operating Temp Range:**

-34 to 82°C (-30 to 180°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:**  $\pm 0.001\%$  FSO/°F (0.0018%/°C)

**Span:**  $\pm 0.001\%$  FSO/°F (0.0018%/°C)

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 360  $\Omega$  minimum

**Output Resistance:** 350  $\pm 10 \Omega$

**FS Deflection:** 0.5 mm (0.02") typical

**Construction:** 17-4 PH stainless steel,  
>30,000 lb, high-alloy steel

**Electrical:**

**LC501/LCM501:** 4.6 m (15')

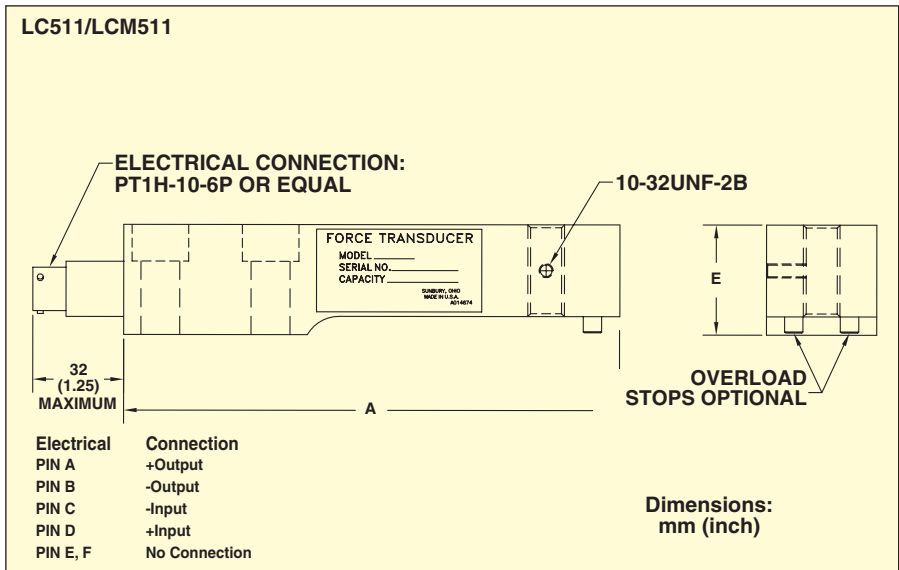
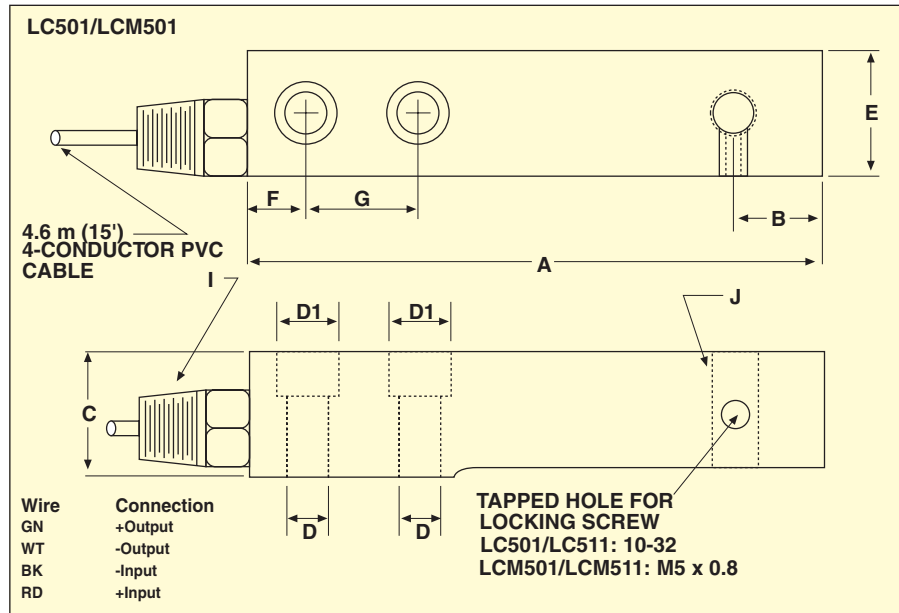
4 conductor shielded cable

**LC511/LCM511:** 6-pin DT02H-10-6P  
or equivalent

**Mating Connector:** PT06F10-6S-R  
(sold separately)

### Accessory Hardware:

TWA/TWAM Series  
Self-Adjusting Weigh Modules  
Nickel-Plated Carbon Steel or  
Stainless Steel



### Dimensions: mm (inch)

| CAPACITY           | A             | B            | C           | D             | D1           | E           | F            | G            | I          | J          | WEIGHT<br>kg (lb) |
|--------------------|---------------|--------------|-------------|---------------|--------------|-------------|--------------|--------------|------------|------------|-------------------|
| <b>STANDARD</b>    |               |              |             |               |              |             |              |              |            |            |                   |
| 50 to<br>750 lb    | 121<br>(4.75) | 19<br>(0.75) | 25<br>(1.0) | 9.9<br>(0.39) | 15<br>(0.59) | 25<br>(1.0) | 13<br>(0.50) | 25<br>(1.0)  | 3/8-18 UNC | 1/2-20     | 0.9<br>(2)        |
| 1K to 6.5K lb      | 173<br>(6.75) | 25<br>(1.0)  | 38<br>(1.5) | 13<br>(0.53)  | 20<br>(0.77) | 38<br>(1.5) | 13<br>(0.50) | 38<br>(1.5)  | 1/2-14 UNC | 1/2-20     | 1.8<br>(4)        |
| 7.5K to 10K lb     | 197<br>(7.75) | 25<br>(1.0)  | 38<br>(1.5) | 20<br>(0.77)  | n/a          | 38<br>(1.5) | 19<br>(0.75) | 51<br>(2.0)  | 1/2-14 UNC | 3/8-16     | 2.3<br>(5)        |
| 20K lb             | 241<br>(9.50) | 25<br>(1.0)  | 64<br>(2.5) | 20<br>(0.77)  | n/a          | 51<br>(2.0) | 25<br>(1.00) | 57<br>(2.25) | 1/2-14 UNC | 1-12       | 5<br>(11)         |
| 30K lb             | 241<br>(9.50) | 25<br>(1.0)  | 64<br>(2.5) | 27<br>(1.06)  | n/a          | 51<br>(2.0) | 25<br>(1.00) | 57<br>(2.25) | 1/2-14 UNC | 1-12       | n/a               |
| <b>METRIC</b>      |               |              |             |               |              |             |              |              |            |            |                   |
| 25 to<br>250 kgf   | 121<br>(4.75) | 19<br>(0.75) | 25<br>(1.0) | 9.9<br>(0.39) | 15<br>(0.59) | 25<br>(1.0) | 13<br>(0.50) | 25<br>(1.0)  | 3/8-18 UNC | M12 x 1.75 | 0.9<br>(2)        |
| 500 to<br>2500 kgf | 173<br>(6.75) | 25<br>(1.0)  | 38<br>(1.5) | 13<br>(0.53)  | 20<br>(0.77) | 38<br>(1.5) | 13<br>(0.50) | 38<br>(1.5)  | 1/2-14 UNC | M12 x 1.75 | 1.8<br>(4)        |
| 5000 kgf           | 197<br>(7.75) | 25<br>(1.0)  | 38<br>(1.5) | 20<br>(0.77)  | n/a          | 38<br>(1.5) | 19<br>(0.75) | 51<br>(2.0)  | 1/2-14 UNC | M20 x 1.5  | 2.3<br>(5)        |
| 10,000 kgf         | 241<br>(9.50) | 25<br>(1.0)  | 64<br>(2.5) | 20<br>(0.77)  | n/a          | 51<br>(2.0) | 25<br>(1.00) | 57<br>(2.25) | 1/2-14 UNC | M24 x 2.0  | 5<br>(11)         |


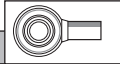
# High-Accuracy Stainless Steel Cantilever Beams

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## To Order

| CAPACITY               |        | MODEL NO.          |                    | COMPATIBLE METERS        | BASE PLATE    |
|------------------------|--------|--------------------|--------------------|--------------------------|---------------|
| kgf                    | lb     | CABLE STYLE        | CONNECTOR STYLE    |                          |               |
| <b>STANDARD MODELS</b> |        |                    |                    |                          |               |
| 45                     | 100    | <b>LC501-100</b>   | <b>LC511-100</b>   | DP41-B, DP41-S, DP25B-S  | <b>BP-10</b>  |
| 91                     | 200    | <b>LC501-200</b>   | <b>LC511-200</b>   | DP41-B, DP41-S, DP25B-S  |               |
| 227                    | 500    | <b>LC501-500</b>   | <b>LC511-500</b>   | DP41-B, DP41-S, DP25B-S  |               |
| 341                    | 750    | <b>LC501-750</b>   | <b>LC511-750</b>   | DP41-B, DP41-S, DP25B-S  |               |
| 455                    | 1000   | <b>LC501-1K</b>    | <b>LC511-1K</b>    | DP41-B, DP41-S, DP25B-S  | <b>BP-15</b>  |
| 909                    | 2000   | <b>LC501-2K</b>    | <b>LC511-2K</b>    | DP41-B, DP41-S, DP25B-S  |               |
| 1361                   | 3000   | <b>LC501-3K</b>    | <b>LC511-3K</b>    | DP41-B, DP41-S, DP25B-S  |               |
| 2269                   | 5000   | <b>LC501-5K</b>    | <b>LC511-5K</b>    | DP41-B, DP41-S, DP25B-S  |               |
| 3402                   | 7500   | <b>LC501-7.5K</b>  | <b>LC511-7.5K</b>  | DP41-B, DP41-S, DP25B-S  |               |
| 4537                   | 10,000 | <b>LC501-10K</b>   | <b>LC511-10K</b>   | DP41-B, DP41-S, DP25B-S  |               |
| 9074                   | 20,000 | <b>LC501-20K</b>   | <b>LC511-20K</b>   | DP41-B, DP41-S, DP25B-S* | <b>BP-20</b>  |
| 13,612                 | 30,000 | <b>LC501-30K</b>   | <b>LC511-30K</b>   | DP41-B, DP41-S, DP25B-S* |               |
| <b>METRIC MODELS</b>   |        |                    |                    |                          |               |
| 25                     | 55     | <b>LCM501-25</b>   | <b>LCM511-25</b>   | DPiS, DP41-S, DP25B-S    | <b>MBP-10</b> |
| 50                     | 110    | <b>LCM501-50</b>   | <b>LCM511-50</b>   | DPiS, DP41-S, DP25B-S    |               |
| 250                    | 551    | <b>LCM501-250</b>  | <b>LCM511-250</b>  | DPiS, DP41-S, DP25B-S    |               |
| 500                    | 1102   | <b>LCM501-500</b>  | <b>LCM511-500</b>  | DPiS, DP41-S, DP25B-S    | <b>MBP-15</b> |
| 1000                   | 2205   | <b>LCM501-1K</b>   | <b>LCM511-1K</b>   | DPiS, DP41-S, DP25B-S    |               |
| 2500                   | 5512   | <b>LCM501-2.5K</b> | <b>LCM511-2.5K</b> | DPiS, DP41-S, DP25B-S    |               |
| 5000                   | 11,023 | <b>LCM501-5K</b>   | <b>LCM511-5K</b>   | DPiS, DP41-S, DP25B-S    |               |
| 10,000                 | 22,046 | <b>LCM501-10K</b>  | <b>LCM511-10K</b>  | DPiS*, DP41-S, DP25B-S*  | <b>MBP-20</b> |

## ACCESSORIES

| MODEL NO.              | DESCRIPTION  |  LOAD BUTTON |  ROD END |
|------------------------|--|---|---|
| <b>STANDARD MODELS</b> |  |   |   |
| <b>LBC-012</b>         | Load button for ranges 100 to 5000 lb                              |   |   |
| <b>LBC-034</b>         | Load button for LC501/511- 7.5K to 10K lb                          |   |   |
| <b>LBC-101</b>         | Load button for LC501/511-20K, LC501/511-30 K                      |   |   |
| <b>REC-012M</b>        | Rod end for ranges 100 to 7500 lb                                  |   |   |
| <b>REC-034M</b>        | Rod end for LC501/511-10K  |   |   |
| <b>METRIC MODELS</b>   |  |   |   |
| <b>MLBC-M12</b>        | Load button for ranges 25 to 2500 kgf                              |   |   |
| <b>MLBC-M20</b>        | Load button for LCM501-5K, LCM511-5K                               |   |   |
| <b>MLBC-M24</b>        | Load button for LCM501-10K, LCM511-10K                             |   |   |
| <b>MREC-M12M</b>       | Rod end for ranges 25 to 2500 kgf                                  |   |   |
| <b>MREC-M20M</b>       | Rod end for LCM501-5K, LCM511-5K                                   |   |   |
| <b>MREC-M24M</b>       | Rod end for LCM501-10K, LCM511-10K                                 |   |   |
| <b>COMMON</b>          |  |   |   |
| <b>PT06F10-6S-R</b>    | Mating connector for LC511/LCM511 series load cells                |   |   |
| <b>CA-4PC24-2-015</b>  | 4.6 m (15') PVC cable with PT06F10-6S, LC511/LCM511 cable assembly |   |   |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

**Note:** Base plates are nickel-plated carbon steel.

To order stainless steel base plates (see Accessories), specify **BP-10-SS**, **BP-15-SS**, **BP-20-SS**.

To order load cells with a twist-lock 6 pin connector, specify **LC511** (standard) or **LCM511** (metric), no extra charge. **PT06F10-6S-R**, mating connector (sold separately).

**Ordering Examples:** **LC501-5K**, 5000 lb capacity load cell. **REC-012M**, optional rod end, **BP-15**, optional base plate.

**LCM511-5K**, 5000 kgf capacity load cell with twist-lock 6 pin connector, **PT06F10-6S-R**, mating connector.

**MREC-M20M**, optional rod end, **MBP-15**, optional base plate.

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# LOAD CELLS

## STANDARD AND METRIC MODELS

**Tension/Compression**  
**0-1 lb to 0-25 lb**  
**0-0.4 kgf to 0-11 kgf**

### LC601/LCM601 Series

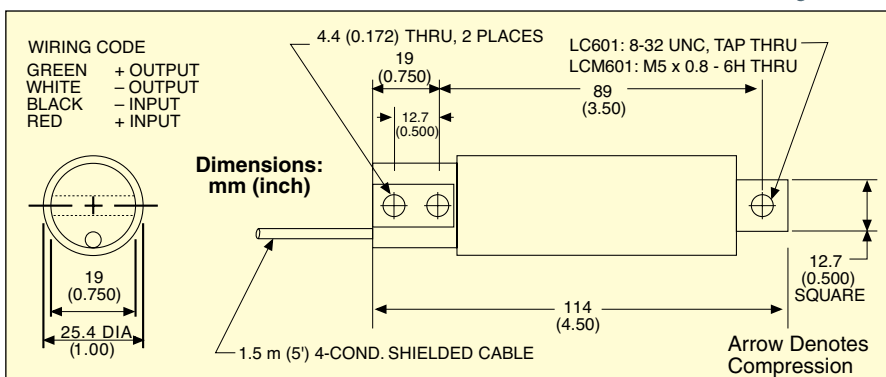


- ✓ 4-Direction Overload Stops
- ✓ 0.25% Interchangeability
- ✓ High-Quality All Stainless Steel Construction
- ✓ Rugged Industrial Design
- ✓ 5-Point Calibration

OMEGA's LC601/LCM601 Series comprises extremely low-capacity industrial load cells with built-in overload stops in all 4 directions for added durability. They offer high accuracy and rugged construction in a small package and are ideal for small scales and for industrial weighing applications.

#### SPECIFICATIONS

- Excitation:** 10 Vdc, 15V maximum
- Output:** 2 mV/V  $\pm 0.25\%$
- 5-Point Calibration (in Compression):** 0%, 50%, 100%, 50%, 0%
- Linearity:**  $\pm 0.03\%$  FSO
- Hysteresis:**  $\pm 0.03\%$  FSO
- Repeatability:**  $\pm 0.02\%$  FSO
- Zero Balance:**  $\pm 1\%$  FSO
- Operating Temperature Range:** -34 to 82°C (-30 to 180°F)
- Compensated Temperature Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero:**  $\pm 0.0025\%$  FSO/°F
  - Span:**  $\pm 0.0010\%$  FSO/°F
- Safe Overload:** 150% of rated capacity
- Ultimate Overload:** 300% of capacity
- Input Resistance:** 360  $\Omega$  minimum
- Output Resistance:** 350  $\pm 10 \Omega$



**Full Scale Deflection:** 0.005 to 0.015" typical  
**Construction:** Stainless steel

**Electrical Connections:** 1.5 m (5') 4-conductor shielded color-coded cable

| To Order               |     |           |                       |
|------------------------|-----|-----------|-----------------------|
| CAPACITY               |     | MODEL NO. | COMPATIBLE METERS*    |
| kgf                    | lb  |           |                       |
| <b>STANDARD MODELS</b> |     |           |                       |
| 0.4                    | 1   | LC601-1   | DPiS, DP41-S, DP25B-S |
| 909 g                  | 2   | LC601-2   | DPiS, DP41-S, DP25B-S |
| 2.3                    | 5   | LC601-5   | DPiS, DP41-S, DP25B-S |
| 4.5                    | 10  | LC601-10  | DPiS, DP41-S, DP25B-S |
| 7                      | 15  | LC601-15  | DPiS, DP41-S, DP25B-S |
| 11                     | 25  | LC601-25  | DPiS, DP41-S, DP25B-S |
| <b>METRIC MODELS</b>   |     |           |                       |
| 1                      | 2.2 | LCM601-1  | DPiS, DP41-S, DP25B-S |
| 2                      | 4.4 | LCM601-2  | DPiS, DP41-S, DP25B-S |
| 5                      | 11  | LCM601-5  | DPiS, DP41-S, DP25B-S |
| 10                     | 22  | LCM601-10 | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 k $\Omega$  shunt data.  
 \* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC601-5, 5 lb capacity load cell.  
 LC601-10, 10 lb capacity load cell.  
 LCM601-5, 5 kgf capacity load cell.  
 LCM601-10, 10 kgf capacity load cell.

# HEAVY-DUTY CONSTANT MOMENT BEAM LOAD CELLS STANDARD AND METRIC MODELS

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**Tension/Compression**  
**50 to 10,000 lb**  
**23 to 4537 kgf**

## LC602/LCM602 Series



- ✓ 5 Point NIST Traceable Calibration with 59 Ω Short Data
- ✓ 0.25% Interchangeability for Scale Applications
- ✓ High-Quality Stainless Steel Construction
- ✓ Environmentally Sealed IP65

The LC602/LCM602 Series comprises heavy-duty load cells designed for industrial weighing and scale applications. They are highly accurate, rugged load cells that are economically designed.



**STANDARD**  
LC602-5K shown  
approximately 50% of  
actual size.

### SPECIFICATIONS

**Excitation:** 10 Vdc (15V maximum)

**Output:**

≤500 lb/250 kgf: 2 mV/V

>500 lb/250 kgf: 3 mV/V ±0.25 % FSO

**5-Point Calibration (in Compression):**

0%, 50%, 100%, 50%, 0%

**Linearity:** ±0.03% FSO

**Hysteresis:**

≤500 lb/250 kgf: ±0.05% FSO

>500 lb/250 kgf: ±0.03% FSO

**Repeatability:** ±0.02% FSO

**Zero Balance:** ±1.0% FSO

**Operating Temp Range:**

-34 to 82°C (-30 to 180°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** ±0.002% FSO/°F

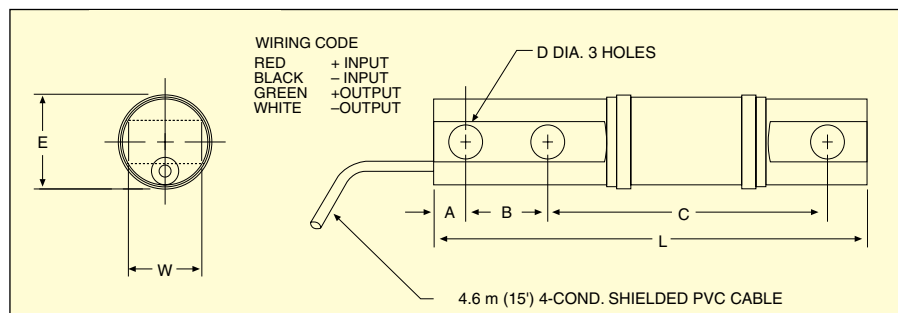
**Span:** ±0.001% FSO/°F

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 Ω minimum

**Protection Class:** IP65



**Dimensions: mm (inch)**

| CAPACITY          | L       | E      | W      | A      | B       | C      | D      |
|-------------------|---------|--------|--------|--------|---------|--------|--------|
| 50 to 100 lb      | 152     | 35     | 27     | 9.3    | 22      | 108    | 7.9    |
| 25 to 50 kgf      | (6.00)  | (1.37) | (1.06) | (0.37) | (0.875) | (4.25) | (0.31) |
| 250 to 2000 lb    | 169     | 35     | 27     | 13     | 29      | 108    | 13     |
| 250 to 750 kgf    | (6.66)  | (1.37) | (1.06) | (0.50) | (1.13)  | (4.25) | (0.53) |
| 2500 lb           | 289     | 57     | 32     | 13     | 44      | 210    | 13     |
| 1000 kgf          | (11.38) | (2.25) | (1.25) | (0.50) | (1.75)  | (8.25) | (0.53) |
| 5000 to 10,000 lb | 323     | 95     | 70     | 19     | 51      | 216    | 20     |
| 2500 to 5000 kgf  | (12.75) | (3.75) | (2.75) | (0.75) | (2.00)  | (8.50) | (0.78) |

**Output Resistance:** 350 ±10 Ω

**Full Scale Deflection:**

0.010 to 0.015" typical

**Construction:** Stainless steel

**Electrical:** 4.6 m (15') PVC insulated,  
4-conductor shielded color-coded cable



DP41-B shown smaller than actual size.

## DP41-B

- ✓ Universal Inputs
- ✓ ±0.005% Rdg Accuracy
- ✓ 6-Digit Color-Changing LED Display
- ✓ Up to 166 Readings per Second
- ✓ Optional Ethernet or RS232/RS485

| To Order               |      |             |                         |
|------------------------|------|-------------|-------------------------|
| CAPACITY               |      | MODEL NO.   | COMPATIBLE METERS*      |
| lb                     | kgf  |             |                         |
| <b>STANDARD MODELS</b> |      |             |                         |
| 50                     | 23   | LC602-50    | DP41-B, DP41-S, DP25B-S |
| 100                    | 45   | LC602-100   | DP41-B, DP41-S, DP25B-S |
| 250                    | 114  | LC602-250   | DP41-B, DP41-S, DP25B-S |
| 500                    | 227  | LC602-500   | DP41-B, DP41-S, DP25B-S |
| 1000                   | 455  | LC602-1K    | DP41-B, DP41-S, DP25B-S |
| 1500                   | 682  | LC602-1.5K  | DP41-B, DP41-S, DP25B-S |
| 2000                   | 909  | LC602-2K    | DP41-B, DP41-S, DP25B-S |
| 2500                   | 1134 | LC602-2.5K  | DP41-B, DP41-S, DP25B-S |
| 5000                   | 2269 | LC602-5K    | DP41-B, DP41-S, DP25B-S |
| 7500                   | 3403 | LC602-7.5   | DP41-B, DP41-S, DP25B-S |
| 10,000                 | 4537 | LC602-10K   | DP41-B, DP41-S, DP25B-S |
| <b>METRIC MODELS</b>   |      |             |                         |
| 55                     | 25   | LCM602-25   | DP41-B, DP41-S, DP25B-S |
| 110                    | 50   | LCM602-50   | DP41-B, DP41-S, DP25B-S |
| 551                    | 250  | LCM602-250  | DP41-B, DP41-S, DP25B-S |
| 1102                   | 500  | LCM602-500  | DP41-B, DP41-S, DP25B-S |
| 1653                   | 750  | LCM602-750  | DP41-B, DP41-S, DP25B-S |
| 2205                   | 1000 | LCM602-1K   | DP41-B, DP41-S, DP25B-S |
| 5512                   | 2500 | LCM602-2.5K | DP41-B, DP41-S, DP25B-S |
| 11,023                 | 5000 | LCM602-5K   | DP41-B, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

Ordering Examples: LC602-250, 250 lb capacity load cell.

LCM602-250, 250 kgf capacity load cell.

## ECONOMICAL BENDING BEAM LOAD CELLS

**Bi-directional**  
**0-1 kgf to 0-5 kgf**  
**0-2.2 lb to 0-11 lb**

## LCEA Series

- ✓ Economical Design— Ideal for OEM Use
- ✓ All-Aluminum Construction
- ✓ 1, 2, and 5 kg Ranges

### SPECIFICATIONS

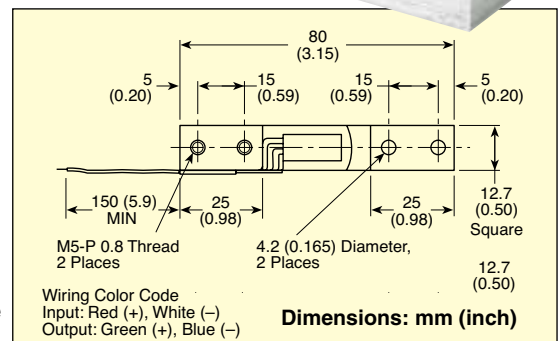
**Output:** 0.5 mV/V ±10%  
 (end user must calibrate to eliminate 10%)

**Excitation:** 5 Vdc (8 Vdc maximum)

**Non-Linearity:** 0.5% full scale

LCEA-2KG shown actual size.

**Hysteresis:** 0.3% FS  
**Zero Balance:** ±1 mV/V  
**Bridge Resistance:** 350 Ω  
**Construction:** Aluminum with acrylic resin protective coating  
**Operating Temperature:** -10 to 80°C (14 to 176°F)  
**Compensated Temperature:** 0 to 65°C (32 to 140°F)  
**Temp Effect:**  
**Zero:** ±0.1% full scale /°C  
**Span:** ±0.1% rdg/°C  
**Safe Overload:** 200% full scale  
**Lead Wire:** 6", 30 AWG, pigtail leads



| To Order |     |           |                       |
|----------|-----|-----------|-----------------------|
| CAPACITY |     | MODEL NO. | COMPATIBLE METERS*    |
| kgf      | lb  |           |                       |
| 1        | 2.2 | LCEA-1KG  | DP25B-S, DP41-S, DP87 |
| 2        | 4.4 | LCEA-2KG  | DP25B-S, DP41-S, DP87 |
| 5        | 11  | LCEA-5KG  | DP25B-S, DP41-S, DP87 |

\* Visit us online for compatible meters.

Ordering Example: LCEA-2KG, 2 kgf load cell.

# LOW CAPACITY TENSION LINK LOAD CELLS

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## INTERNAL THREAD DESIGN

### STANDARD AND METRIC MODELS

**Calibrated in Tension**  
**0-100 lb to 0-2000 lb**  
**0-50 kgf to 0-1000 kgf**

**LC701/LCM701 Series**  
**LC711/LCM711 Series**



- ✓ All Stainless Steel Construction
- ✓ Accuracy 0.15%
- ✓ Rugged Design for Industrial Applications
- ✓ 5-Point NIST Traceable Calibration in Tension

The LC701/LCM701 Series tension links have a 1.8 m (6') cable with stripped end termination. The LC711/LCM711 Series units have an integral connector on the body. These stainless steel load cells are ideal for measuring in-line tension forces. Applications include cables on cranes, support rods in architectural designs, engine test beds, and industrial weighing.

### SPECIFICATIONS

**Output:** 3 mV/V  $\pm 0.25\%$  FSO

**Excitation:** 10 Vdc (15V maximum)

**Linearity:**

>100 lb:  $\pm 0.10\%$  FSO

$\leq 100$  lb:  $\pm 0.20\%$  FSO

**Hysteresis:**  $\pm 0.10\%$  FSO

**Repeatability:**  $\pm 0.05\%$  FSO

**Zero Balance:**  $\pm 1.0\%$  FSO

**Operating Temp. Range:**

-46 to 121°C (-50 to 250°F)

**Compensated Temp. Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:**  $\pm 0.0045\%$  FSO/°C

**Span:**  $\pm 0.007\%$  rdg/°C

**Safe Overload:** 150% of capacity

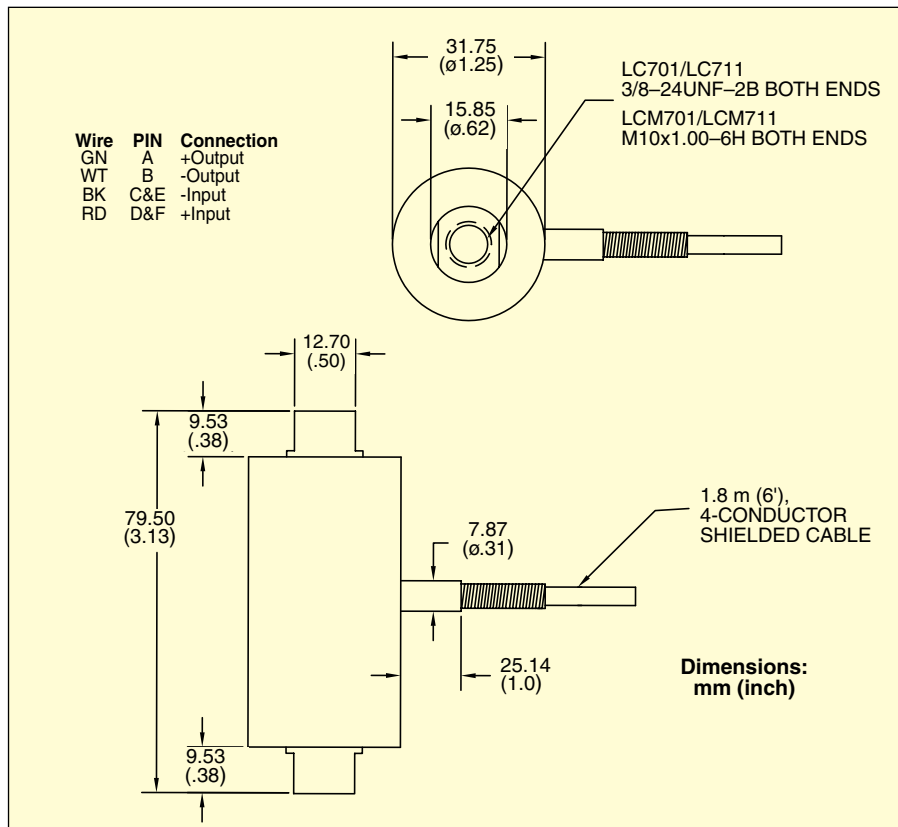
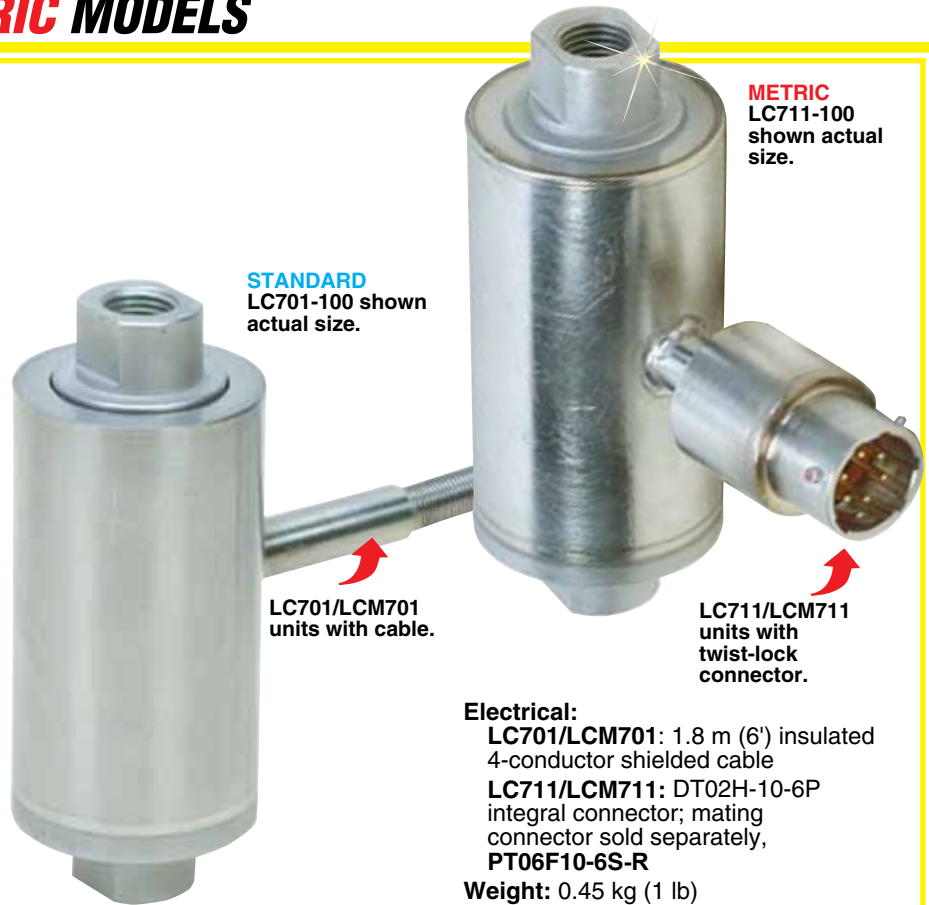
**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350  $\Omega$

**Full Scale Deflection:** 0.025 to 0.102 mm (0.001 to 0.004")

**Protection Class:** IP65

**Construction:** Stainless steel



LOAD CELLS  
F

## LOW-CAPACITY TENSION LINK LOAD CELLS

| To Order               |         |                       |                           |                       |  |
|------------------------|---------|-----------------------|---------------------------|-----------------------|--|
| CAPACITY               |         | CABLE STYLE MODEL NO. | CONNECTOR STYLE MODEL NO. | COMPATIBLE METERS     |  |
| <b>STANDARD MODELS</b> |         |                       |                           |                       |  |
| 100 lb                 | 45 kgf  | <b>LC701-100</b>      | <b>LC711-100</b>          | DPiS, DP41-S, DP25B-S |  |
| 250 lb                 | 114 kgf | <b>LC701-250</b>      | <b>LC711-250</b>          | DPiS, DP41-S, DP25B-S |  |
| 750 lb                 | 341 kgf | <b>LC701-750</b>      | <b>LC711-750</b>          | DPiS, DP41-S, DP25B-S |  |
| 1000 lb                | 455 kgf | <b>LC701-1K</b>       | <b>LC711-1K</b>           | DPiS, DP41-S, DP25B-S |  |
| 2000 lb                | 909 kgf | <b>LC701-2K</b>       | <b>LC711-2K</b>           | DPiS, DP41-S, DP25B-S |  |
| <b>METRIC MODELS</b>   |         |                       |                           |                       |  |
| 50 kgf                 | 110 lb  | <b>LCM701-50</b>      | <b>LCM711-50</b>          | DPiS, DP41-S, DP25B-S |  |
| 500 kgf                | 1100 lb | <b>LCM701-500</b>     | <b>LCM711-500</b>         | DPiS, DP41-S, DP25B-S |  |
| 1000 kgf               | 2200 lb | <b>LCM701-1K</b>      | <b>LCM711-1K</b>          | DPiS, DP41-S, DP25B-S |  |

### ACCESSORIES

| MODEL NO.           | DESCRIPTION   |
|---------------------|---|
| <b>REC-038M</b>     | 3/8"-24 male rod end                                |
| <b>PT06F10-6S-R</b> | Mating connector for LC711/LCM711 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

**Ordering Examples:** **LC701-1K**, 1000 lb capacity tension link with 1.8 m (6') cable.

**LC711-250**, 250 lb capacity tension link with integral connector on the body.

**LCM701-1K**, 1000 kgf capacity tension link with 1.8 m (6') cable.

**LCM711-50**, 50 kgf capacity tension link with integral connector on the body.

**PT06F10-6S-R**, mating connector (sold separately).



# LOAD CELLS

**Custom Units Available with Built-In Amplifiers!**

**Calibrated in Tension\***  
**0-5000 lb to 0-1,000,000 lb**  
**0-2269 kgf to 0-453,721 kgf**

## LC702/LC712 Series

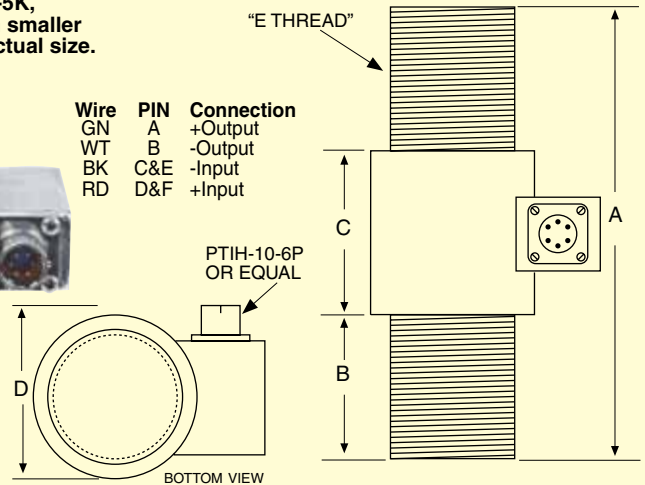


- ✓ All Stainless Steel Construction
- ✓ Accuracy of 0.15%
- ✓ Heavy-Duty Construction for High-Capacity Loads

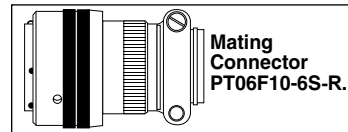


**LC712-5K, Shown smaller than actual size.**

| Wire | PIN | Connection |
|------|-----|------------|
| GN   | A   | +Output    |
| WT   | B   | -Output    |
| BK   | C&E | -Input     |
| RD   | D&F | +Input     |



To order with amplified 0 to 5V output, add suffix "-5V" to model number for additional cost.



OMEGA's LC702 Series tension links have a 1.8 m (6') cable, and the LC712 Series links have an integral connector. Both series comprise all stainless steel, high-capacity, in-line tension load cells for applications such as cables on cranes, support rods in architectural designs, engine test beds, and industrial weighing.

### SPECIFICATIONS

- Output:** 2 mV/V ±0.25 % FSO
- Excitation:** 10 Vdc (15V max)
- Linearity:** ±0.10% FSO
- Hysteresis:** ±0.10% FSO
- Repeatability:** ±0.05% FSO
- Zero Balance:** ±1.0% FSO
- Operating Temp Range:** -34 to 121°C (-30 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero:** ±0.009% FSO/°C (±0.005% FSO/°F)
  - Span:** ±0.009% FSO/°C (±0.005% FSO/°F)
- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Bridge Resistance:** 350 Ω
- Construction:** Stainless steel
- Electrical:**
  - LC702: 1.8 m (6') 4-conductor cable
  - LC712: DT02H-10-6P (or equiv.)

**Protection Class:** IP67  
**Mating Connector:** PT06F10-6S-R, (sold separately)  
**Calibration:** Calibrated in tension\*  
 \* ≥150,000 lb calibrated in compression.  
 For calibrations ≥300,000 lb, add suffix "-FS" and consult Sales for price and delivery.

**Dimensions: mm (inch)**

| CAPACITY (lb) | A           | B          | C          | D          | E        |
|---------------|-------------|------------|------------|------------|----------|
| 5K to 10K     | 140 (5.50)  | 32 (1.25)  | 76 (3.00)  | 76 (3.00)  | 1-14 NS  |
| 20K to 50K    | 165 (6.50)  | 51 (2.00)  | 64 (2.50)  | 76 (3.00)  | 1½-12 UN |
| 75K to 100K   | 200 (7.88)  | 64 (2.53)  | 72 (2.84)  | 76 (3.00)  | 2¼-12 UN |
| 150K to 200K  | 260 (10.25) | 83 (3.25)  | 95 (3.75)  | 102 (4.10) | 3-8 UN   |
| 250K to 300K  | 323 (12.75) | 114 (4.50) | 95 (3.75)  | 141 (5.56) | 4-8 UN   |
| 400K to 600K  | 381 (15.00) | 142 (5.63) | 95 (3.75)  | 168 (6.63) | 5-8 UN   |
| 750K to 1000K | 444 (17.50) | 168 (6.63) | 108 (4.25) | 219 (8.63) | 6-8 UN   |

### To Order

| MODELS WITH 1.8 m (6') CABLE OR WITH INTEGRAL CONNECTOR |             |             |             |                        |
|---|-------------|-------------|-------------|------------------------|
| CAPACITY  |             | CABLE STYLE | CONN. STYLE | COMPATIBLE METERS      |
| 5000 lb   | 2269 kgf    | LC702-5K    | LC712-5K    | DPIS, DP41-S, DP25B-S  |
| 10,000 lb   | 4537 kgf    | LC702-10K   | LC712-10K   | DPIS, DP41-S, DP25B-S  |
| 20,000 lb   | 9074 kgf    | LC702-20K   | LC712-20K   | DPIS, DP41-S, DP25B-S* |
| 30,000 lb   | 13,612 kgf  | LC702-30K   | LC712-30K   | DPIS, DP41-S, DP25B-S* |
| 50,000 lb   | 22,686 kgf  | LC702-50K   | LC712-50K   | DPIS, DP41-S, DP25B-S* |
| 100,000 lb  | 45,372 kgf  | LC702-100K  | LC712-100K  | DPIS, DP41-S, DP25B-S* |
| 150,000 lb  | 68,058 kgf  | LC702-150K  | LC712-150K  | DPIS, DP41-S, DP25B-S* |
| 200,000 lb  | 90,744 kgf  | LC702-200K  | LC712-200K  | DPIS, DP41-S, DP25B-S* |
| 300,000 lb  | 136,116 kgf | LC702-300K  | LC712-300K  | DPIS, DP41-S, DP25B-S* |
| 500,000 lb  | 226,860 kgf | LC702-500K  | LC712-500K  | DPIS, DP41-S, DP25B-S* |
| 1,000,000 lb  | 453,721 kgf | LC702-1M    | LC712-1M    | DPIS, DP41-S, DP25B-S* |

### ACCESSORY

| MODELNO.     | DESCRIPTION                                  |
|--------------|--|
| PT06F10-6S-R | Mating connector for LC712 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
 \* 4-digit meter, counts by 10.  
 To order additional cable add length, in feet, to the end of the model number, additional price per foot over 1.8 m (6').  
**Ordering Examples:** LC702-5K-25FT, 5000 lb capacity tension link with 7.6 m (25') 4-conductor cable. LC712-100K, 100,000 lb capacity tension link with integral twist-lock connector. PT06F10-6S-R, mating connector (sold separately). LC702-200K, 200,000 lb capacity tension link with standard 1.8 m (6') 4-conductor cable.

LOAD CELLS **F**



# MINIATURE LOW PROFILE TENSION LINKS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## LOW PROFILE 19 mm (0.75") TO 25 mm (1") HEIGHT

### STANDARD AND METRIC MODELS

**Tension/Compression**  
**Calibrated in Tension**  
**10 lb to 1000 lb**  
**5 kg to 500 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

## LC703/LCM703 Series



- ✓ Low Profile
- ✓ High Accuracy
- ✓ Rugged Industrial Design

The LC703/LCM703 Series comprises economical universal (tension/compression) load cells with a low profile. Ranges above 100 lb are stainless steel; ranges below 100 lb are aluminum. The low profile and rugged design make LC703 and LCM703 suitable for many industrial applications, including robotics, automated weighing systems, and batch-process control systems.

### SPECIFICATIONS

**Excitation:** 10 Vdc (15V max)

**Output:** 2 mV/V nominal

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Linearity:**

10 to 100 lb: ±0.15%

>100 lb: ±0.10 FSO

5 to 50 kgf: ±0.15%

75 to 500 kgf: ±0.10%

**Hysteresis:**

10 to 100 lb: ±0.15%

>100 lb: ±0.10 FSO

5 to 50 kgf: ±0.15%

75 to 500 kgf: ±0.10%

**Repeatability:** ±0.05%

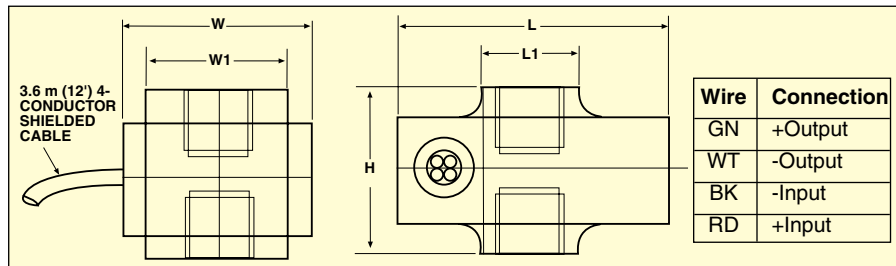
**Zero Balance:** ±1.0% FSO

**Operating Temp Range:**

-40 to 82°C (-40 to 180°F)

**STANDARD**  
 LC703-25,  
 shown actual size.

**METRIC**  
 LCM703-150,  
 shown actual size.



Dimensions: mm (in)

| CAPACITY      | L (MAX)   | L1        | W         | W1         | H         | THREAD       |
|---------------|-----------|-----------|-----------|------------|-----------|--------------|
| 10 lb         | 38 (1.50) | 14 (0.56) | 14 (0.54) | 9.5 (0.38) | 19 (0.75) | 10-32 x 0.20 |
| 5 kgf         |           |           |           |            |           | M5 x 0.8-6H  |
| 25 to 100 lb  | 41 (1.62) | 14 (0.56) | 17 (0.66) | 13 (0.50)  | 19 (0.75) | ¼-28 x 0.23  |
| 10 to 50 kgf  |           |           |           |            |           | M6 x 1.00-6H |
| 150 to 1K lb  | 44 (1.75) | 14 (0.56) | 24 (0.93) | 19 (0.75)  | 25 (1.0)  | ¾-24 x 0.38  |
| 75 to 500 kgf |           |           |           |            |           | M10 x 1.5-6H |

**Compensated Temp Range:**  
 16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** ±0.005% FSO/°F

**Span:** ±0.005% FSO/°F

**Protection Class:** IP54

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Output Resistance:** 350 ±10 Ω

**Input Resistance:** 360 Ω minimum

**Full Scale Deflection:** 0.003" nominal

**Construction:**

≤100 lb: Aluminum

>100 lb: 17-4 PH stainless steel

≤50 kg: Aluminum

>50 kg: 17-4 PH stainless steel

**Electrical:** 3.6 m (12') shielded 4-conductor PVC cable

**To Order**

| CAPACITY               |      | MODEL NO.  | COMPATIBLE METERS     | ROD END   |
|------------------------|------|------------|-----------------------|-----------|
| kgf                    | lb   |            |                       |           |
| <b>STANDARD MODELS</b> |      |            |                       |           |
| 4.5                    | 10   | LC703-10   | DPiS, DP41-S, DP25B-S | REC-010M  |
| 11                     | 25   | LC703-25   | DPiS, DP41-S, DP25B-S | REC-014M  |
| 23                     | 50   | LC703-50   | DPiS, DP41-S, DP25B-S | REC-014M  |
| 34                     | 75   | LC703-75   | DPiS, DP41-S, DP25B-S | REC-014M  |
| 45                     | 100  | LC703-100  | DPiS, DP41-S, DP25B-S | REC-014M  |
| 68                     | 150  | LC703-150  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 91                     | 200  | LC703-200  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 136                    | 300  | LC703-300  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 227                    | 500  | LC703-500  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 341                    | 750  | LC703-750  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 455                    | 1000 | LC703-1K   | DPiS, DP41-S, DP25B-S | REC-038M  |
| <b>METRIC MODELS</b>   |      |            |                       |           |
| 5                      | 11   | LCM703-5   | DPiS, DP41-S, DP25B-S | MREC-M5M  |
| 10                     | 22   | LCM703-10  | DPiS, DP41-S, DP25B-S | MREC-M6M  |
| 25                     | 55   | LCM703-25  | DPiS, DP41-S, DP25B-S | MREC-M6M  |
| 50                     | 110  | LCM703-50  | DPiS, DP41-S, DP25B-S | MREC-M6M  |
| 75                     | 165  | LCM703-75  | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 100                    | 220  | LCM703-100 | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 150                    | 331  | LCM703-150 | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 250                    | 551  | LCM703-250 | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 500                    | 1102 | LCM703-500 | DPiS, DP41-S, DP25B-S | MREC-M10M |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC703-200, 200 lb capacity universal link with 3.6 m (12') cable.

LCM703-100, 100 kgf capacity universal link with 3.6 m (12') cable, MREC-M10M, accessory rod ends.

**COMPATIBLE METERS**

**DP25B/DP41-B**



**PATENTED**



DP25B-E, shown smaller than actual size.

- ✓ mV, V, mA, Strain Gage Thermocouple, RTD Inputs
- ✓ Full Process Unit Scaling
- ✓ Built-In Transducer Power



DP41-B, shown smaller than actual size.

**To Order**

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| DP25B-E   | 4-digit voltage/current input meter with excitation   |
| DP25B-S   | 4-digit mV input meter with excitation                |
| DP41-B    | 6-digit 1/8 DIN universal input meter with excitation |

Comes complete with operator's manual.

**Ordering Examples:** DP25B-E, voltage/current input meter for use with 0 to 5 V, 0 to 10 V, 4 to 20 mA output transducers.

DP25B-S, mV input meter for use with mV/V output transducers, DP41-B, universal input meter for use with all standard transducer outputs.

# High-Capacity Tension Link Load Cells

**Calibrated in Tension\***  
**5000 lb to 1,000,000 lb**  
**0-2269 kgf to 0-453,721 kgf**

**LC704/LC714 Series**

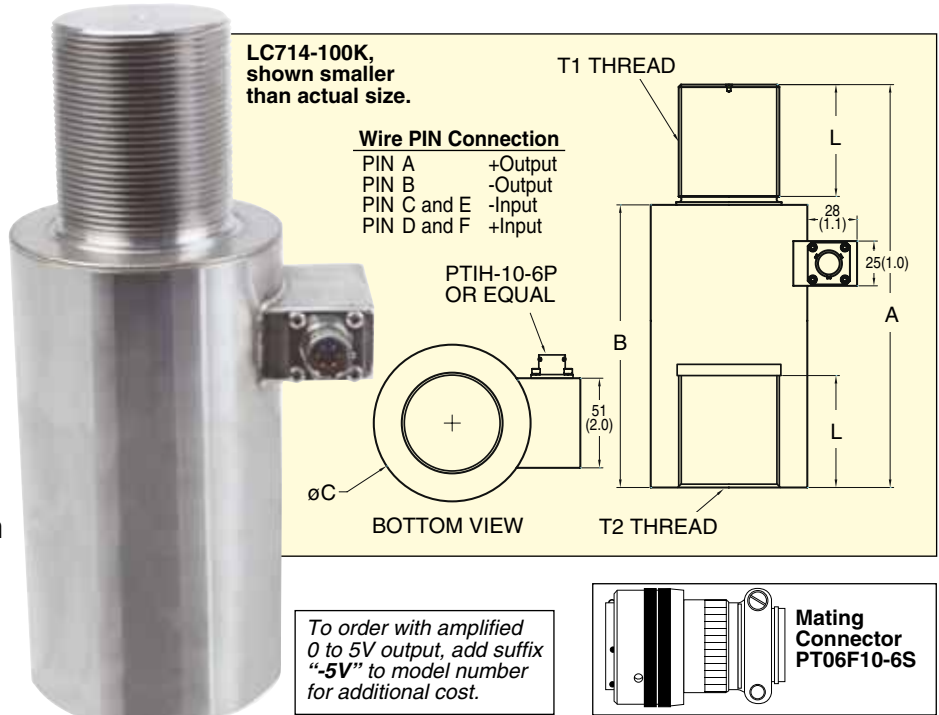


- ✓ Male to Female Thread Connection
- ✓ All Stainless Steel Construction
- ✓ Accuracy of 0.15%
- ✓ Heavy-Duty Construction for High-Capacity Loads

OMEGA's LC704/714 Series tension links have a male to female thread connection; LC704 with a 1.8 m (6') cable, and LC714 with an integral connector. Both series are comprised of all stainless steel. Applications include cables on cranes, support rods in architectural designs, engine test beds, suspension bridges and industrial weighing.

## Specifications

- Output:** 2 mV/V ±0.25 % FSO
- Excitation:** 10 Vdc (15V max)
- Linearity:** ±0.10% FSO
- Hysteresis:** ±0.10% FSO
- Repeatability:** ±0.05% FSO
- Zero Balance:** ±1.0% FSO
- Operating Temp Range:** -34 to 121°C (-30 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero:** ±0.005% FSO/°C (±0.009% FSO/°F)
  - Span:** ±0.005% FSO/°C (±0.009% FSO/°F)
- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Bridge Resistance:** 350 Ω
- Construction:** Stainless steel
- Electrical:**
  - LC704:** 1.8 m (6') 4-conductor cable
  - LC714:** DT02H-10-6P (or equiv.)
- Protection Class:** IP67
- Mating Connector:** PT06F10-6S, (sold separately)
- Calibration:** Calibrated in tension\*
  - \* ≥150,000 lb calibrated in compression.
  - For calibrations ≥300,000 lb, add suffix "-FS" and consult Sales for price and delivery.



**Dimensions: mm (inch)**

| Capacity (lb) | A                        | B          | C          | L          | T1           | T2           |
|---------------|--------------------------|------------|------------|------------|--------------|--------------|
| 5K to 10K     | 146 (5.75)               | 114 (4.50) | 57 (2.25)  | 29 (1.125) | 1-14 UNS-2A  | 1-14 UNS-2B  |
| 20K to 50K    | 165 (6.50)               | 113 (4.46) | 76 (3.00)  | 41 (1.625) | 1½-12 UNF-2A | 1½-12 UNF-2B |
| 75K to 100K   | 229 (9.00)               | 160 (6.31) | 89 (3.50)  | 64 (2.50)  | 2¼-12 UN-2A  | 2¼-12 UN-2B  |
| 150K to 200K  | 305 (12.00)              | 220 (8.65) | 140 (5.50) | 83 (3.25)  | 3-8 UN-2A    | 3-8 UN-2B    |
| 250K to 1000K | AVAILABLE, CONSULT SALES |            |            |            |              |              |

## To Order

**Models with 1.8 m (6') Cable or with Integral Connector**

| Capacity     | Cable Style | Conn. Style       | Compatible Meters |                        |
|--------------|-------------|-------------------|-------------------|------------------------|
| 5000 lb      | 2269 kgf    | <b>LC704-5K</b>   | <b>LC714-5K</b>   | DPIS, DP41-S, DP25B-S  |
| 10,000 lb    | 4537 kgf    | <b>LC704-10K</b>  | <b>LC714-10K</b>  | DPIS, DP41-S, DP25B-S  |
| 20,000 lb    | 9074 kgf    | <b>LC704-20K</b>  | <b>LC714-20K</b>  | DPIS, DP41-S, DP25B-S* |
| 30,000 lb    | 13,612 kgf  | <b>LC704-30K</b>  | <b>LC714-30K</b>  | DPIS, DP41-S, DP25B-S* |
| 50,000 lb    | 22,686 kgf  | <b>LC704-50K</b>  | <b>LC714-50K</b>  | DPIS, DP41-S, DP25B-S* |
| 100,000 lb   | 45,372 kgf  | <b>LC704-100K</b> | <b>LC714-100K</b> | DPIS, DP41-S, DP25B-S* |
| 150,000 lb   | 68,058 kgf  | <b>LC704-150K</b> | <b>LC714-150K</b> | DPIS, DP41-S, DP25B-S* |
| 200,000 lb   | 90,744 kgf  | <b>LC704-200K</b> | <b>LC714-200K</b> | DPIS, DP41-S, DP25B-S* |
| 300,000 lb   | 136,116 kgf | <b>LC704-300K</b> | <b>LC714-300K</b> | DPIS, DP41-S, DP25B-S* |
| 500,000 lb   | 226,860 kgf | <b>LC704-500K</b> | <b>LC714-500K</b> | DPIS, DP41-S, DP25B-S* |
| 1,000,000 lb | 453,721 kgf | <b>LC704-1M</b>   | <b>LC714-1M</b>   | DPIS, DP41-S, DP25B-S* |

## Accessory

| Model No.         | Description                                  |
|-------------------|--|
| <b>PT06F10-6S</b> | Mating connector for LC714 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
 \* 4-digit meter, counts by 10.

To order additional cable add length, in feet, to the end of the model number, additional price per foot over 1.8 m (6').

**Ordering Examples:** **LC704-5K-25FT**, 5000 lb capacity tension link with 7.6 m (25') 4-conductor cable. **LC714-100K**, 100,000 lb capacity tension link with integral twist-lock connector. **PT06F10-6S**, mating connector (sold separately).

**LC704-200K**, 200,000 lb capacity tension link with standard 1.8 m (6') 4-conductor cable.

# High-Capacity Tension Link Load Cells

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

**Calibrated in Tension\***  
**5000 lb to 1,000,000 lb**  
**0-2269 kgf to**  
**0-453,721 kgf**

**LC706/LC716 Series**



- ✓ **Female to Female Thread Connection**
- ✓ **All Stainless Steel Construction**
- ✓ **Accuracy of 0.15%**
- ✓ **Heavy-Duty Construction for High-Capacity Loads**

OMEGA's LC706/716 Series tension links have a female to female thread connection; LC706 with a 1.8 m (6') cable, and LC716 with an integral connector. Both series are comprised of all stainless steel. Applications include cables on cranes, support rods in architectural designs, engine test beds, suspension bridges and industrial weighing.

## Specifications

**Output:** 2 mV/V  $\pm 0.25$  % FSO

**Excitation:** 10 Vdc (15V max)

**Linearity:**  $\pm 0.10$ % FSO

**Hysteresis:**  $\pm 0.10$ % FSO

**Repeatability:**  $\pm 0.05$ % FSO

**Zero Balance:**  $\pm 1.0$ % FSO

**Operating Temp Range:**

-34 to 121°C (-30 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero & Span:**  $\pm 0.009$ % FSO/°C  
 ( $\pm 0.005$ % FSO/°F)

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350  $\Omega$

**Construction:** Stainless steel

**Electrical:**

**LC706:** 1.8 m (6') 4-conductor cable

**LC716:** DT02H-10-6P (or equiv.)

**Protection Class:** IP67

**Mating Connector:** PT06F10-6S,

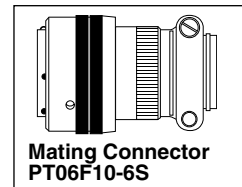
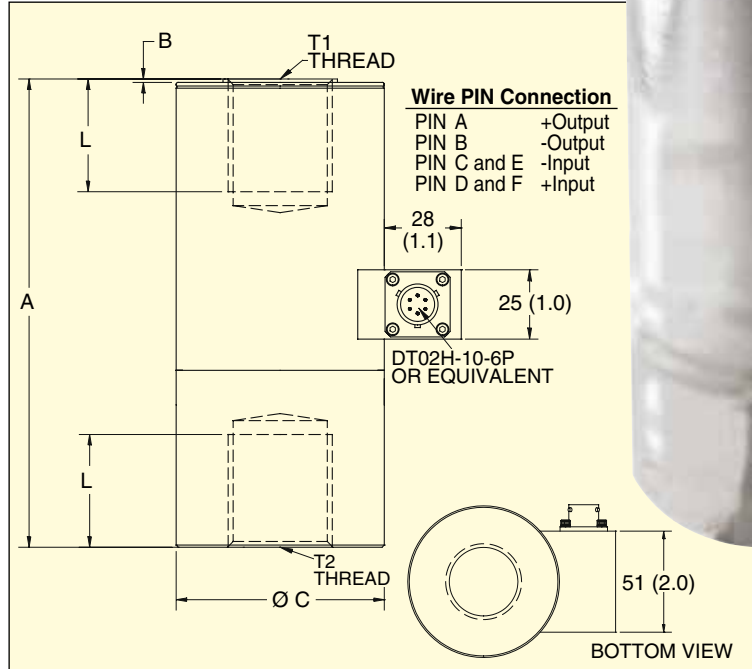
(sold separately)

**Calibration:** Calibrated in tension for capacities <100K lbs\*

\*  $\geq 100,000$  lb calibrated in compression.

For calibrations  $\geq 300,000$  lb, add suffix "FS" and consult Sales for price and delivery.

LC716-10K,  
 shown smaller  
 than actual size.



To order with amplified 0 to 5V output, add suffix "-5V" to model number for additional cost.

## Dimensions: mm (inch)

| Capacity (lb) | A                        | B        | C          | L         | T1           | T2           |
|---------------|--------------------------|----------|------------|-----------|--------------|--------------|
| 5K to 10K     | 146 (5.75)               | 1 (0.03) | 57 (2.25)  | 29 (1.13) | 1-14 UNS-2B  | 1-14 UNS-2B  |
| 20K to 50K    | 171 (6.75)               | 1 (0.05) | 76 (3.00)  | 44 (1.75) | 1½-12 UNF-2B | 1½-12 UNF-2B |
| 60K to 100K   | 254 (10.00)              | 2 (0.06) | 102 (4.00) | 70 (2.75) | 2¼-12 UN-2B  | 2¼-12 UN-2B  |
| 150K to 200K  | 356 (14.00)              | 3 (0.10) | 140 (5.50) | 95 (3.75) | 3-8 UN-2B    | 3-8 UN-2B    |
| 250K to 1000K | AVAILABLE, CONSULT SALES |          |            |           |              |              |

## To Order

### Models with 1.8 m (6') Cable or with Integral Connector

| Capacity     | Cable Style | Connector Style | Compatible Meters |                                  |
|--------------|-------------|-----------------|-------------------|----------------------------------|
| 5000 lb      | 2269 kgf    | LC706-5K        | LC716-5K          | DP8PT, DP25B-S, DP8EPT, DP41-B   |
| 10,000 lb    | 4537 kgf    | LC706-10K       | LC716-10K         | DP8PT, DP25B-S, DP8EPT, DP41-B   |
| 20,000 lb    | 9074 kgf    | LC706-20K       | LC716-20K         | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 30,000 lb    | 13,612 kgf  | LC706-30K       | LC716-30K         | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 50,000 lb    | 22,686 kgf  | LC706-50K       | LC716-50K         | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 100,000 lb   | 45,372 kgf  | LC706-100K      | LC716-100K        | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 150,000 lb   | 68,058 kgf  | LC706-150K      | LC716-150K        | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 200,000 lb   | 90,744 kgf  | LC706-200K      | LC716-200K        | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 300,000 lb   | 136,116 kgf | LC706-300K      | LC716-300K        | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 500,000 lb   | 226,860 kgf | LC706-500K      | LC716-500K        | DP8PT", DP25B-S", DP8EPT, DP41-B |
| 1,000,000 lb | 453,721 kgf | LC706-1M        | LC716-1M          | DP8PT", DP25B-S", DP8EPT, DP41-B |

## Accessory

| Model No.  | Description                                  |
|------------|--|
| PT06F10-6S | Mating connector for LC716 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 k $\Omega$  shunt data.

\*\* 4-digit meter, counts in multiples of 10.

To order additional cable, add length in feet, to the end of the model number, and additional price per foot over 1.8 m (6').

**Ordering Examples:** LC706-5K-25FT, 5000 lb capacity tension link with 7.6 m (25') 4-conductor cable. LC716-100K, 100,000 lb capacity tension link with integral twist-lock connector. PT06F10-6S, mating connector (sold separately).

LC706-200K, 200,000 lb capacity tension link with standard 1.8 m (6') 4-conductor cable.

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# THROUGH-HOLE LOAD CELLS

## 1.00 TO 1.25" OD

### Compression

0-5 lb to 0-500 lb

0-2.3 kg to 0-227 kg

1 Newton = 0.2248 lb

1 daNewton = 10 Newtons

1 lb = 454 g

1 t = 1000 kg = 2204 lb



## LC8100/LC8125 Series



Standard

- ✓ Low Profile
- ✓ All Stainless Steel Construction
- ✓ Rugged Industrial Design

The LC8100 and LC8125 Series donut load cells are an economical solution to applications requiring a through-hole design. With their extremely low-profile and compact design, they are ideal for applications such as clamping forces, bolt loading forces, and other compressive loads. This series, with its all stainless steel construction and environmental protection, has proved reliable in the toughest industrial applications.

### SPECIFICATIONS

**Output:** 2 mV/V nominal

**Input:** 10 Vdc (15V maximum)

**Accuracy:** ±1.0% linearity, hysteresis and repeatability combined

**Zero Balance:** ±2.0% FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** ±0.009% FSO/°C

**Span:** ±0.018% rdg/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Deflection:** 0.075 mm (0.003") nominal

**Input Resistance:** 360 Ω minimum

**Output Resistance:** 350 ±5 Ω

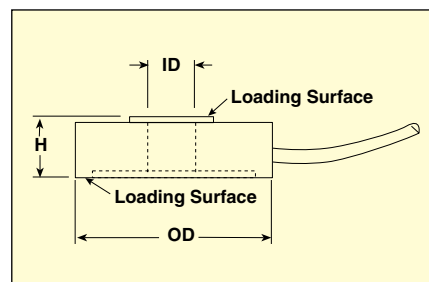
**Construction:** 17-4 PH stainless steel

**Electrical:** 1.5 m (5') 4-conductor shielded cable

### Dimensions: mm (inch)

| MODEL  | OD        | H          |
|--------|-----------|------------|
| LC8100 | 25 (1.00) | 7.1 (0.28) |
| LC8125 | 32 (1.25) | 7.1 (0.28) |

| WIRE | CONNECTION |
|------|------------|
| GN   | +Output    |
| WT   | -Output    |
| BK   | -Input     |
| RD   | +Input     |



| INSIDE DIAMETERS (ID) + = MOST POPULAR X = AVAILABLE |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|
| ID CODE  | 100    | 125    | 188    | 200    | 250    | 312    | 375    |
| MODEL  | 0.100" | 0.125" | 0.188" | 0.200" | 0.250" | 0.312" | 0.375" |
| LC8100   | X      | X      | X      | +      | X      |        |        |
| LC8125   | X      | X      | X      | +      | X      | +      | X      |

Also available in metric configurations, consult engineering for details.

### To Order

| CAPACITY  | MODEL NO. | COMPATIBLE METERS** |
|---|-----------|---------------------|
| <b>Model LC8100 with a 1.00" OD and Selectable ID</b> |           |                     |
| 5 lb  | 2.3 kg    | LC8100-[*]-5        |
| 10 lb   | 4.5 kg    | LC8100-[*]-10       |
| 25 lb   | 11 kg     | LC8100-[*]-25       |
| 50 lb   | 23 kg     | LC8100-[*]-50       |
| 100 lb  | 45 kg     | LC8100-[*]-100      |
| 200 lb  | 91 kg     | LC8100-[*]-200      |
| <b>Model LC8125 with a 1.25" OD and Selectable ID</b> |           |                     |
| 25 lb   | 11 kg     | LC8125-[*]-25       |
| 50 lb   | 23 kg     | LC8125-[*]-50       |
| 100 lb  | 45 kg     | LC8125-[*]-100      |
| 250 lb  | 114 kg    | LC8125-[*]-250      |
| 500 lb  | 227 kg    | LC8125-[*]-500      |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

[\*] Select ID Code from table above to complete model number.

**Ordering Examples:** LC8100-200-200, 200 lb capacity load cell, 1.00" OD and 0.200" ID.

LC8100-125-10, 10 lb capacity load cell, 1.00" OD and 0.125" ID.

LC8125-188-25, 25 lb capacity load cell, 1.25" OD and 0.188" ID.

LC8125-200-500, 500 lb capacity load cell with 1.25" OD and 0.200" ID.

# LOAD CELLS

## 1.50" OD

**Compression**  
**0-500 lb to 0-5000 lb**  
**0-50 kgf to 0-2250 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

### LC8150 Series



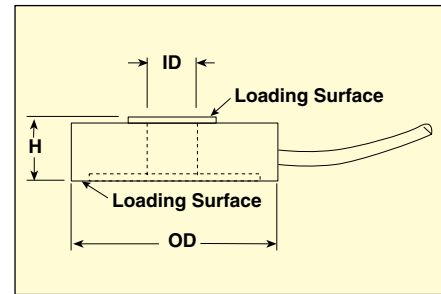
- ✓ Low Profile
- ✓ All Stainless Steel Construction
- ✓ Rugged Industrial Design

The LC8150 Series donut load cells are an economical solution to applications requiring a through-hole design. With their low profile and compact design, these load cells are ideal for applications such as clamping forces, bolt loading forces, and other compressive loads. This series, with its all stainless steel construction and environmental protection, has proved reliable in the toughest industrial applications.

Dimensions: mm (inch)

| MODEL  | OD        | H         |
|--------|-----------|-----------|
| LC8150 | 38 (1.50) | 13 (0.50) |

| WIRE | CONNECTION |
|------|------------|
| GN   | +Output    |
| WT   | -Output    |
| BK   | -Input     |
| RD   | +Input     |



| INSIDE DIAMETERS (ID) + = MOST POPULAR X = AVAILABLE |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|
| ID CODE  | 100    | 125    | 200    | 250    | 312    | 375    | 500    |
| MODEL  | 0.100" | 0.125" | 0.200" | 0.250" | 0.312" | 0.375" | 0.500" |
| LC8150   | X      | X      | X      | +      | X      | +      | X      |

Also available in metric configurations, consult engineering for details.

### SPECIFICATIONS

- Output:** 2 mV/V nominal
- Input:** 10 Vdc (15V maximum)
- Linearity:** ±0.5% FSO
- Repeatability:** ±0.1% FSO
- Zero Balance:** ±2.0% FSO
- Operating Temp Range:** -54 to 121°C (-65 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero: ±0.009% FSO/°C
  - Span: ±0.018% rdg/°C
- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Input Resistance:** 360 Ω minimum
- Deflection:** 0.076 mm (0.003") FS nom.
- Output Resistance:** 350 ±5 Ω
- Construction:** 17-4 PH stainless steel
- Electrical:** 1.5 m (5') 4-conductor shielded cable

### To Order

| MODEL NO.   | CAPACITY |          | COMPATIBLE METERS**   |
|---|----------|----------|-----------------------|
| <b>Model LC8150 with a 1.50" OD and Selectable ID</b> |          |          |                       |
| LC8150-[*]-100  | 100 lb   | 45 kgf   | DP41-S, DP25B-S, DPiS |
| LC8150-[*]-250  | 250 lb   | 114 kgf  | DP41-S, DP25B-S, DPiS |
| LC8150-[*]-500  | 500 lb   | 227 kgf  | DP41-S, DP25B-S, DPiS |
| LC8150-[*]-1K   | 1000 lb  | 455 kgf  | DP41-S, DP25B-S, DPiS |
| LC8150-[*]-2K   | 2000 lb  | 909 kgf  | DP41-S, DP25B-S, DPiS |
| LC8150-[*]-3K   | 3000 lb  | 1361 kgf | DP41-S, DP25B-S, DPiS |
| LC8150-[*]-5K   | 5000 lb  | 2269 kgf | DP41-S, DP25B-S, DPiS |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

[\*] Select ID Code from table above to complete model number.

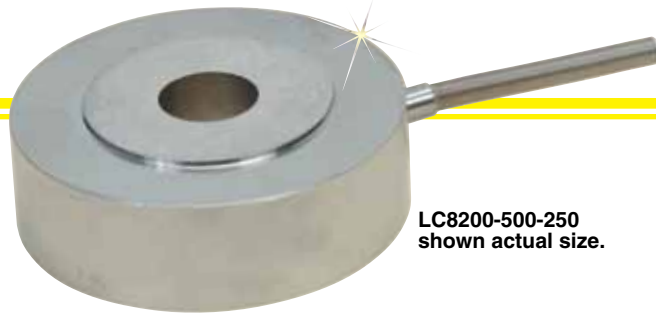
Ordering Examples: LC8150-125-100, 100 lb capacity load cell, 0.125" ID.

LC8150-200-2K, 2000 lb capacity load cell, 0.200" ID.

LC8150-375-500, 500 lb capacity load cell, 0.375" ID.

# LOAD CELLS

## 2.00" OD



LC8200-500-250  
 shown actual size.

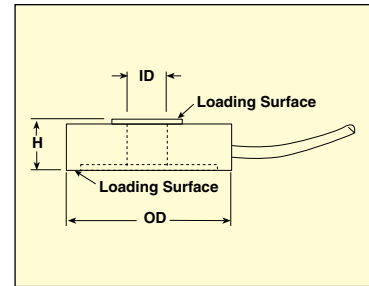
**Compression**  
**0-5 lb to 0-10,000 lb**  
**0-2.3 kgf to 0-4537 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

Dimensions: mm (inch)

| CAPACITY      | OD        | H          |
|---------------|-----------|------------|
| 5 to 100 lb   | 51 (2.00) | 9.4 (0.37) |
| 250 to 10k lb | 51 (2.00) | 16 (0.63)  |

| WIRE | CONNECTION |
|------|------------|
| GN   | +Output    |
| WT   | -Output    |
| BK   | -Input     |
| RD   | +Input     |



## LC8200 Series



- ✓ Low Profile
- ✓ All Stainless Steel Construction
- ✓ Rugged Industrial Design

| AVAILABLE INSIDE DIAMETERS (ID) + = MOST POPULAR X = AVAILABLE |        |        |        |        |        |        |        |        |       |
|--|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| ID CODE  | 125    | 188    | 250    | 375    | 500    | 625    | 750    | 875    | 1.00  |
| CAPACITY   | 0.125" | 0.188" | 0.250" | 0.375" | 0.500" | 0.625" | 0.750" | 0.875" | 1.00" |
| 5  | X      | X      | X      | X      | X      | +      |        |        |       |
| 10   | X      | X      | X      | X      | X      | X      |        |        |       |
| 25   | X      | X      | X      | X      | X      | X      |        |        |       |
| 50   | X      | X      | X      | X      | X      | +      |        |        |       |
| 100  | X      | X      | X      | X      | X      | X      |        |        |       |
| 250  | X      | X      | X      | X      | X      | +      | X      | X      |       |
| 500  | X      | X      | X      | X      | X      | +      | X      | X      | X     |
| 1000   | X      | X      | X      | X      | X      | X      | X      | X      | X     |
| 2000   |        | X      | X      | X      | X      | X      | X      | X      | X     |
| 3000   |        |        | X      | X      | X      | +      | X      | X      |       |
| 5000   |        |        | X      | X      | X      | +      | X      |        |       |
| 7500   |        |        |        | X      | X      |        |        |        |       |
| 10,000   |        |        |        | X      | X      |        |        |        |       |

Also available in metric configurations, consult engineering for details.

## SPECIFICATIONS

**Output:** 2 mV/V nominal  
**Input:** 10 Vdc (15V maximum)  
**Linearity:** ±0.5% FSO  
**Repeatability:** ±0.1% FSO  
**Zero Balance:** ±2.0% FSO  
**Operating Temp Range:** -54 to 121°C (-65 to 250°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
 Zero: ±0.009% FSO/°C  
 Span: ±0.036% rdg/°C  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±5 Ω  
**Full Scale Deflection:** 0.003" nominal  
**Construction:** 17-4 PH stainless steel  
**Electrical:** 1.5 m (5') 4-conductor shielded cable

## To Order

| CAPACITY  | MODEL NO. | COMPATIBLE METERS** |                       |
|---|-----------|---------------------|-----------------------|
| <b>Model LC8200 with a 2.00" OD and Selectable ID</b> |           |                     |                       |
| 5 lb  | 2.3 kgf   | LC8200-[*]-5        | DP41-S, DP25B-S, DPiS |
| 10 lb   | 4.5 kgf   | LC8200-[*]-10       | DP41-S, DP25B-S, DPiS |
| 25 lb   | 11 kgf    | LC8200-[*]-25       | DP41-S, DP25B-S, DPiS |
| 50 lb   | 23 kgf    | LC8200-[*]-50       | DP41-S, DP25B-S, DPiS |
| 100 lb  | 45 kgf    | LC8200-[*]-100      | DP41-S, DP25B-S, DPiS |
| 250 lb  | 114 kgf   | LC8200-[*]-250      | DP41-S, DP25B-S, DPiS |
| 500 lb  | 227 kgf   | LC8200-[*]-500      | DP41-S, DP25B-S, DPiS |
| 1000 lb   | 455 kgf   | LC8200-[*]-1K       | DP41-S, DP25B-S, DPiS |
| 2000 lb   | 909 kgf   | LC8200-[*]-2K       | DP41-S, DP25B-S, DPiS |
| 3000 lb   | 1361 kgf  | LC8200-[*]-3K       | DP41-S, DP25B-S, DPiS |
| 5000 lb   | 2269 kgf  | LC8200-[*]-5K       | DP41-S, DP25B-S, DPiS |
| 7500 lb   | 3403 kgf  | LC8200-[*]-7.5K     | DP41-S, DP25B-S, DPiS |
| 10,000 lb   | 4537 kgf  | LC8200-[*]-10K      | DP41-S, DP25B-S, DPiS |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

[\*] Select ID Code from table above to complete model number.

Ordering Examples: LC8200-125-250, 250 lb capacity load cell, 0.125" ID.

LC8200-250-1K, 1000 lb capacity load cell with 0.250" ID.

LC8200-1.00-2K, 2000 lb capacity load cell with 1.00" ID.

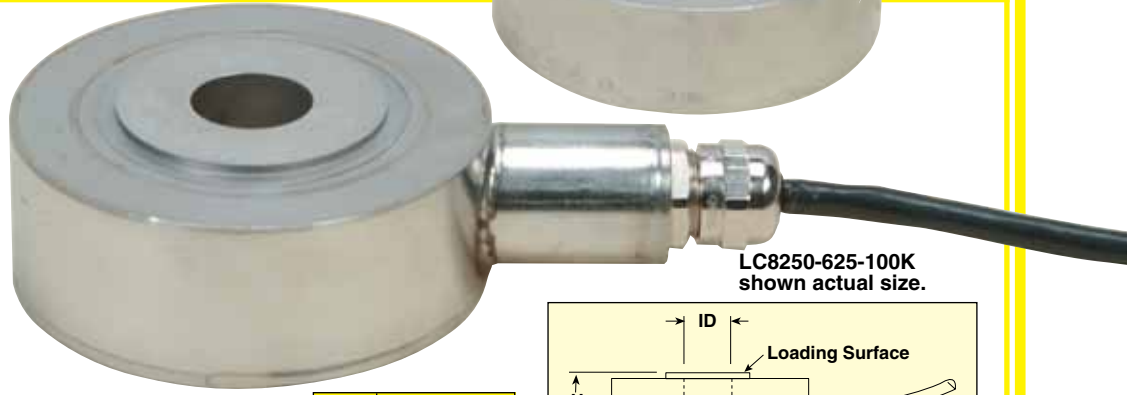
# LOAD CELLS

## 2.50" OD

LC8250-375-3K  
 shown smaller than  
 actual size.



LC8250-625-100K  
 shown actual size.



**Compression**  
**0-1000 lb to 0-100,000 lb**  
**0-455 kgf to 0-45,372 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

### LC8250 Series

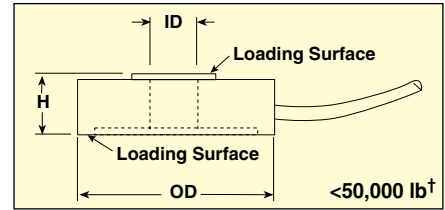


Standard

Dimensions:  
 mm (inch)

| MODEL  | OD           | H           |
|--------|--------------|-------------|
| LC8250 | 64<br>(2.50) | 25<br>(1.0) |

| WIRE | CONNECTION |
|------|------------|
| GN   | +Output    |
| WT   | -Output    |
| BK   | -Input     |
| RD   | +Input     |



† Units >50,000 lb top and bottom loading surfaces are through the center hub.

| AVAILABLE INSIDE DIAMETERS (ID) + = MOST POPULAR X = AVAILABLE |        |        |        |        |        |        |        |       |       |       |       |       |
|--|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| ID CODE  | 250    | 375    | 500    | 625    | 750    | 875    | 938    | 1.00  | 1.13  | 1.25  | 1.38  | 1.50  |
| CAPACITY   | 0.250" | 0.375" | 0.500" | 0.625" | 0.750" | 0.875" | 0.938" | 1.00" | 1.13" | 1.25" | 1.38" | 1.50" |
| 1000   | X      | X      | X      | X      | X      | X      | X      | +     | X     | X     | X     | X     |
| 2000   | X      | X      | X      | X      | X      | X      | X      | X     | X     | X     | X     | X     |
| 3000   | X      | X      | X      | X      | X      | X      | X      | X     | X     | X     | X     | X     |
| 5000   |        | X      | +      | X      | X      | X      | X      | X     | X     | X     | X     | X     |
| 7500   |        | X      | X      | X      | X      | X      | X      | X     | X     | X     | X     | X     |
| 10,000   |        | X      | X      | X      | X      | X      | X      | +     | X     | X     | X     | X     |
| 15,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 20,000   |        |        | +      | X      | X      | X      | X      | +     |       |       |       |       |
| 30,000   |        |        | +      | X      | X      | X      | X      | +     |       |       |       |       |
| 40,000   |        |        | X      | X      | X      | X      | X      | X     |       |       |       |       |
| 50,000   |        |        | X      | X      | X      | X      | X      | +     |       |       |       |       |
| 75,000   |        |        | X      | X      | X      | X      | X      | X     |       |       |       |       |
| 100,000  |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |

Also available in metric configurations, consult engineering for details.

- Low Profile
- All Stainless Steel Construction
- Rugged Industrial Design

The LC8250 Series donut load cells are an economical solution to applications requiring a through-hole design. With their extremely low profile and compact design, these load cells are ideal for applications such as clamping forces, bolt loading forces, and other compressive loads. This series, with its all stainless steel construction and environmental protection, has proved reliable in tough industrial applications.

### SPECIFICATIONS

- Output:** 2 mV/V nominal
- Input:** 10 Vdc (15V maximum)
- Linearity:** ±0.5% FSO
- Repeatability:** ±0.1% FSO
- Zero Balance:** ±2.0% FSO
- Operating Temp Range:** -54 to 121°C (-65 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero: ±0.009% FSO/°C
  - Span: ±0.018% rdg/°C
- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Input Resistance:** 360 Ω minimum
- Output Resistance:** 350 ±5 Ω
- Full Scale Deflection:** 0.003" nominal
- Construction:** 17-4 PH stainless steel
- Electrical:** 1.5 m (5') 4-conductor shielded cable

### To Order

| CAPACITY  | MODEL NO.  | COMPATIBLE METERS**                   |
|---|------------|---------------------------------------|
| <b>Model LC8250 with a 2.50" OD and Selectable ID</b> |            |                                       |
| 1000 lb   | 455 kgf    | LC8250-[*]-1K DP41-S, DP25B-S, DPiS   |
| 2000 lb   | 909 kgf    | LC8250-[*]-2K DP41-S, DP25B-S, DPiS   |
| 3000 lb   | 1361 kgf   | LC8250-[*]-3K DP41-S, DP25B-S, DPiS   |
| 4000 lb   | 1815 kgf   | LC8250-[*]-4K DP41-S, DP25B-S, DPiS   |
| 5000 lb   | 2269 kgf   | LC8250-[*]-5K DP41-S, DP25B-S, DPiS   |
| 7500 lb   | 3403 kgf   | LC8250-[*]-7.5K DP41-S, DP25B-S, DPiS |
| 10,000 lb   | 4537 kgf   | LC8250-[*]-10K DP41-S, DP25B-S, DPiS  |
| 20,000 lb   | 9074 kgf   | LC8250-[*]-20K DP41-S, DP25B-S, DPiS  |
| 30,000 lb   | 13,612 kgf | LC8250-[*]-30K DP41-S, DP25B-S, DPiS  |
| 40,000 lb   | 18,149 kgf | LC8250-[*]-40K DP41-S, DP25B-S, DPiS  |
| 50,000 lb   | 22,686 kgf | LC8250-[*]-50K DP41-S, DP25B-S, DPiS  |
| 75,000 lb   | 34,029 kgf | LC8250-[*]-75K DP41-S, DP25B-S, DPiS  |
| 100,000 lb  | 45,372 kgf | LC8250-[*]-100K DP41-S, DP25B-S, DPiS |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

[\*] Select ID Code from table above to complete model number.

Ordering Examples: LC8250-750-2K, 2000 lb capacity load cell, 0.750" ID.

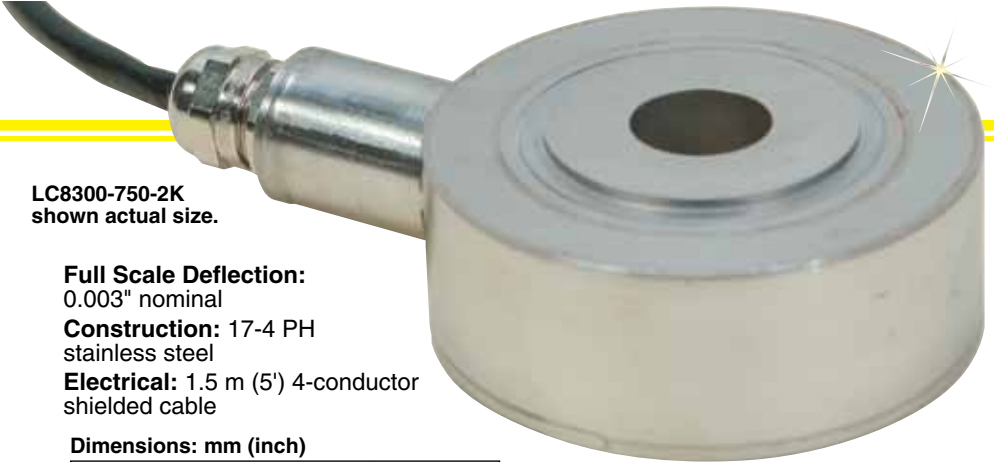
LC8250-375-7.5K, 7500 lb capacity load cell, 0.375" ID.

LC8250-1.25-10K, 10,000 lb capacity load cell, 1.25" ID.



# LOAD CELLS

## 3.00" OD



### LC8300 Series

**Compression**

**0-1000 lb to 0-100,000 lb**  
**0-455 kgf to 0-45,372 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

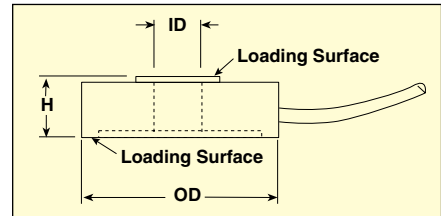
LC8300-750-2K  
 shown actual size.

**Full Scale Deflection:**  
 0.003" nominal  
**Construction:** 17-4 PH  
 stainless steel  
**Electrical:** 1.5 m (5') 4-conductor  
 shielded cable

**Dimensions:** mm (inch)

| MODEL  | OD          | H           |
|--------|-------------|-------------|
| LC8300 | 76.3 (3.00) | 25.4 (1.00) |

| WIRE | CONNECTION |
|------|------------|
| GN   | +Output    |
| WT   | -Output    |
| BK   | -Input     |
| RD   | +Input     |



### LC8300 Series



Standard

- ✓ Low Profile
- ✓ All Stainless Steel Construction
- ✓ Rugged Industrial Design

The LC8300 Series donut load cells are an economical solution to applications requiring a through-hole design. With their extremely low profile and compact design, these load cells are ideal for applications such as clamping forces, bolt loading forces, and other compressive loads. This series, with its all stainless steel construction and environmental protection, has proved reliable in tough industrial applications.

### SPECIFICATIONS

**Output:** 2 mV/V nominal  
**Input:** 10 Vdc (15V maximum)  
**Linearity:** ±0.5% FSO  
**Repeatability:** ±0.1% FSO  
**Zero Balance:** ±2.0% FSO  
**Operating Temp Range:**  
 -54 to 121°C (-65 to 250°F)  
**Compensated Temp Range:**  
 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
**Zero:** ±0.009% FSO/°C  
**Span:** ±0.018% rdg/°C

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 +5 Ω

| AVAILABLE INSIDE DIAMETERS (ID) + = MOST POPULAR X = AVAILABLE |        |        |        |        |        |        |        |       |       |       |       |       |
|--|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| ID CODE  | 250    | 375    | 500    | 625    | 750    | 875    | 938    | 1.00  | 1.13  | 1.25  | 1.138 | 1.50  |
| CAPACITY   | 0.250" | 0.375" | 0.500" | 0.625" | 0.750" | 0.875" | 0.938" | 1.00" | 1.13" | 1.25" | 1.38" | 1.50" |
| 1000   | X      | X      | +      | X      | X      | X      | X      | X     | +     | X     | X     | X     |
| 2000   | X      | X      | +      | X      | X      | X      | X      | X     | +     | X     | X     | X     |
| 3000   | X      | X      | +      | X      | X      | X      | X      | X     | +     | X     | X     | X     |
| 5000   |        | X      | +      | X      | X      | X      | X      | X     | +     | X     | X     | X     |
| 7500   |        | X      | +      | X      | X      | X      | X      | X     | +     | X     | X     | X     |
| 10,000   |        | X      | +      | X      | X      | X      | X      | X     | +     | X     | X     | X     |
| 15,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 20,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 30,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 40,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 50,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 75,000   |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |
| 100,000  |        |        | +      | X      | X      | X      | X      | X     |       |       |       |       |

Also available in metric configurations, consult engineering for details.

| To Order                                       |            |                 |                        |
|--|------------|-----------------|------------------------|
| CAPACITY                                       |            | MODEL NO.       | COMPATIBLE METERS**    |
| Model LC8300 with a 3.00" OD and Selectable ID |            |                 |                        |
| 1000 lb  | 455 kgf    | LC8300-[*]-1K   | DP41-S, DP25B-S, DPiS  |
| 2000 lb  | 909 kgf    | LC8300-[*]-2K   | DP41-S, DP25B-S, DPiS  |
| 3000 lb  | 1361 kgf   | LC8300-[*]-3K   | DP41-S, DP25B-S, DPiS  |
| 4000 lb  | 1815 kgf   | LC8300-[*]-4K   | DP41-S, DP25B-S, DPiS  |
| 5000 lb  | 2269 kgf   | LC8300-[*]-5K   | DP41-S, DP25B-S, DPiS  |
| 7500 lb  | 3403 kgf   | LC8300-[*]-7.5K | DP41-S, DP25B-S, DPiS  |
| 10,000 lb                                      | 4537 kgf   | LC8300-[*]-10K  | DP41-S, DP25B-S, DPiS  |
| 20,000 lb                                      | 9074 kgf   | LC8300-[*]-20K  | DP41-S, DP25B-S, DPiS* |
| 30,000 lb                                      | 13,612 kgf | LC8300-[*]-30K  | DP41-S, DP25B-S, DPiS* |
| 40,000 lb                                      | 18,149 kgf | LC8300-[*]-40K  | DP41-S, DP25B-S, DPiS* |
| 50,000 lb                                      | 22,686 kgf | LC8300-[*]-50K  | DP41-S, DP25B-S, DPiS* |
| 75,000 lb                                      | 34,029 kgf | LC8300-[*]-75K  | DP41-S, DP25B-S, DPiS* |
| 100,000 lb                                     | 45,372 kgf | LC8300-[*]-100K | DP41-S, DP25B-S, DPiS* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

[\*] Select ID Code from table above to complete model number.

Ordering Examples: LC8300-750-2K, 2000 lb capacity load cell, 0.750" ID.

LC8300-750-100K, 100,000 lb capacity load cell, and 0.750" ID.

LC8300-1.25-10K, 10,000 lb capacity load cell, and 1.25" ID.

# HOLE LOAD CELLS

## 2.00 TO 3.13" ID



LC8400-213-10K shown smaller than actual size.

**Compression**  
**0-1000 lb to 0-100K lb**  
**0-455 kgf to 0-45,372 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

### LC8313/LC8400 Large Series

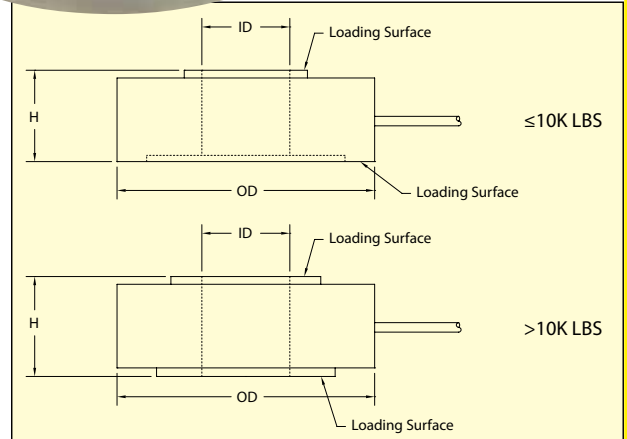


Standard

Dimensions: mm (inch)

| MODEL              | OD         | H         |
|--------------------|------------|-----------|
| LC8313             | 80 (3.13)  | 13 (0.50) |
| LC8400 (1K to 50K) | 102 (4.00) | 25 (1.00) |
| LC8400 (≥100K)     | 102 (4.00) | 51 (2.00) |
| LC8450             | 114 (4.50) | 32 (1.25) |

| WIRE | CONNECTION |
|------|------------|
| GN   | +Output    |
| WT   | -Output    |
| BK   | -Input     |
| RD   | +Input     |



- ✓ For Large-ID Applications
- ✓ All Stainless Steel Construction
- ✓ Rugged Industrial Design

The LC8313, LC8400, and LC8450 Series donut load cells are space-saving solutions to applications requiring a large through-hole. With their rugged construction and design, these load cells are ideal for applications such as loading forces on large bolts or other suspended load applications. These series, with their all stainless steel construction and environmental protection, have proved reliable in tough industrial applications.

### SPECIFICATIONS

- Output:** 2 mV/V nominal
- Input:** 10 Vdc (15V maximum)
- Accuracy Class:** ±0.5% linearity, hysteresis and repeatability combined
- Zero Balance:** ±2.0% FSO
- Operating Temp Range:** -54 to 121°C (-65 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero: ±0.009% FSO/°C
  - Span: ±0.018% rdg/°C
- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Input Resistance:** 360 Ω minimum
- Output Resistance:** 350 ±5 Ω
- Construction:** 17-4 PH stainless steel
- Electrical:** 1.5 m (5') 4-conductor shielded cable

| INSIDE DIAMETERS (ID) | + = MOST POPULAR X = AVAILABLE |       |       |       |
|-----------------------|--------------------------------|-------|-------|-------|
| ID CODE               | 200                            | 213   | 300   | 313   |
| MODEL                 | 2.00"                          | 2.13" | 3.00" | 3.13" |
| LC8313                | +                              | X     |       |       |
| LC8400                | +                              | X     |       |       |
| LC8450                |                                |       | X     | +     |

Also available in metric configurations, consult engineering for details.

| To Order  |           |                     |                       |
|---|-----------|---------------------|-----------------------|
| CAPACITY  | MODEL NO. | COMPATIBLE METERS** |                       |
| <b>Model LC8313 with a 3.13" OD and Selectable ID</b> |           |                     |                       |
| 1 K lb  | 455 kg    | LC8313-[*]-1K       | DP41-S, DP25B-S, DPiS |
| 3 K lb  | 1361 kg   | LC8313-[*]-3K       | DP41-S, DP25B-S, DPiS |
| 5 K lb  | 2269 kg   | LC8313-[*]-5K       | DP41-S, DP25B-S, DPiS |
| 7.5 K lb  | 3403 kg   | LC8313-[*]-7.5K     | DP41-S, DP25B-S, DPiS |
| 10 K lb   | 4537 kg   | LC8313-[*]-10K      | DP41-S, DP25B-S, DPiS |
| <b>Model LC8400 with a 4.00" OD and Selectable ID</b> |           |                     |                       |
| 1 K lb  | 455 kg    | LC8400-[*]-1K       | DP41-S, DP25B-S, DPiS |
| 3 K lb  | 1361 kg   | LC8400-[*]-3K       | DP41-S, DP25B-S, DPiS |
| 5 K lb  | 2269 kg   | LC8400-[*]-5K       | DP41-S, DP25B-S, DPiS |
| 10 K lb   | 4537 kg   | LC8400-[*]-10K      | DP41-S, DP25B-S, DPiS |
| 25 K lb   | 11,343 kg | LC8400-[*]-25K      | DP41-S, DP25B-S, DPiS |
| 50 K lb   | 22,686 kg | LC8400-[*]-50K      | DP41-S, DP25B-S, DPiS |
| 100 K lb  | 45,372 kg | LC8400-[*]-100K     | DP41-S, DP25B-S, DPiS |
| 200 K lb  | 90,744 kg | LC8400-[*]-200K     | DP41-S, DP25B-S, DPiS |
| <b>Model LC8450 with a 4.50" OD and Selectable ID</b> |           |                     |                       |
| 1 K lb  | 455 kg    | LC8450-[*]-1K       | DP41-S, DP25B-S, DPiS |
| 3 K lb  | 1361 kg   | LC8450-[*]-3K       | DP41-S, DP25B-S, DPiS |
| 5 K lb  | 2269 kg   | LC8450-[*]-5K       | DP41-S, DP25B-S, DPiS |
| 10 K lb   | 4537 kg   | LC8450-[*]-10K      | DP41-S, DP25B-S, DPiS |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

[\*] Select ID Code from table above to complete model number.

**Ordering Examples:** LC8313-200-3K, 3000 lb capacity load cell, 3.13" OD and 2.00" ID.

LC8400-200-10K, 10,000 lb capacity load cell, 4.00" OD and 2.00" ID.

LC8400-213-25K, 25,000 lb capacity load cell, 4.00" OD and 2.13" ID.

LC8450-313-5K, 5000 lb capacity load cell, 4.50" OD and 3.13" ID.

## WITH MOUNTING WASHERS STANDARD AND METRIC MODELS

### Compression

0-2000 lb to 0-100,000 lb

0-10,000 N to 0-500,000 N

1 Newton = 0.2248 lb

1 daNewton = 10 Newtons

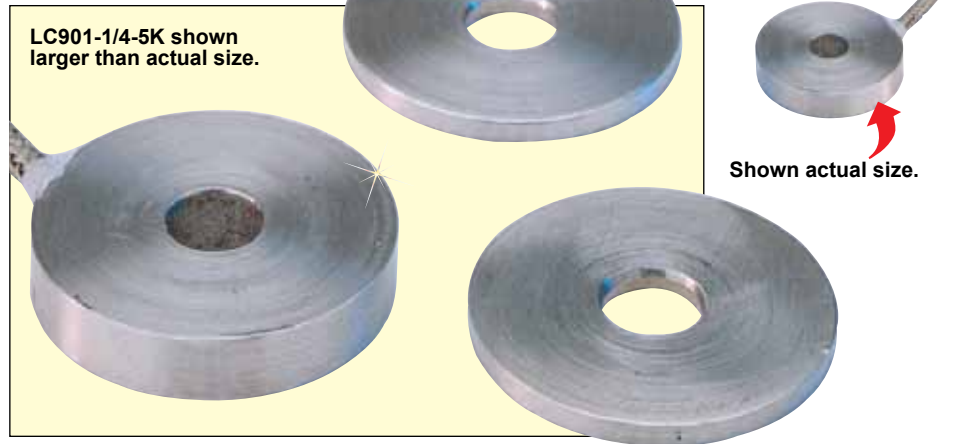
1 lb = 454 g

1 t = 1000 kgf = 2204 lb

### LC900/LCM900 Series



Standard



OMEGA's LC900/LCM900 Series bolt force sensors are compression load cells designed to measure the clamping force of a bolt. With excellent long-term stability and all stainless steel construction, the LC900/LCM900 Series delivers high reliability in severe industrial environments. These units are designed to operate by mounting on a flat surface between 2 mounting washers (included).

### SPECIFICATIONS

**Excitation:** 5 Vdc (10V max)

**Output:** 2 mV/V nominal

**Accuracy:** ±3.5% FSO linearity, hysteresis and repeatability combined

**Zero Balance:** ±4% FSO

**Operation Temp Range:** -54 to 93°C (-65 to 200°F)

**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

#### Thermal Effects:

**Zero:** ±0.018% FSO/°C

**Span:** ±0.036% rdg/°C

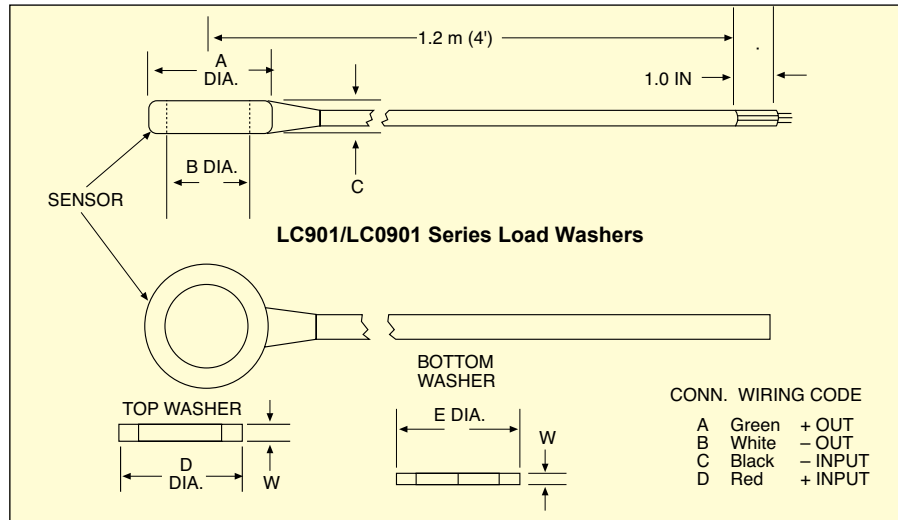
**Safe Overload:** 130% of capacity

**Ultimate Overload:** 150% of capacity

**Bridge Resistance:** 120 Ω nominal

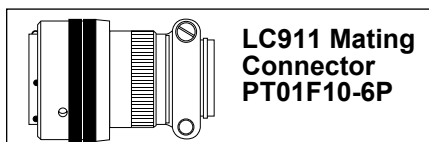
**Construction:** Stainless steel

**Electrical Connection:** 1.2 m (4') insulated shielded cable



### Dimensions: mm (inch)

| SIZE                   | CAPACITY   | BOLT SENSOR  |              |              | WASHERS      |              |              |
|------------------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                        |            | A            | B            | C            | D            | E            | W            |
| <b>STANDARD MODELS</b> |            |              |              |              |              |              |              |
| 1/4"                   | 2000 lb    | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 1/4"                   | 5000 lb    | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 3/8"                   | 10,000 lb  | 19.1 (0.750) | 10.1 (0.396) | 4.75 (0.187) | 16.7 (0.656) | 19.1 (0.750) | 1.57 (0.062) |
| 1/2"                   | 30,000 lb  | 25.4 (1.000) | 13.1 (0.517) | 6.35 (0.250) | 21.4 (0.844) | 25.4 (1.000) | 1.98 (0.078) |
| 5/8"                   | 50,000 lb  | 28.6 (1.125) | 16.4 (0.644) | 6.35 (0.250) | 24.6 (0.968) | 28.6 (1.125) | 1.98 (0.078) |
| 3/4"                   | 65,000 lb  | 38.1 (1.500) | 19.6 (0.770) | 9.53 (0.375) | 30.9 (1.218) | 38.1 (1.500) | 2.36 (0.093) |
| 1 1/2"                 | 100,000 lb | 66.7 (2.625) | 38.9 (1.533) | 22.2 (0.875) | 63.5 (2.500) | 66.7 (2.625) | 3.18 (0.125) |
| <b>METRIC MODELS</b>   |            |              |              |              |              |              |              |
| 6 mm                   | 10,000 N   | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 6 mm                   | 20,000 N   | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 10 mm                  | 50,000 N   | 19.1 (0.75)  | 10.1 (0.396) | 4.75 (0.187) | 16.7 (0.656) | 19.1 (0.750) | 1.57 (0.062) |
| 13 mm                  | 130,000 N  | 25.4 (1.000) | 13.1 (0.517) | 6.35 (0.250) | 21.4 (0.844) | 25.4 (1.000) | 1.98 (0.078) |
| 16 mm                  | 200,000 N  | 28.6 (1.125) | 16.4 (0.644) | 6.35 (0.250) | 24.6 (0.968) | 28.6 (1.125) | 1.98 (0.078) |
| 19 mm                  | 300,000 N  | 38.1 (1.500) | 19.6 (0.770) | 9.53 (0.375) | 30.9 (1.218) | 38.1 (1.500) | 2.36 (0.093) |
| 38 mm                  | 500,000 N  | 66.7 (2.625) | 38.9 (1.533) | 22.2 (0.875) | 63.5 (2.500) | 66.7 (2.625) | 3.18 (0.125) |



# BOLT SENSORS WITH MOUNTING WASHERS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

**STANDARD AND METRIC MODELS**

| To Order               |          |         |                         |                        |                        |
|------------------------|----------|---------|-------------------------|------------------------|------------------------|
| BOLT SIZE              | CAPACITY |         | MODEL NO. STRIPPED ENDS | MODEL NO CONNECTOR END | COMPATIBLE METERS**    |
|                        | LB       | N       |                         |                        |                        |
| <b>STANDARD MODELS</b> |          |         |                         |                        |                        |
| 1/4"                   | 2000     | 8897    | LC901-1/4-2K            | -                      | DP41-S, DP25B-S, DPiS  |
| 1/4"                   | 5000     | 22,242  | LC901-1/4-5K            | -                      | DP41-S, DP25B-S, DPiS  |
| 3/8"                   | 10,000   | 44,484  | LC901-3/8-10K           | -                      | DP41-S, DP25B-S, DPiS* |
| 1/2"                   | 30,000   | 133,452 | LC901-1/2-30K           | LC911-1/2-30K          | DP41-S, DP25B-S, DPiS* |
| 5/8"                   | 50,000   | 222,420 | LC901-5/8-50K           | LC911-5/8-50K          | DP41-S, DP25B-S, DPiS* |
| 3/4"                   | 65,000   | 289,146 | LC901-3/4-65K           | LC911-3/4-65K          | DP41-S, DP25B-S, DPiS* |
| 1 1/2"                 | 100,000  | 444,840 | LC901-1.5-100K          | -                      | DP41-S, DP25B-S, DPiS* |
| <b>METRIC MODELS</b>   |          |         |                         |                        |                        |
| 6 mm                   | 2248     | 10,000  | LCM901-6-10Kn           | -                      | DPiS, DP41-S, DP25B-S  |
| 6 mm                   | 4496     | 20,000  | LCM901-6-20Kn           | -                      | DPiS, DP41-S, DP25B-S  |
| 10 mm                  | 11,240   | 50,000  | LCM901-10-50Kn          | -                      | DPiS, DP41-S, DP25B-S  |
| 13 mm                  | 29,225   | 130,000 | LCM901-13-130Kn         | LCM911-13-130KN        | DPiS, DP41-S, DP25B-S  |
| 16 mm                  | 44,962   | 200,000 | LCM901-16-200Kn         | LCM911-16-200KN        | DPiS, DP41-S, DP25B-S  |
| 19 mm                  | 67,443   | 300,000 | LCM901-19-300Kn         | LCM911-19-300KN        | DPiS, DP41-S, DP25B-S* |
| 38 mm                  | 112,405  | 500,000 | LCM901-38-500Kn         | -                      | DPiS, DP41-S, DP25B-S* |

## ACCESSORY

| MODEL NO.  | DESCRIPTION   |
|------------|---|
| PT01F10-6P | Mating connector for LC911/LCM911 series load cells |

Comes complete with 2-point NIST-traceable calibration and 59 kΩ shunt data. \* 4-digit meter. \*\* Visit us online for compatible meters.

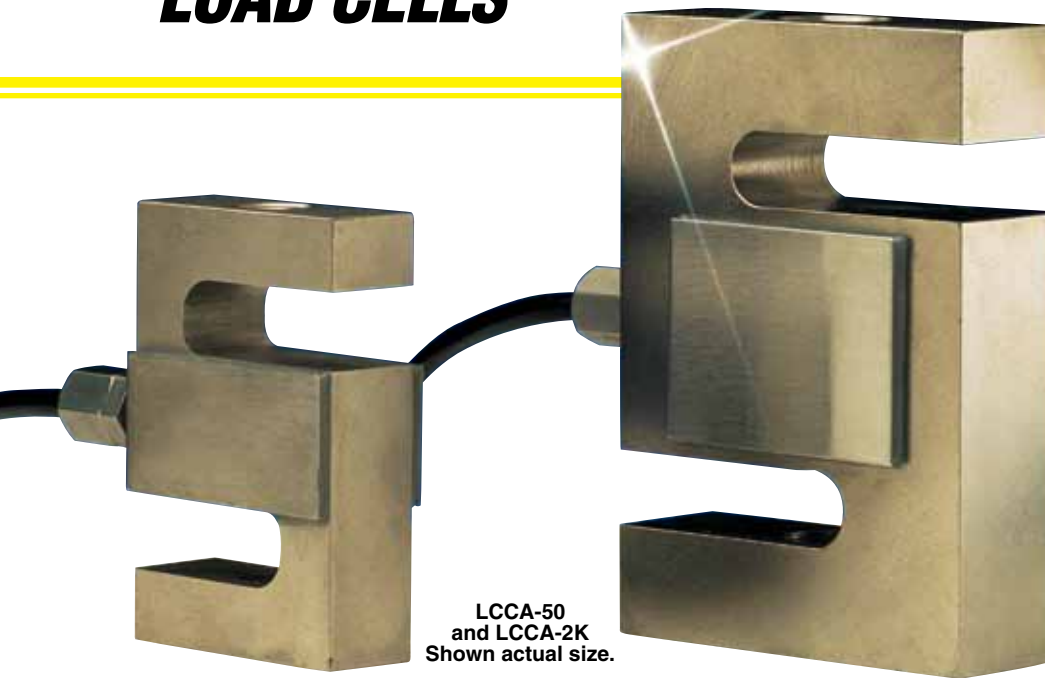
**Ordering Examples:** LC901-3/8-10K, 10,000 lb capacity bolt sensor for a 3/8" diameter bolt, with stripped ends on the leads.

LCM901-10-50KN, 50 kN capacity bolt sensor for 10 mm bolt, with stripped ends on the leads.

LC911-1/2-30K, 30,000 lb capacity bolt sensor for a 1/2" diameter bolt with a connector installed on the cable. PT01F10-6P, mating connector (sold separately).

LCM911-13-130KN, 130 kN capacity bolt sensor for 13 mm bolt with a connector installed on the cable. PT01F10-6P, mating connector (sold separately).

# LOAD CELLS



LCCA-50  
and LCCA-2K  
Shown actual size.

**Tension/Compression**  
 0-25 to 0-20,000 lb



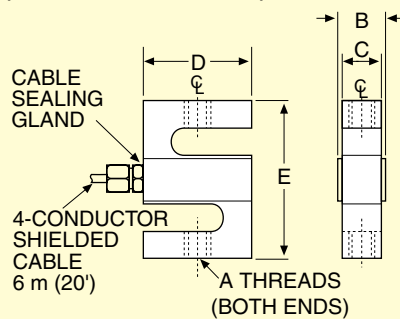
## LCCA Series

- ✓ Environmentally Protected for Washdown Applications
- ✓ Corrosion Resistant
- ✓ Calibration Certificate Supplied
- ✓ 0.25% Interchangeable

### SPECIFICATIONS

**Rated Output:** 3mV/V ( $\pm 0.0075$ mV/V actual output supplied with each load cell)  
**Excitation:** 10 Vdc (15 Vdc maximum)  
**Accuracy:** 0.037% Full Scale  
**Linearity:** 0.03% FS  
**Hysteresis:** 0.02% FS  
**Repeatability:** 0.01% FS  
**Zero Balance:** 1% FS  
**Creep in 20 min:** 0.03% FS  
**Operating Temperature:** 0 to 150°F  
**Compensated Temperature:** 0 to 150°F  
**Thermal Effects:** Zero - 0.0015% FS/°F  
 Span - 0.0008% RDG/°F  
**Maximum Load:** Safe, 150%; Ultimate, 300%  
**Bridge Resistance:** 350  $\Omega$  nominal  
**Full Scale Deflection:** 0.010 in to 0.020 in  
**Construction:** Nickel Plated Carbon Steel  
**Cable:** 6 m (20') 4-conductor shielded 22-gage wire

(DIMENSIONS IN INCHES)

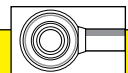
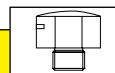


| CAPACITY               | A     | B    | C    | D    | E    |
|------------------------|-------|------|------|------|------|
| 25-200                 | ¼-28  | .65  | .50  | 2.00 | 2.50 |
| 250                    | ⅜-24  | .75  | .50  | 2.00 | 3.00 |
| 500-750<br>1,000-2,000 | ½-20  | 1.00 | .75  | 2.00 | 3.00 |
| 3,000                  | ½-20  | 1.25 | 1.00 | 2.00 | 3.00 |
| 5,000                  | ¾-16  | 1.25 | 1.00 | 3.00 | 4.25 |
| 10,000                 | ¾-16  | 1.25 | 1.00 | 3.50 | 4.75 |
| 15,000                 | 1-14  | 1.50 | 1.25 | 4.00 | 5.50 |
| 20,000                 | 1¼-12 | 2.25 | 2.00 | 5.00 | 7.00 |

WIRING (TENSION)

RED: +INPUT  
 BLACK: -INPUT  
 GREEN: +OUTPUT  
 WHITE: -OUTPUT

### To Order



| MODEL NO. | RATED CAPACITY | DEFL | WT     | COMPATIBLE METERS         | LOAD BUTTON MODEL | ROD END MODEL |
|-----------|----------------|------|--------|---------------------------|-------------------|---------------|
| LCCA-25   | 25 lb          | .015 | 2 lb   | 002-S, DP460-S, DP25-S    | LBC-014           | REC-014M      |
| LCCA-50   | 50 lb          | .015 | 2 lb   | 002-S, DP460-S, DP25-S    | LBC-014           | REC-014M      |
| LCCA-100  | 100 lb         | .010 | 2 lb   | DP3002-S, DP460-S, DP25-S | LBC-014           | REC-014M      |
| LCCA-150  | 150 lb         | .010 | 2 lb   | DP3002-S, DP460-S, DP25-S | LBC-014           | REC-014M      |
| LCCA-200  | 200 lb         | .010 | 2 lb   | DP3002-S, DP460-S, DP25-S | LBC-014           | REC-014M      |
| LCCA-250  | 250 lb         | .010 | 2 lb   | DP41-S, DP3002-S, DP25-S  | LBC-038           | REC-038M      |
| LCCA-500  | 500 lb         | .010 | 2 lb   | DP41-S, DP3002-S, DP25-S  | LBC-012           | REC-012M      |
| LCCA-750  | 750 lb         | .010 | 2 lb   | DP41-S, DP3002-S, DP25-S  | LBC-012           | REC-012M      |
| LCCA-1K   | 1000 lb        | .012 | 2 lb   | DP41-S, DP3002-S, DP25-S  | LBC-012           | REC-012M      |
| LCCA-2K   | 2000 lb        | .012 | 3 lb   | DP41-S, DP3002-S, DP25-S  | LBC-012           | REC-012M      |
| LCCA-3K   | 3000 lb        | .012 | 3 lb   | DP41-S, DP87              | LBC-012           | REC-012M      |
| LCCA-5K   | 5000 lb        | .017 | 3.5 lb | DP41-S, DP87              | LBC-034           | REC-034M      |
| LCCA-10K  | 10000 lb       | .017 | 3.5 lb | DP41-S, DP87              | LBC-034           | REC-034M      |
| LCCA-15K  | 15000 lb       | .017 | 6 lb   | DP41-S, DP87              | LBC-100           | REC-100M      |
| LCCA-20K  | 20000 lb       | .017 | 13 lb  | DP41-S, DP87              | —                 | REC-114M      |

Ordering Example: LCCA-1K is a 1,000 lb capacity load cell.

# ENVIRONMENTAL & PROTECTED

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## LOAD CELLS

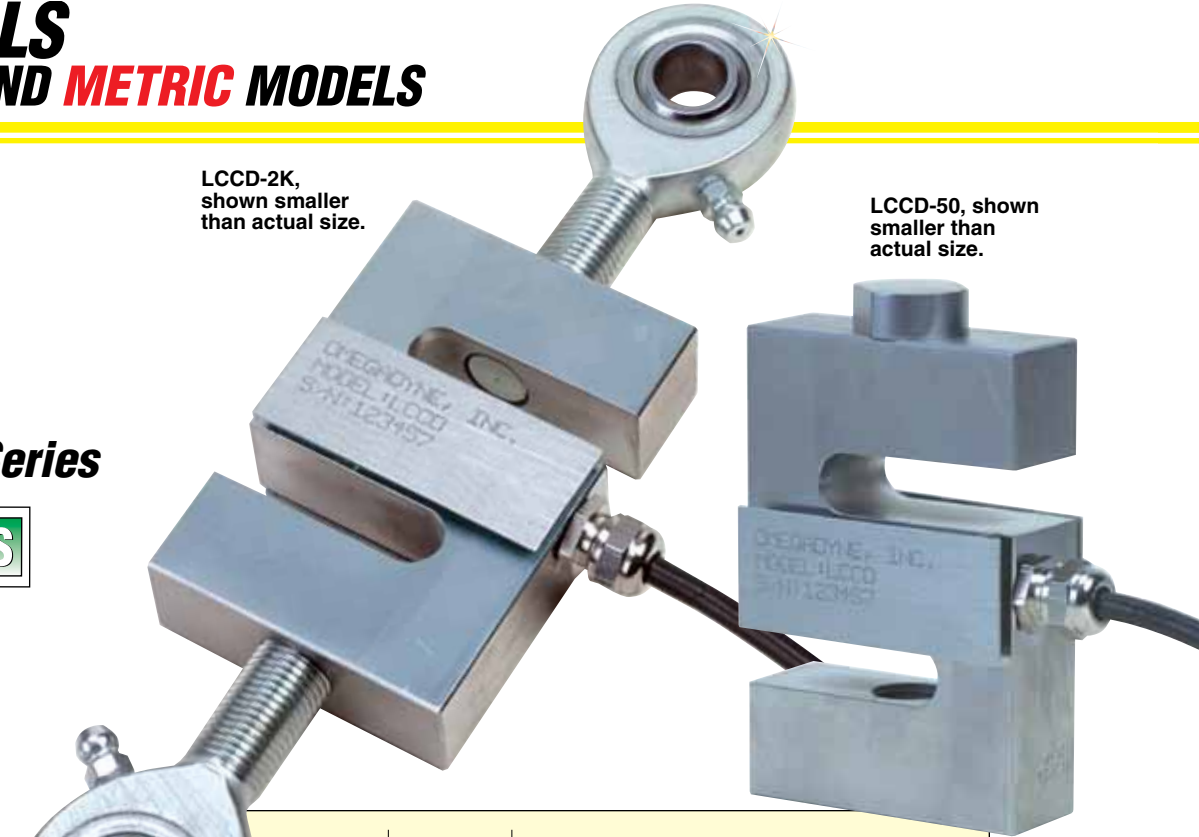
### STANDARD AND METRIC MODELS

**Tension/Compression**  
**0-25 lb to 0-20,000 lb**  
**0-10 kgf to 0-5000 kgf**

LCCD-2K,  
 shown smaller  
 than actual size.

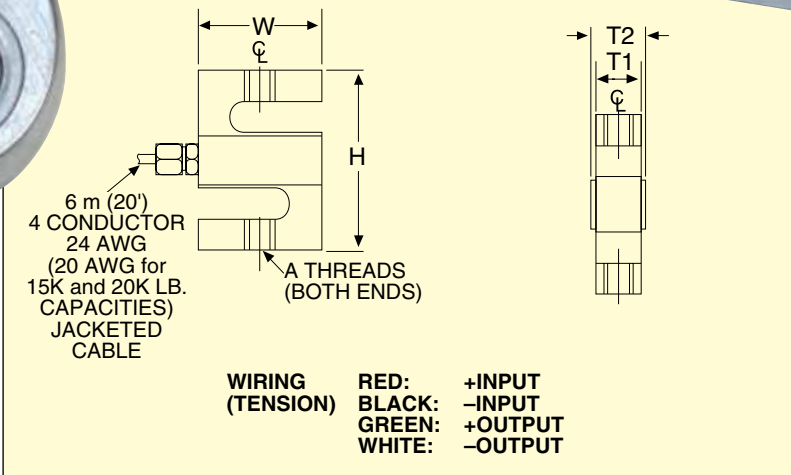
LCCD-50, shown  
 smaller than  
 actual size.

## LCCD/LCMCD Series



REC-012M rod ends sold  
 separately, each.

- ✓ Environmentally Protected to IP67
- ✓ Stainless Steel
- ✓ Calibration Certificate Supplied
- ✓ 0.25% Interchangeability



## SPECIFICATIONS

**Excitation:** 10 Vdc (15 Vdc maximum)  
**Output:** 3.0 mV/V  $\pm$ 0.25%  
**Linearity:** 0.03% FS  
**Hysteresis:** 0.02% FS  
**Repeatability:** 0.01% FS  
**Zero Balance:** 1% FS  
**Creep in 20 min:** 0.03% FS  
**Operating Temperature:**  
 -18 to 66°C (0 to 150°F)  
**Compensated Temperature:**  
 -18 to 66°C (0 to 150°F)  
**Thermal Effects:**  
**Zero:** 0.0027% FS/°C  
**Span:** 0.0015% rdg/°C  
**Maximum Load:** Safe, 150%;  
 ultimate, 300%  
**Bridge Resistance:** 350  $\Omega$  nominal  
**Construction:** 17-4 PH stainless steel  
**Cable:** 6 m (20') 4-conductor shielded  
 22-gauge wire PVC cable

| CAPACITY       | THREADS         | Dimensions: mm (inch) |           |             |             |
|----------------|-----------------|-----------------------|-----------|-------------|-------------|
|                |                 | H                     | W         | T1          | T2          |
| <b>lb</b>      |                 |                       |           |             |             |
| 25 to 200      | 1/4-28 UNF-2B   | 63.5 (2.5)            | 50.8 (2)  | 10.2 (0.4)  | 19.1 (0.75) |
| 250            | 3/8-24 UNF-2B   | 76.2 (3)              | 50.8 (2)  | 12.7 (0.5)  | 21.6 (0.85) |
| 500 to 2000    | 1/2-20 UNF-2B   | 76.2 (3)              | 50.8 (2)  | 17.8 (0.7)  | 25.4 (1)    |
| 3000           | 1/2-20 UNF-2B   | 76.2 (3)              | 50.8 (2)  | 24.1 (0.95) | 33 (1.3)    |
| 5000 to 10,000 | 3/4-16 UNF-2B   | 108 (4.25)            | 76.2 (3)  | 24.1 (0.95) | 33 (1.3)    |
| 15,000         | 1-14 UNF-2B     | 139.7 (5.5)           | 101.6 (4) | 31.8 (1.25) | 40.6 (1.6)  |
| 20,000         | 1-1/4-12 UNF-2B | 177.8 (7)             | 127 (5)   | 50.8 (2)    | 58.4 (2.3)  |
| <b>kgf</b>     |                 |                       |           |             |             |
| 10 to 250      | M8 x 1,25-6H    | 64 (2.5)              | 51 (2)    | 11 (0.4)    | 20 (0.8)    |
| 500 to 1000    | M12 x 1,75-6H   | 76 (3)                | 51 (2)    | 19 (0.7)    | 25 (1)      |
| 2000           | M20 x 1,5-6H    | 108 (4.3)             | 76 (3)    | 25 (1)      | 34 (1.3)    |
| 5000           | M20 x 1,5-6H    | 121 (4.8)             | 89 (3.5)  | 25 (1)      | 34 (1.3)    |

| <b>To Order</b>        |      |           |              |         |                       |             |           |
|------------------------|------|-----------|--------------|---------|-----------------------|-------------|-----------|
| CAPACITY               |      | MODEL NO. | DEFL. (inch) | WT      | COMPATIBLE METERS     | LOAD BUTTON | ROD END   |
| lb                     | kgf  |           |              |         |                       | MODEL       | MODEL     |
| <b>STANDARD MODELS</b> |      |           |              |         |                       |             |           |
| 25                     | 11   | LCCD-25   | 0.011        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 50                     | 23   | LCCD-50   | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 100                    | 45   | LCCD-100  | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 150                    | 68   | LCCD-150  | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 200                    | 91   | LCCD-200  | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 250                    | 114  | LCCD-250  | 0.010        | 0.6 lb  | DP25B-S, DP41-S, DPiS | LBC-038     | REC-038M  |
| 500                    | 227  | LCCD-500  | 0.010        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 750                    | 340  | LCCD-750  | 0.006        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 1000                   | 454  | LCCD-1K   | 0.007        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 2000                   | 907  | LCCD-2K   | 0.011        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 3000                   | 1361 | LCCD-3K   | 0.006        | 1.3 lb  | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 5000                   | 2269 | LCCD-5K   | 0.011        | 2.3 lb  | DP25B-S, DP41-S, DPiS | LBC-034     | REC-034M  |
| 10,000                 | 4537 | LCCD-10K  | 0.014        | 2.6 lb  | DP25B-S, DP41-S, DPiS | LBC-034     | REC-034M  |
| 15,000                 | 6806 | LCCD-15K  | 0.018        | 6 lb    | DP25B-S, DP41-S, DPiS | LBC-100     | REC-100M  |
| 20,000                 | 9074 | LCCD-20K  | 0.028        | 14 lb   | DP25B-S, DP41-S, DPiS | —           | REC-114M  |
| <b>METRIC MODELS</b>   |      |           |              |         |                       |             |           |
|                        |      |           | (mm)         |         |                       |             |           |
| 22                     | 10   | LCMCD-10  | 0.27         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 55                     | 25   | LCMCD-25  | 0.24         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 110                    | 50   | LCMCD-50  | 0.24         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 220                    | 100  | LCMCD-100 | 0.25         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 551                    | 250  | LCMCD-250 | 0.24         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M12    | MREC-M12M |
| 1102                   | 500  | LCMCD-500 | 0.18         | 0.37 kg | DP25B-S, DP41-S, DPiS | MLBC-M12    | MREC-M12M |
| 2204                   | 1000 | LCMCD-1K  | 0.29         | 0.37 kg | DP25B-S, DP41-S, DPiS | MLBC-M12    | MREC-M12M |
| 4408                   | 2000 | LCMCD-2K  | 0.28         | 1.0 kg  | DP25B-S, DP41-S, DPiS | MLBC-M20    | MREC-M20M |
| 11,020                 | 5000 | LCMCD-5K  | 0.36         | 1.2 kg  | DP25B-S, DP41-S, DPiS | MLBC-M20    | MREC-M20M |

Comes complete with 5-point NIST-traceable calibration and 59 k shunt data.

DPiS meter suitable for one direction measurement only.

Ordering Example: LCCD-1K, 1000 lb capacity load cell.

LCMCD-100, 100 kgf capacity load cell.

## Economical Strain Indicators with Built-In Sensor Excitation

### DP25B-S

- ✓ NEMA 4 (IP65) Front Panel
- ✓ 4-Digit Display, -1999 to 9999 Counts
- ✓ Excitation Supply, Front Panel Tare, and Peak Hold Standard
- ✓ Accepts Voltage, Current, or Millivolt Inputs
- ✓ Easily Scaled to Display Readings in Engineering Units
- ✓ Program to Display in Red, Amber, or Green



DP25B-S, shown smaller than actual size.

# LOW DANCE S-BEAM LOAD CELLS

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## WITH 500% OVERLOAD PROTECTION

25 to 750 lb Capacities  
11 to 340 kg Capacities

### LCCE Series



- ✓ Protected to 500% Full Scale Overload
- ✓ High Accuracy
- ✓ 5-Point Calibration Included
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ Rugged Stainless Steel Construction on All Ranges

The LCCE S-Beam load cells are designed with mechanical overload protection to 500% of FS in both tension and compression. This unique design gives you an extra level of protection and functionality that is typically an extra cost option on most load cells. When overloaded, the load cell is protected by a unique locking design. When the overload

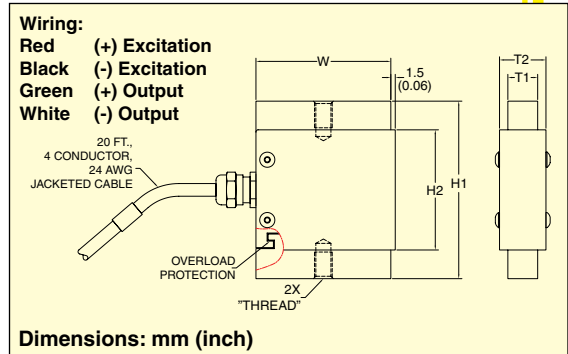
is removed, the load cell unlocks and returns to normal function. The stainless steel sensing element makes this load cell one of the most durable models available.

#### SPECIFICATIONS

- Excitation:** 10 Vdc, 15V maximum
- Output:** 3 mV/V  $\pm$  0.25% full scale
- Calibration:** 5 point NIST traceable in tension 0%, 50%, 100%, 50%, 0%
- Linearity:**  $\pm$  0.03% full scale
- Hysteresis:**  $\pm$  0.02% full scale
- Repeatability:**  $\pm$  0.01% full scale
- Zero Balance:**  $\pm$  1% full scale
- Creep in 20 minutes:**  $\pm$  0.03% full scale
- Operating Temperature:** -18 to 65°C (0 to 150°F)
- Compensated Temperature:** -18 to 65°C (0 to 150°F)
- Thermal Effects:**
  - Zero:**  $\pm$  0.0027% FS/°C
  - Span:**  $\pm$  0.0014% rdg/°C
- Safe Overload:** 500% capacity tension and compression
- Ultimate Overload:** 500% capacity
- Bridge Resistance:** 350  $\Omega$  nominal
- Protection Level:** IP67
- Material:** 17-4 PH SS element, aluminum side cover
- Electrical Connection:** 6 m (20') 4-conductor 24 AWG jacketed cable



LCCE-250 shown actual size.



| CAPACITY |     | THREADS     | Dimensions: mm (inch) |          |          |          |           | DEFL*        | WEIGHT*<br>kg (lb) |
|----------|-----|-------------|-----------------------|----------|----------|----------|-----------|--------------|--------------------|
| lb       | kg  |             | H1                    | H2       | W        | T1       | T2        |              |                    |
| 25       | 11  | ¼-28 UNF-2B | 64 (2.5)              | 43 (1.7) | 48 (1.9) | 10 (0.4) | 17 (0.65) | 0.28 (0.011) | 0.18 (0.4)         |
| 50       | 23  | ¼-28 UNF-2B | 64 (2.5)              | 43 (1.7) | 48 (1.9) | 10 (0.4) | 17 (0.65) | 0.25 (0.010) | 0.18 (0.4)         |
| 100      | 45  | ¼-28 UNF-2B | 64 (2.5)              | 43 (1.7) | 48 (1.9) | 10 (0.4) | 17 (0.65) | 0.23 (0.009) | 0.18 (0.4)         |
| 150      | 68  | ¼-28 UNF-2B | 64 (2.5)              | 43 (1.7) | 48 (1.9) | 10 (0.4) | 17 (0.65) | 0.23 (0.009) | 0.18 (0.4)         |
| 200      | 91  | ¼-28 UNF-2B | 64 (2.5)              | 43 (1.7) | 48 (1.9) | 10 (0.4) | 17 (0.65) | 0.25 (0.010) | 0.18 (0.4)         |
| 250      | 113 | ⅜-24 UNF-2B | 76 (3.0)              | 46 (1.8) | 48 (1.9) | 13 (0.5) | 18 (0.70) | 0.23 (0.009) | 0.27 (0.6)         |
| 500      | 227 | ½-20 UNF-2B | 76 (3.0)              | 46 (1.8) | 48 (1.9) | 18 (0.7) | 24 (0.95) | 0.25 (0.010) | 0.36 (0.8)         |
| 750      | 340 | ½-20 UNF-2B | 76 (3.0)              | 46 (1.8) | 48 (1.9) | 18 (0.7) | 24 (0.95) | 0.15 (0.006) | 0.41 (0.9)         |

\* For reference only

### To Order

| CAPACITY |     | MODEL NO. | COMPATIBLE METERS       | LOAD BUTTON MODEL NO. | ROD END MODEL NO. |
|----------|-----|-----------|-------------------------|-----------------------|-------------------|
| lb       | kg  |           |                         |                       |                   |
| 25       | 11  | LCCE-25   | DP41-S, DP25B-S, DPi8-S | LBC-014               | REC-014M          |
| 50       | 23  | LCCE-50   | DP41-S, DP25B-S, DPi8-S | LBC-014               | REC-014M          |
| 100      | 45  | LCCE-100  | DP41-S, DP25B-S, DPi8-S | LBC-014               | REC-014M          |
| 150      | 68  | LCCE-150  | DP41-S, DP25B-S, DPi8-S | LBC-014               | REC-014M          |
| 200      | 91  | LCCE-200  | DP41-S, DP25B-S, DPi8-S | LBC-014               | REC-014M          |
| 250      | 113 | LCCE-250  | DP41-S, DP25B-S, DPi8-S | LBC-038               | REC-038M          |
| 500      | 227 | LCCE-500  | DP41-S, DP25B-S, DPi8-S | LBC-012               | REC-012M          |
| 750      | 340 | LCCE-750  | DP41-S, DP25B-S, DPi8-S | LBC-012               | REC-012M          |

Comes complete with 5-point NIST traceable calibration certificate and 59K shunt data.

Ordering Example: LCCE-25 25 lb range high overload S-Beam load cell

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LOAD CELLS





# MINIDEAM LOAD CELLS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## EXCEPTIONAL ACCURACY

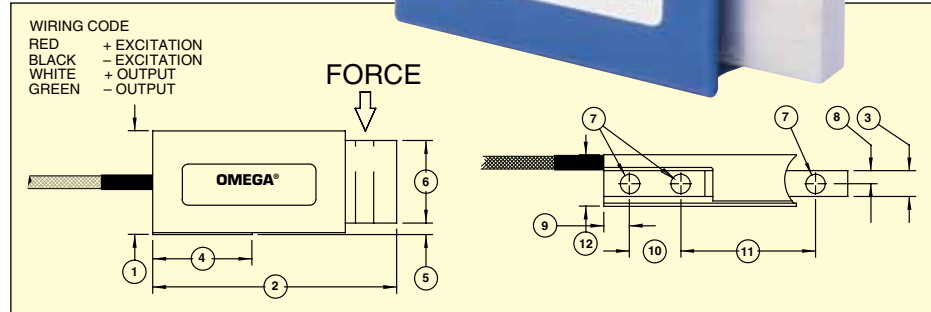
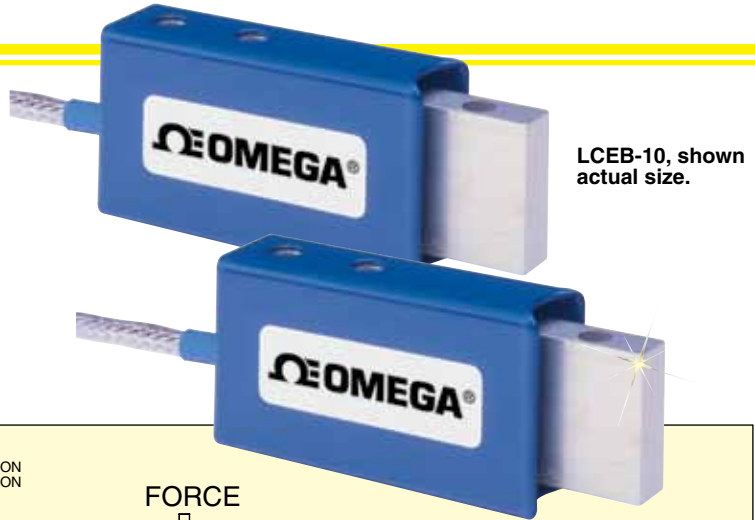
**Compression**  
**5 lb to 250 lb**  
**2.3 kgf to 114 kgf**

### LCEB Series



Standard

- ✓ Very High Precision
- ✓ Low Profile—1" Height
- ✓ High Repeatability
- ✓ 100% Creep Tested



LCEB load cells offer exceptional accuracy in compression when deployed in controlled environments (in general, anywhere a digital readout is used). Their high accuracy, small size, low creep, and excellent temperature compensation make them excellent choices for force testing, thrust measurements, check weighing, and scale applications.

Dimensions in inches and mm

| See Drawing Above | CAPACITY (lb) |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                   | 5, 10         |      | 25   |      | 50   |      | 75   |      | 100  |      | 150  |      | 250  |      |
|                   | inch          | mm   | inch | mm   | inch | mm   | inch | mm   | inch | mm   | inch | mm   | inch | mm   |
| 1                 | 1.01          | 25.7 | 1.01 | 25.7 | 1.01 | 25.7 | 1.01 | 25.7 | 1.01 | 25.7 | 1.01 | 25.7 | 1.02 | 25.9 |
| 2                 | 2.38          | 60.5 | 2.38 | 60.5 | 2.38 | 60.5 | 2.38 | 60.5 | 2.38 | 60.5 | 2.38 | 60.5 | 2.38 | 60.5 |
| 3                 | 0.25          | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.5  | 12.8 |
| 4                 | 0.97          | 24.6 | 0.97 | 24.6 | 0.97 | 24.6 | 0.97 | 24.6 | 0.97 | 24.6 | 0.97 | 24.6 | 0.97 | 24.6 |
| 5                 | 0.14          | 3.6  | 0.11 | 2.8  | 0.15 | 3.8  | 0.14 | 3.6  | 0.13 | 3.3  | 0.1  | 2.5  | 0.12 | 3    |
| 6                 | 0.75          | 19.1 | 0.81 | 20.6 | 0.72 | 18.3 | 0.75 | 19.1 | 0.78 | 19.8 | 0.82 | 20.8 | 0.79 | 20.1 |
| 7                 | 0.17          | 4.3  | 0.17 | 4.3  | 0.17 | 4.3  | 0.17 | 4.3  | 0.17 | 4.3  | 0.17 | 4.3  | 0.17 | 4.3  |
| 8                 | 0.13          | 6.4  | 0.13 | 6.4  | 0.13 | 6.4  | 0.13 | 6.4  | 0.13 | 6.4  | 0.13 | 6.4  | 0.25 | 6.4  |
| 9                 | 0.25          | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  | 0.25 | 6.4  |
| 10                | 0.50          | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 |
| 11                | 1.31          | 33.3 | 1.31 | 33.3 | 1.31 | 33.3 | 1.31 | 33.3 | 1.31 | 33.3 | 1.31 | 33.3 | 1.31 | 33.3 |
| 12                | 0.50          | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.75 | 19.1 |

### SPECIFICATIONS

- Excitation:** 10 Vdc (15V maximum)
- Output:** 3 mV/V nominal
- Calibration:** NIST-traceable
- Linearity:** ±0.03% full scale
- Hysteresis:** ±0.02% full scale
- Repeatability:** ±0.01% full scale
- Creep (after 20 min):** ±0.15%
- Zero Balance:** ±1% full scale
- Operating Temp Range:** -55 to 90°C (-65 to 200°F)
- Compensated Temp Range:** -15 to 65°C (0 to 150°F)
- Thermal Effects:**
  - Zero:** ±0.0015% rdg/°F maximum
  - Span:** ±0.0008% full scale/°F maximum
- Safe Overload:** ±150% of capacity
- Ultimate Overload:** ±400% of capacity
- Input Resistance:** 350 Ω +50/-3.5 Ω
- Output Resistance:** 350 Ω ±3.5 Ω
- Construction:** Aluminum
- Electrical:** 1.5 m (5") insulated 4-conductor shielded color-coded cable

### To Order

| CAPACITY |         | MODEL NO. | COMPATIBLE METERS*    |
|----------|---------|-----------|-----------------------|
| 5 lb     | 2.3 kgf | LCEB-5    | DPiS, DP41-S, DP25B-S |
| 10 lb    | 4.5 kgf | LCEB-10   | DPiS, DP41-S, DP25B-S |
| 25 lb    | 11 kgf  | LCEB-25   | DPiS, DP41-S, DP25B-S |
| 50 lb    | 23 kgf  | LCEB-50   | DPiS, DP41-S, DP25B-S |
| 75 lb    | 34 kgf  | LCEB-75   | DPiS, DP41-S, DP25B-S |
| 100 lb   | 45 kgf  | LCEB-100  | DPiS, DP41-S, DP25B-S |
| 150 lb   | 68 kgf  | LCEB-150  | DPiS, DP41-S, DP25B-S |
| 250 lb   | 114 kgf | LCEB-250  | DPiS, DP41-S, DP25B-S |

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.  
**Ordering Examples:** LCEB-10, 10 lb capacity load cell.  
 LCEB-100, 100 lb capacity load cell.

# SEALED BEAM LOAD CELLS FOR LOW-CLEARANCE INSTALLATIONS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)



**Tension/Compression  
Calibrated in Compression  
50 lb to 1000 lb  
23 kg to 455 kgf**



## LCEC Series



- ✓ Very High Precision
- ✓ Low Profile
- ✓ Waterproof, Corrosion Resistant
- ✓ Barometrically Insensitive

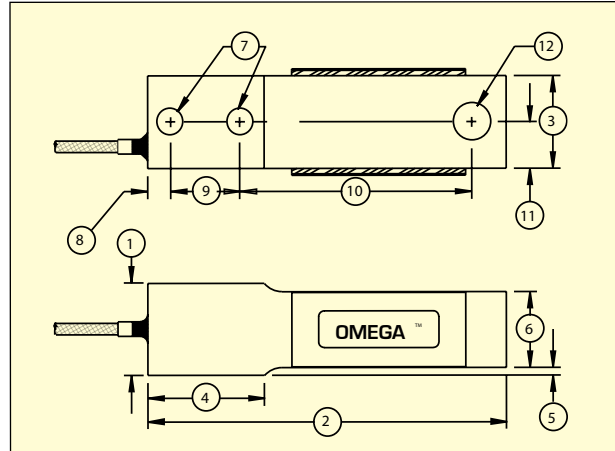
LCEC Series load cells are designed to operate in all weather or wet industrial environments. Their low profile and high side load capability simplify mechanical installation considerations. Their weather sealing, high precision, and repeatability make them ideal for rugged industrial use in testing, batching, weigh pits, and applications that are exposed to the elements.

### SPECIFICATIONS

- Excitation:** 10 Vdc (15V maximum)
- Output:** 3 mV/V nominal
- Calibration:** NIST-traceable
- Linearity:**  $\pm 0.03\%$  full scale
- Hysteresis:**  $\pm 0.02\%$  full scale
- Repeatability:**  $\pm 0.01\%$  full scale
- Creep (after 20 min):**  $\pm 0.03\%$
- Zero Balance:**  $\pm 1\%$  full scale
- Operating Temp Range:** -55 to 90°C (-65 to 200°F)
- Compensated Temp Range:** -15 to 65°C (0 to 150°F)
- Thermal Effects:**
  - Zero:  $\pm 0.0015\%$  rdg/°F maximum
  - Span:  $\pm 0.0008\%$  full scale/°F maximum
- Safe Overload:**  $\pm 150\%$  of capacity
- Ultimate Overload:**  $\pm 300\%$  of capacity
- Input Resistance:** 350  $\Omega$   $\pm 50/-3.5 \Omega$
- Allowable Side Load at Rated Load:** 50% rated capacity
- Protection Class:** IP67

LCEC-1K shown actual size.

**Output Resistance:** 350  $\pm 3.5 \Omega$   
**Construction:** Aluminum  
**Electrical:** 3 m (10') insulated 4-conductor shielded color-coded cable



Dimensions: inches and mm

| See Drawing Above | CAPACITY (lb) |      |      |      |      |      |      |      |      |       |
|-------------------|---------------|------|------|------|------|------|------|------|------|-------|
|                   | 50            |      | 100  |      | 250  |      | 500  |      | 1000 |       |
|                   | inch          | mm   | inch | mm   | inch | mm   | inch | mm   | inch | mm    |
| 1                 | 0.98          | 24.9 | 0.98 | 24.9 | 0.98 | 24.9 | 1.0  | 25.4 | 1.50 | 38.1  |
| 2                 | 2.38          | 60.5 | 2.38 | 60.5 | 2.38 | 60.5 | 3.88 | 98.6 | 5.00 | 127.0 |
| 3                 | 0.50          | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 1.00 | 25.4  |
| 4                 | 0.97          | 24.6 | 0.97 | 24.6 | 0.97 | 24.6 | 1.25 | 31.8 | 1.75 | 44.5  |
| 5                 | 0.11          | 2.80 | 0.11 | 2.80 | 0.11 | 2.80 | 0.09 | 2.30 | 0.10 | 2.50  |
| 6                 | 0.82          | 20.8 | 0.82 | 20.8 | 0.82 | 20.8 | 0.82 | 20.8 | 1.36 | 34.5  |
| 7                 | 0.17          | 4.30 | 0.17 | 4.30 | 0.17 | 4.30 | 0.28 | 7.10 | 0.41 | 10.3  |
| 8                 | 0.25          | 6.40 | 0.25 | 6.40 | 0.25 | 6.40 | 0.25 | 6.40 | 0.38 | 9.70  |
| 9                 | 0.50          | 12.7 | 0.50 | 12.7 | 0.50 | 12.7 | 0.75 | 19.1 | 1.00 | 25.4  |
| 10                | 1.31          | 33.3 | 1.31 | 33.3 | 1.31 | 33.3 | 2.50 | 63.5 | 3.25 | 82.6  |
| 11                | 0.25          | 6.40 | 0.25 | 6.40 | 0.25 | 6.40 | 0.25 | 6.40 | 0.50 | 12.7  |
| 12                | 0.17          | 4.30 | 0.17 | 4.30 | 0.17 | 4.30 | 0.40 | 10.2 | 0.40 | 10.2  |

### To Order

| CAPACITY | MODEL NO. | COMPATIBLE METERS*    |
|----------|-----------|-----------------------|
| 50 lb    | LCEC-50   | DPiS, DP41-S, DP25B-S |
| 100 lb   | LCEC-100  | DPiS, DP41-S, DP25B-S |
| 250 lb   | LCEC-250  | DPiS, DP41-S, DP25B-S |
| 500 lb   | LCEC-500  | DPiS, DP41-S, DP25B-S |
| 1000 lb  | LCEC-1K   | DPiS, DP41-S, DP25B-S |

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCEC-250, 250 lb capacity load cell.  
 LCEC-1K, 1000 lb capacity load cell.

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# HIGH ACCURACY LOAD CELLS

## STANDARD AND METRIC MODELS

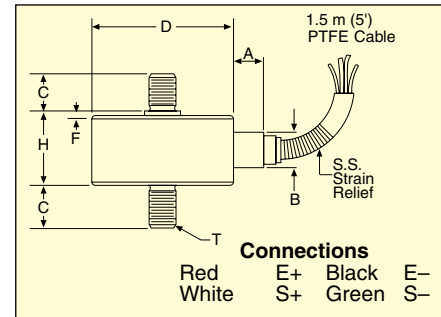
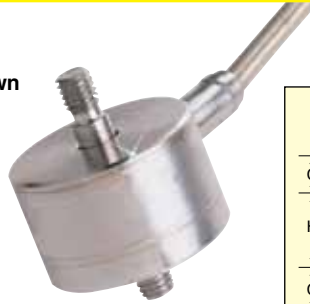
**Tension/Compression**  
**2.2 lb to 1000 lb**  
**10 to 5000 N**

### LCFD/LCMFD Series



Standard

LCFD-100, shown actual size.



Small and capable of highly accurate readings, the LCFD/LCMFD subminiature load cells are designed for precision industrial applications. They are all stainless steel, measure both tension and compression loads, and have male thread studs for load attachment. The exclusive internal design provides superior long-term stability and minimizes the effects of small off-axis loads.

### SPECIFICATIONS

**Excitation:**

- ≤10 lb/50 N: 5 Vdc
- ≥25 lb/100 N: 10 Vdc

**Output:**

- 2.2 lb/10 N: 1.5 mV/V (nom)
- ≥5 lb/20 N: 2 mV/V (nom)

**Accuracy (Linearity and Hysteresis Combined):**

- ≤100 lb/500 N: ±0.15% FSO
- ≥250 lb/1000 N: ±0.20% FSO

**Repeatability:**

- ≤2.2 lb: ± 0.15% FSO
- ≥5 lb/10 N: 0.20% FSO

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

- Span: ±0.009% FSO/°C
- Zero: ±0.009% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Construction:** Stainless steel

**Electrical Connection:** 1.5 m (5')

4-conductor, shielded cable

- ≤10 lb/50 N: SS overbraided PTFE with temperature compensation board

**Protection Class:** IP65

**Dimensions: mm (inch)**

| CAPACITY       | T, THREAD    | F      | D DIA. | H      | A      | B DIA. | C      | WEIGHT g (oz) |
|----------------|--------------|--------|--------|--------|--------|--------|--------|---------------|
| 1 kg to 10 lb  | #6 - 32 UNC  | 1.3    | 19     | 12.7   | 7.9    | 4.8    | 6.35   | 42            |
| 10 to 50 N     | M5 x 0.8     | (0.05) | (0.75) | (0.50) | (0.31) | (0.19) | (0.25) | (1.48)        |
| 25 to 100 lb   | #10 - 32 UNF | 3      | 25.4   | 16.3   | 12.7   | 6.35   | 6.35   | 56            |
| 100 to 500 N   | M6 x 1.0     | (0.12) | (1.00) | (0.64) | (0.50) | (0.25) | (0.25) | (1.98)        |
| 250 to 1000 lb | ¼-28 UNF     | 0.76   | 25.4   | 14.0   | 12.7   | 6.35   | 9.7    | 68            |
| 1 to 5 KN      | M6 x 1.00    | (0.03) | (1.00) | (0.55) | (0.50) | (0.25) | (0.38) | (2.40)        |

### To Order

| CAPACITY               |      | MODEL NO.  | COMPATIBLE METERS     | ACCESSORY ROD ENDS |
|------------------------|------|------------|-----------------------|--------------------|
| lb                     | N    |            |                       |                    |
| <b>STANDARD MODELS</b> |      |            |                       |                    |
| 2.2                    | 9.8  | LCFD-1KG   | DP41-S, DP25B-S       | REC-006F           |
| 5                      | 22.2 | LCFD-5     | DP41-S, DP25B-S       | REC-006F           |
| 10                     | 44.5 | LCFD-10    | DP41-S, DP25B-S       | REC-006F           |
| 25                     | 111  | LCFD-25    | DPiS, DP41-S, DP25B-S | REC-010F           |
| 50                     | 222  | LCFD-50    | DPiS, DP41-S, DP25B-S | REC-010F           |
| 100                    | 445  | LCFD-100   | DPiS, DP41-S, DP25B-S | REC-010F           |
| 250                    | 1112 | LCFD-250   | DPiS, DP41-S, DP25B-S | REC-014F           |
| 500                    | 2224 | LCFD-500   | DPiS, DP41-S, DP25B-S | REC-014F           |
| 1000                   | 4448 | LCFD-1K    | DPiS, DP41-S, DP25B-S | REC-014F           |
| CAPACITY               |      | MODEL NO.  | COMPATIBLE METERS     | ACCESSORY ROD ENDS |
| N                      | lb   |            |                       |                    |
| <b>METRIC MODELS</b>   |      |            |                       |                    |
| 10                     | 2.2  | LCMFD-10N  | DP41-S, DP25B-S       | MREC-M5F           |
| 20                     | 4.5  | LCMFD-20N  | DP41-S, DP25B-S       | MREC-M5F           |
| 50                     | 11   | LCMFD-50N  | DP41-S, DP25B-S       | MREC-M5F           |
| 100                    | 22   | LCMFD-100N | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 200                    | 45   | LCMFD-200N | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 500                    | 112  | LCMFD-500N | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 1000                   | 225  | LCMFD-1KN  | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 2000                   | 450  | LCMFD-2KN  | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 5000                   | 1124 | LCMFD-5KN  | DPiS, DP41-S, DP25B-S | MREC-M6F           |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCFD-1KG, 1000 gram load cell, matching rod end, REC-006F, LCFD-500, 500 lb capacity load cell, matching rod end, REC-014F.

LCMFD-20N, 20 N capacity load cell, matching rod end, MREC-M5F.

# 19 mm (0.75") and 25.4 mm (1") DIAMETER ROMETEC srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it EQUIMINIAL MINIAURE TENSION UK COMPRESSION LOAD CELLS STANDARD AND METRIC RANGES

**Tension/Compression  
Calibrated in Tension  
0-2.2 lb to 0-100 lb  
10 N to 0-500 N**



## LCFL/LCMFL Series



Small and capable of highly accurate readings, the LCFL/LCMFL subminiature load cells are suitable for precision industrial applications. They are all stainless steel, measure either tension or compression loads, and have male thread studs for load attachment. The exclusive internal design provides superior long-term stability and minimizes the effects of small off-axis loads.

### SPECIFICATIONS

#### Excitation:

≤10 lb/50 N: 5 Vdc  
≥25 lb/100 N: 10 Vdc

#### Output:

2.2 lb/10 N: 1 mV/V (nom.)  
≥5 lb/20 N: 2 mV/V (nom.)

**Accuracy (Linearity and Hysteresis Combined):** ±0.50% FSO

**Repeatability:** ±0.20% FSO

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-53 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Span:** ±0.009% rdg/°C

**Zero:** 0.009% FSO/°C

**Deflection FS:** 0.03 to 0.08 mm (0.001 to 0.003")

**Safe Overload:** 150% of capacity

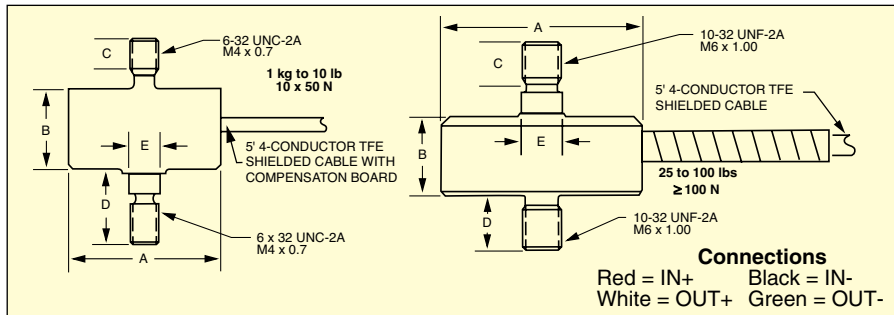
**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Construction:** Stainless steel

**Electrical Connection:** 1.5 m (5') 4-conductor, shielded PTFE cable

**Protection Rating:** IP54



#### Dimensions: mm (inch)

| CAPACITY                   | A           | B           | C          | D          | E          |
|----------------------------|-------------|-------------|------------|------------|------------|
| 10 to 50 N, 2.2 to 10 lb   | 19.1 (0.75) | 10.1 (0.40) | 6.4 (0.25) | 9.7 (0.38) | 3.8 (0.15) |
| 100 to 500 N, 25 to 100 lb | 25.4 (1.00) | 9.9 (0.39)  | 9.7 (0.38) | 7.0 (0.26) | 5.0 (0.20) |

### To Order

| CAPACITY               |      | MODEL NO.         | COMPATIBLE METERS     |
|------------------------|------|-------------------|-----------------------|
| lb                     | N    |                   |                       |
| <b>STANDARD MODELS</b> |      |                   |                       |
| 2.2                    | 9.8  | <b>LCFL-1KG</b>   | DPiS, DP41-S, DP25B-S |
| 5                      | 22.2 | <b>LCFL-5</b>     | DPiS, DP41-S, DP25B-S |
| 10                     | 44.5 | <b>LCFL-10</b>    | DPiS, DP41-S, DP25B-S |
| 25                     | 111  | <b>LCFL-25</b>    | DPiS, DP41-S, DP25B-S |
| 50                     | 222  | <b>LCFL-50</b>    | DPiS, DP41-S, DP25B-S |
| 75                     | 334  | <b>LCFL-75</b>    | DPiS, DP41-S, DP25B-S |
| 100                    | 445  | <b>LCFL-100</b>   | DPiS, DP41-S, DP25B-S |
| <b>METRIC MODELS</b>   |      |                   |                       |
| N                      | lb   |                   |                       |
| 10                     | 2.2  | <b>LCMFL-10N</b>  | DP25B-S, DP41-S, DPiS |
| 20                     | 4.5  | <b>LCMFL-20N</b>  | DP25B-S, DP41-S, DPiS |
| 50                     | 11   | <b>LCMFL-50N</b>  | DP25B-S, DP41-S, DPiS |
| 100                    | 22   | <b>LCMFL-100N</b> | DP25B-S, DP41-S, DPiS |
| 200                    | 45   | <b>LCMFL-200N</b> | DP25B-S, DP41-S, DPiS |
| 500                    | 112  | <b>LCMFL-500N</b> | DP25B-S, DP41-S, DPiS |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCFL-1KG, 2.2 lb load cell, matching rod end, REC-006F, LCMFL-100N, 100 N load cell, MREC-M6F, matching rod end.

#### ACCESSORIES

| MODEL NO.       | DESCRIPTION                               |
|-----------------|---|
| <b>REC-006F</b> | 6-32 UNC female rod end for LCFL ≤10 lb   |
| <b>REC-010F</b> | 10-32 UNF female rod end for LCFL ≥25 lb  |
| <b>MREC-M6F</b> | M6 x 1.00 female rod end for LCMFL ≥100 N |

# COMPRESSION LOAD CELL WITH THROUGH-BODY MOUNTING HOLES

**Compression**  
 0-50 lb to 0-50,000 lb  
 0-23 kg to 0-22,000 kg

## LCGB Series



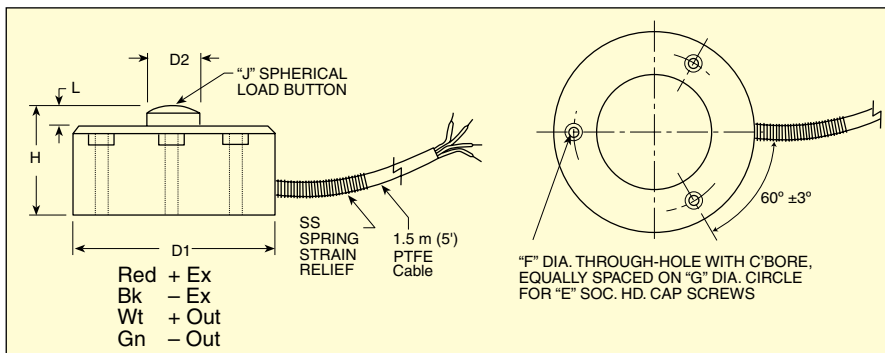
Standard

- Stainless Steel
- High Accuracy
- Low Profile
- Miniature Size

The LCGB Series comprises miniature low-profile compression load cells with excellent long-term stability. An all stainless steel construction ensures reliability in harsh industrial environments. These cells are designed to be mounted on a flat surface using cap screws to secure them to the base. A load button is integral to their basic construction for even force distribution.



LCGB-5K shown actual size.



### Dimensions: mm (inch)

| CAPACITY            | D1           | D2            | H            | L             | E  | F             | G              | J             |
|---------------------|--------------|---------------|--------------|---------------|----|---------------|----------------|---------------|
| 50 to 2000 lb       | 32<br>(1.25) | 8.1<br>(0.32) | 10<br>(0.39) | 1.8<br>(0.07) | #2 | 4.0<br>(0.16) | 25.4<br>(1.00) | 51<br>(2)     |
| 3000 to 10,000 lb   | 38<br>(1.50) | 11<br>(0.43)  | 16<br>(0.63) | 2.0<br>(0.08) | #4 | 3.2<br>(0.13) | 31.8<br>(1.25) | 51<br>(2)     |
| 15,000 to 30,000 lb | 51<br>(2.00) | 15<br>(0.60)  | 25<br>(1.00) | 3.0<br>(0.12) | #6 | 6.4<br>(0.25) | 41.3<br>(1.63) | 63.5<br>(2.5) |
| 50,000 lb           | 76<br>(3.00) | 20<br>(0.78)  | 38<br>(1.50) | 4.6<br>(0.18) | #6 | 6.4<br>(0.25) | 60.3<br>(2.38) | 153<br>(6)    |

## SPECIFICATIONS

- Excitation: 10 Vdc
- Output: 2 mV/V nominal
- 5-Point Calibration: 0%, 50% 100%, 50%, 0%; 59K shunt data included
- Linearity: ±0.25% FSO
- Hysteresis: ±0.20% FSO
- Repeatability: ±0.10% FSO
- Zero Balance: ±2% FSO
- Operating Temp Range: -54 to 121°C (-65 to 250°F)
- Compensated Temp Range: 16 to 71°C (60 to 160°F)
- Thermal Effects:
  - Span: ±0.018% rdg/°C
  - Zero: ±0.009% FSO/°C
- Safe Overload: 150% of capacity
- Ultimate Overload: 300% of capacity
- Bridge Resistance: 350 Ω minimum
- Deflection: 0.08 mm (0.003")
- Construction: Stainless steel
- Electrical Connection: 1.5 m (5') 4-conductor cable with strain relief
- Protection Rating: IP54

## To Order Visit [omega.com/lcgb](http://omega.com/lcgb) for Pricing and Details

| CAPACITY |        | MODEL NO. | COMPATIBLE METERS     |
|----------|--------|-----------|-----------------------|
| lb       | kg     |           |                       |
| 50       | 23     | LCGB-50   | DPiS, DP41-S, DP25B-S |
| 100      | 45     | LCGB-100  | DPiS, DP41-S, DP25B-S |
| 250      | 114    | LCGB-250  | DPiS, DP41-S, DP25B-S |
| 500      | 227    | LCGB-500  | DPiS, DP41-S, DP25B-S |
| 750      | 340    | LCGB-750  | DPiS, DP41-S, DP25B-S |
| 1000     | 455    | LCGB-1K   | DPiS, DP41-S, DP25B-S |
| 2000     | 909    | LCGB-2K   | DPiS, DP41-S, DP25B-S |
| 3000     | 1361   | LCGB-3K   | DPiS, DP41-S, DP25B-S |
| 5000     | 2269   | LCGB-5K   | DPiS, DP41-S, DP25B-S |
| 10,000   | 4537   | LCGB-10K  | DPiS, DP41-S, DP25B-S |
| 15,000   | 6806   | LCGB-15K  | DPiS, DP41-S, DP25B-S |
| 20,000   | 9074   | LCGB-20K  | DPiS, DP41-S, DP25B-S |
| 30,000   | 13,612 | LCGB-30K  | DPiS, DP41-S, DP25B-S |
| 50,000   | 22,686 | LCGB-50K  | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

Ordering Examples: LCGB-5K, 5000 lb capacity load cell.

LCGB-50, 50 lb capacity load cell.

# COMPRESSION LOAD CELL

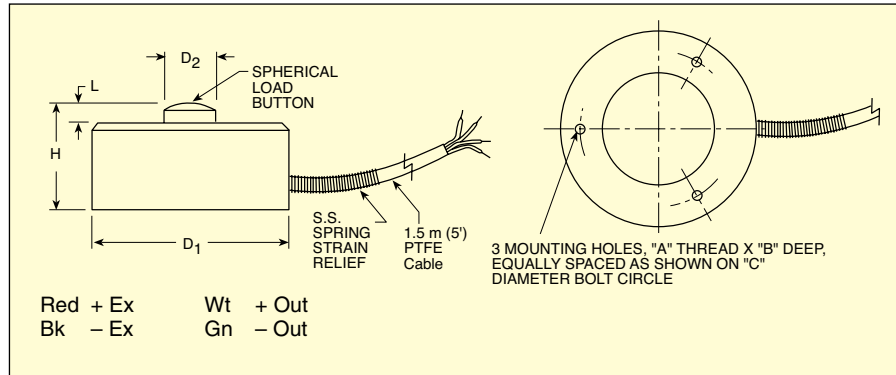
## STANDARD AND METRIC MODELS

**Compression**  
**0-25 lb to 0-50,000 lb**  
**0-100 N to 0-200,000 N**

### LCGD/LCMGD Series



- 5-Point NIST Traceable Calibration
- Stainless Steel
- High Accuracy
- Low Profile
- Miniature Size



The LCGD/LCMGD Series miniature low-profile load cells are compression load cells with excellent long-term stability. An all stainless steel construction ensures reliability in severe industrial environments. These cells are designed to be mounted on a flat surface, and a load button is integral to their basic design.

### SPECIFICATIONS

- Excitation:** 10 Vdc
- Output:** 2 mV/V nominal
- 5-Point Calibration:** 0%, 50% 100%, 50%, 0%
- Linearity:** ±0.25% FSO
- Hysteresis:** ±0.20% FSO
- Repeatability:** ±0.10% FSO
- Zero Balance:** ±2% FSO
- Operating Temp Range:** -54 to 121°C (-65 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Span:** ±0.018% rdg/°C
  - Zero:** ±0.009% FSO/°C

- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Bridge Resistance:** 350 Ω minimum
- Deflection:** 0.076 mm (0.003")

- Construction:** Stainless steel
- Electrical Connection:** 1.5 m (5') shielded cable
- Protection Class:** IP65

### STANDARD Dimensions: mm (inch)

| CAPACITY            | D1           | D2            | H            | L             | A         | B             | C              |
|---------------------|--------------|---------------|--------------|---------------|-----------|---------------|----------------|
| 25 to 100 lb        | 25<br>(1.00) | 5.3<br>(0.21) | 16<br>(0.62) | 1.3<br>(0.05) | #4-40 UNC | 4.8<br>(0.19) | 19<br>(0.75)   |
| 250 to 2000 lb      | 32<br>(1.25) | 8.1<br>(0.32) | 10<br>(0.39) | 1.8<br>(0.07) | #6-32 UNC | 6.4<br>(0.25) | 25.4<br>(1.00) |
| 5000 to 10,000 lb   | 38<br>(1.50) | 11<br>(0.43)  | 16<br>(0.63) | 2.0<br>(0.08) | #6-32 UNC | 6.4<br>(0.25) | 31.8<br>(1.25) |
| 15,000 to 30,000 lb | 51<br>(2.00) | 15<br>(0.60)  | 25<br>(1.00) | 3.0<br>(0.12) | #6-32 UNC | 6.4<br>(0.25) | 41.3<br>(1.63) |
| 50,000 lb           | 76<br>(3.00) | 20<br>(0.78)  | 38<br>(1.50) | 4.6<br>(0.18) | #6-32 UNC | 6.4<br>(0.25) | 60.3<br>(2.38) |

### METRIC Dimensions: mm (inch)

| CAPACITY (N)      | D1           | D2            | H            | L             | A        | B              | C              |
|-------------------|--------------|---------------|--------------|---------------|----------|----------------|----------------|
| 100 to 500        | 25<br>(1.00) | 5.3<br>(0.21) | 16<br>(0.62) | 1.3<br>(0.05) | M4 x 0.7 | 4.8<br>(0.19)  | 19.1<br>(0.75) |
| 1000 to 10,000    | 32<br>(1.25) | 8.1<br>(0.32) | 10<br>(0.39) | 1.8<br>(0.07) | M4 x 0.7 | 6.4<br>(0.25)  | 25.4<br>(1.00) |
| 20,000 to 50,000  | 38<br>(1.50) | 11<br>(0.43)  | 16<br>(0.63) | 2.0<br>(0.08) | M4 x 0.7 | 6.4<br>(0.25)  | 31.8<br>(1.25) |
| 60,000 to 120,000 | 51<br>(2.00) | 15<br>(0.60)  | 25<br>(1.00) | 3.0<br>(0.12) | M4 x 0.7 | 6.4<br>(0.25)  | 41.3<br>(1.63) |
| 200,000           | 76<br>(3.00) | 20<br>(0.78)  | 38<br>(1.50) | 4.6<br>(0.18) | M4 x 0.7 | 6.35<br>(0.25) | 60.3<br>(2.38) |

**STANDARD MODELS**



| CAPACITY |         | MODEL NO. | COMPATIBLE METERS*        |
|----------|---------|-----------|---------------------------|
| lb       | N       |           |                           |
| 25       | 111     | LCGD-25   | DPiS, DP41-S, DP25B-S     |
| 50       | 222     | LCGD-50   | DPiS, DP41-S, DP25B-S     |
| 100      | 445     | LCGD-100  | DPiS, DP41-S, DP25B-S     |
| 250      | 1112    | LCGD-250  | DPiS, DP41-S, DP25B-S     |
| 500      | 2224    | LCGD-500  | DPiS, DP41-S, DP25B-S     |
| 1000     | 4448    | LCGD-1K   | DPiS, DP41-S, DP25B-S     |
| 2000     | 8897    | LCGD-2K   | DPiS, DP41-S, DP25B-S     |
| 5000     | 22,242  | LCGD-5K   | DPiS, DP41-S, DP25B-S     |
| 10,000   | 44,484  | LCGD-10K  | DPiS, DP41-S, DP25B-S     |
| 15,000   | 66,726  | LCGD-15K  | DPiS**, DP41-S, DP25B-S** |
| 20,000   | 88,968  | LCGD-20K  | DPiS**, DP41-S, DP25B-S** |
| 30,000   | 133,452 | LCGD-30K  | DPiS**, DP41-S, DP25B-S** |
| 50,000   | 222,420 | LCGD-50K  | DPiS**, DP41-S, DP25B-S** |

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   | COMPATIBLE METERS*        |
|----------|--------|-------------|---------------------------|
| N        | lb     |             |                           |
| 100      | 22.5   | LCMGD-100N  | DPiS, DP41-S, DP25B-S     |
| 200      | 45     | LCMGD-200N  | DPiS, DP41-S, DP25B-S     |
| 500      | 112    | LCMGD-500N  | DPiS, DP41-S, DP25B-S     |
| 1000     | 225    | LCMGD-1KN   | DPiS, DP41-S, DP25B-S     |
| 2000     | 450    | LCMGD-2KN   | DPiS, DP41-S, DP25B-S     |
| 5000     | 1124   | LCMGD-5KN   | DPiS, DP41-S, DP25B-S     |
| 10,000   | 2248   | LCMGD-10KN  | DPiS**, DP41-S, DP25B-S** |
| 20,000   | 4496   | LCMGD-20KN  | DPiS**, DP41-S, DP25B-S** |
| 50,000   | 11,240 | LCMGD-50KN  | DPiS**, DP41-S, DP25B-S** |
| 60,000   | 13,488 | LCMGD-60KN  | DPiS**, DP41-S, DP25B-S** |
| 80,000   | 17,984 | LCMGD-80KN  | DPiS**, DP41-S, DP25B-S** |
| 120,000  | 26,976 | LCMGD-120KN | DPiS**, DP41-S, DP25B-S** |
| 200,000  | 44,960 | LCMGD-200KN | DPiS**, DP41-S, DP25B-S** |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Compatible meters available online.

\*\* 4-digit meter.

Ordering Examples: LCGD-5K, 5000 lb capacity load cell.

LCGD-25, 25 lb capacity load cell.

LCMGD-10KN, 10,000 Newton capacity load cell.

LCMGD-500N, 500 Newton capacity load cell.

**COMPATIBLE METERS**

**DP25B/DP41-B**



- ✓ mV, V, mA, Strain Gage Thermocouple, RTD Inputs
- ✓ Full Process Unit Scaling
- ✓ Built-In Transducer Power



DP41-B, shown smaller than actual size, see [omega.com/dp41b](http://omega.com/dp41b)

**MONOGRAM SERIES**

**PATENTED**



DP25B-E, shown smaller than actual size, see [omega.com/dp25b](http://omega.com/dp25b)

**To Order**

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| DP25B-E   | 4-digit voltage/current input meter with excitation   |
| DP25B-S   | 4-digit mV input meter with excitation                |
| DP41-B    | 6-digit 1/8 DIN universal input meter with excitation |

Comes complete with operator's manual.

Ordering Examples: DP25B-E, voltage/current input meter for use with 0 to 5 V, 0 to 10 V, 4 to 20 mA output transducers.

DP25B-S, mV input meter for use with mV/V output transducers, DP41-B, universal input meter for use with all standard transducer outputs.

# INTRINSICALLY SAFE LOW PROFILE LOAD CELLS FOR HAZARDOUS LOCATIONS STANDARD AND METRIC MODELS

**Tension or Compression**  
**7.5 to 500,000 lb Capacities**  
**5000 kg to 10,000 kg Metric Models**

## LCHD/LCMHD-IS Series



- ✓ FM Intrinsically Safe Rating Standard
- ✓ 4 to 20 mA Output
- ✓ 5-Point NIST Traceable Calibration Included
- ✓ 0.25% Interchangeability
- ✓ All Stainless Steel Construction for Harsh Industrial Environments
- ✓ Heavy-Duty Industrial Design
- ✓ Low Profile for Easy Installations



LCHD-7.5K1C2IS,  
twist-lock  
termination shown.

**Please Note:**  
**Not for export,**  
**USA and Canada only**

The LCHD Series intrinsically safe load cells are FM rated Intrinsically safe for use in Hazardous locations. They are available with 5 different electrical terminations: Three connector options and 2 cable options, one of which is a submersible waterproof cable. Standard models have an amplified 4 to 20 mA output for uni-directional applications and a 4-12-20 mA output for bi-directional applications.

### SPECIFICATIONS

**Excitation Voltage:** 10 to 28 Vdc  
**Nonlinearity (%F.S.O.):** 0.10  
**Hysteresis (%F.S.O.):** 0.10  
**Repeatability (%F.S.O.):** 0.05  
**Zero Balance:** 4 mA +10%, -2% adjustable  
**Operating Temperature:** -40 to 75°C (-40 to 167°F)  
**Compensated Temperature:** 16 to 71°C (60 to 160°F)

### Temperature Effects:

**Zero (%FSO/°F):**  
±0.005 (±0.009%FSO/°C)  
**Span (%Reading/°F):**  
±0.005 (±0.009%Reading/°C)  
**Safe Overload (% of Capacity):** 150  
**Ultimate Overload (% of Capacity):** 300  
**Material:** Stainless Steel 17-4

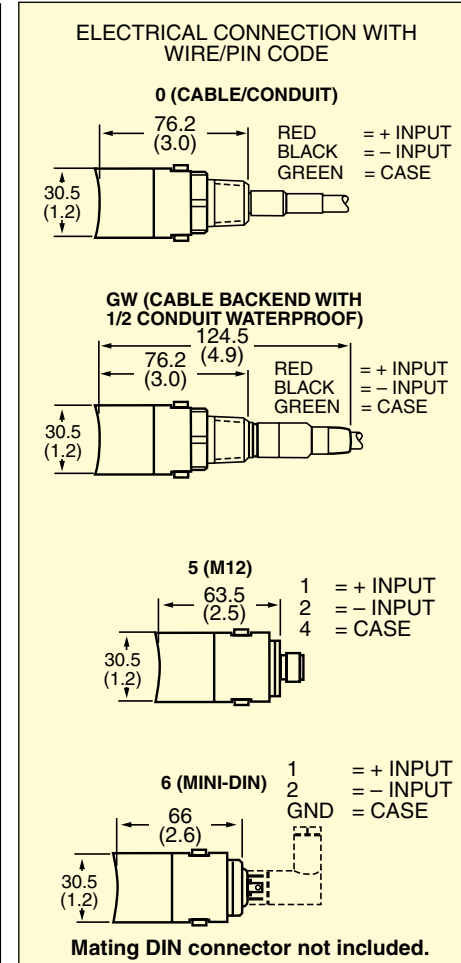
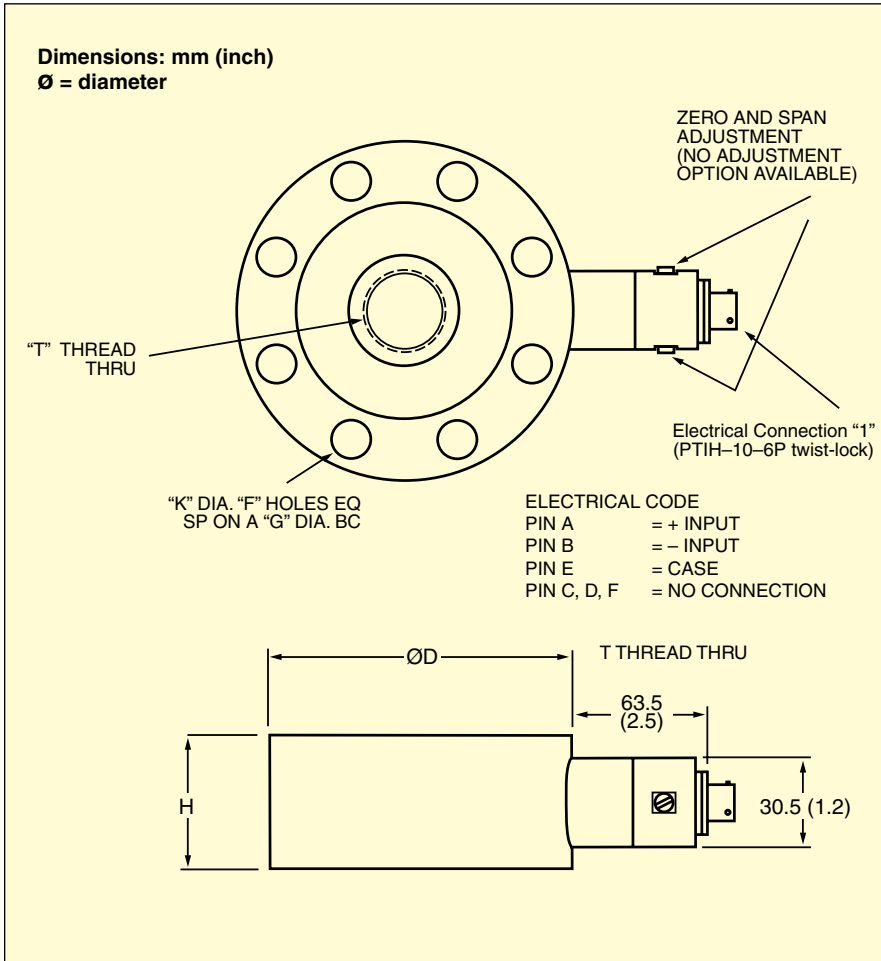
### AGENCY APPROVALS

| TYPE                               | AGENCY | APPROVAL LISTINGS   |
|------------------------------------|--------|---|
| Intrinsically Safe (US and Canada) | FM     | Hazardous (Classified) Location, Rated Intrinsically Safe, Securite Intrinsique Class I, II, III, Division 1 Gr A, B, C, D, E, F, G Class I, Zone 0 Aex ia IIc (US), Class I, Zone 0 Ex ia IIC (Canada), T4, Ta = -40 to 75°C |
| Non-Incendive                      | FM     | FM Hazardous (Classified) Location, Rated Non-Incendive Class I Division 2 Groups A, B, C, D (US and Canada) T4, Ta = -40 to 75°C, Conduit electrical connections only  |

**NOTE:** Please refer to [www.omega.com/approvals/](http://www.omega.com/approvals/) for downloadable copies of FM Approvals Certificate of Compliance and installation control drawings.



Any cable or connector must meet the requirements of the environment where it is being installed. The safety engineer should specify the cables and connectors.



| CAPACITY (lbs)               | D           | H          | K         | G           | F  | T            |
|------------------------------|-------------|------------|-----------|-------------|----|--------------|
| <b>STANDARD MODEL (LCHD)</b> |             |            |           |             |    |              |
| 7500 – 15,000                | 140 (5.50)  | 46 (1.80)  | 10 (0.40) | 115 (4.50)  | 8  | 1-14UNS-2B   |
| 20,000 – 50,000              | 152 (6.00)  | 46 (1.80)  | 13 (0.53) | 124 (4.88)  | 8  | 1½-12UNF-2B  |
| 75,000 – 100,000             | 229 (9.00)  | 64 (2.50)  | 17 (0.66) | 197 (7.75)  | 12 | 2-12UN-2B    |
| 150,000 – 200,000            | 279 (11.00) | 76 (3.00)  | 20 (0.78) | 241 (9.50)  | 12 | 2½-12UN-2B   |
| 300,000 – 500,000            | 356 (14.00) | 108 (4.25) | 25 (1.00) | 298 (11.75) | 12 | 3½-8UN-2B    |
| <b>METRIC MODEL (LCMHD)</b>  |             |            |           |             |    |              |
| <b>CAPACITY (kg)</b>         |             |            |           |             |    |              |
| 5000 – 7500                  | 140 (5.50)  | 46 (1.80)  | 10 (0.40) | 114 (4.50)  | 8  | M24 x 2.0-6H |
| 10,000                       | 152 (6.00)  | 46 (1.80)  | 13 (0.53) | 124 (4.88)  | 12 | M36 x 2.0-6H |

## STANDARD MODELS

### To Order

| CALIBRATED CAPACITY                       |             | MODEL NO.                | COMPATIBLE METER        | LOAD BUTTON | ROD END  |
|---|-------------|--------------------------|-------------------------|-------------|----------|
| lb  | kg (Ref)    |                          |                         |             |          |
| <b>INTRINSICALLY SAFE STANDARD MODELS</b> |             |                          |                         |             |          |
| 7500                                      | 3403 kgf    | LCHD-7.5K [*] [**] [***] | DP41-E, DP25B-E, DPi8   | LBC-100     | REC-100M |
| 10,000                                    | 4537 kgf    | LCHD-10K [*] [**] [***]  | DP41-E, DP25B-E, DPi8   | LBC-100     | REC-100M |
| 15,000                                    | 6806 kgf    | LCHD-15K [*] [**] [***]  | DP41-E, 6-digit display | LBC-100     | REC-100M |
| 20,000                                    | 9074 kgf    | LCHD-20K [*] [**] [***]  | DP41-E, 6-digit display | LBC-112     | REC-112M |
| 30,000                                    | 13,612 kgf  | LCHD-30K [*] [**] [***]  | DP41-E, 6-digit display | LBC-112     | REC-112M |
| 50,000                                    | 22,686 kgf  | LCHD-50K [*] [**] [***]  | DP41-E, 6-digit display | LBC-112     | REC-112M |
| 75,000                                    | 34,029 kgf  | LCHD-75K [*] [**] [***]  | DP41-E, 6-digit display | -           | -        |
| 100,000                                   | 45,372 kgf  | LCHD-100K [*] [**] [***] | DP41-E, 6-digit display | -           | -        |
| 150,000                                   | 68,058 kgf  | LCHD-150K [*] [**] [***] | DP41-E, 6-digit display | -           | -        |
| 200,000                                   | 90,744 kgf  | LCHD-200K [*] [**] [***] | DP41-E, 6-digit display | -           | -        |
| 300,000                                   | 136,116 kgf | LCHD-300K [*] [**] [***] | DP41-E, 6-digit display | -           | -        |
| 400,000                                   | 181,488 kgf | LCHD-400K [*] [**] [***] | DP41-E, 6-digit display | -           | -        |
| 500,000                                   | 226,860 kgf | LCHD-500K [*] [**] [***] | DP41-E, 6-digit display | -           | -        |

All models come complete with 5-point NIST traceable calibration certificate.

Note: Ranges over 300,000 lb are calibrated at 300,000 lb.

Ordering Example: LCHD-100K0BC2IS, 100,000 lb capacity, bidirectional, with PVC cable and FMIS approvals.

### [\*] ELECTRICAL TERMINATIONS

| TERMINATIONS                | SUFFIX |
|-----------------------------|--------|
| 4.6 m (15') PVC cable       | 0      |
| PTIH-10-6P twist-lock       | 1      |
| M12 4-pin                   | 5      |
| mini-DIN                    | 6      |
| 3 m (10') submersible cable | GW     |

### [\*\*] OUTPUT OPTIONS

| INTRINSICALLY SAFE AMPLIFIERS   | SUFFIX |
|---|--------|
| FM Intrinsically Safe 4 to 20 mA Output (calibrated 0 to full scale in tension)                   | C2IS   |
| FM Intrinsically Safe 4-12-20 mA Output [calibrated (-)full scale to (+)full scale] Bidirectional | BC2IS  |

### [\*\*\*] FINAL SUFFIX OPTIONS

| DESCRIPTION                         | SUFFIX |
|-------------------------------------|--------|
| Potentiometers Standard (No Suffix) |        |
| No Potentiometers                   | NP     |



DP41-E, shown smaller than actual size.

### TENSION PLATES

| MODEL NO.  | DESCRIPTION                                |
|------------|--|
| LCHD-TP200 | Tension plate, 5 to 25 lb ranges           |
| LCHD-TP225 | Tension plate, 50 to 1000 lb ranges        |
| LCHD-TP263 | Tension plate, 2000 to 5000 lb ranges      |
| LCHD-TP450 | Tension plate, 7500 to 15,000 lb ranges    |
| LCHD-TP488 | Tension plate, 20,000 to 50,000 lb ranges  |
| LCHD-TP775 | Tension plate, 75,000 to 100,000 lb ranges |

# INTRINSICALLY SAFE

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# METRIC MODELS

| To Order                         |          |                           |                         |             |
|----------------------------------|----------|---------------------------|-------------------------|-------------|
| CALIBRATED CAPACITY              |          | MODEL NO.                 | COMPATIBLE METER        | LOAD BUTTON |
| kg                               | lb (Ref) |                           |                         |             |
| INTRINSICALLY SAFE METRIC MODELS |          |                           |                         |             |
| 5000                             | 11,023   | LCMHD-5K [*] [**] [***]   | DP41-E, DP25B-E, DPi8   | MLBC-M24    |
| 7500                             | 16,535   | LCMHD-7.5K [*] [**] [***] | DP41-E, DP25B-E, DPi8   | MLBC-M24    |
| 10,000                           | 22,046   | LCMHD-10K [*] [**] [***]  | DP41-E, 6-digit display | MLBC-M36    |

All models come complete with 5-point NIST traceable calibration certificate.

Note: Ranges over 300,000 lb are calibrated at 300,000 lb.

Ordering Example: LCMHD-5K1C2IS, 5000 kg capacity load cell.

## [\*] ELECTRICAL TERMINATIONS

| TERMINATIONS   | SUFFIX |
|--|--------|
| 2 m (6.6') PVC cable with 1/2 NPT conduit†                             | 0      |
| PTIH-10-6P twist-lock mating connector<br>PT06F10-6S (sold separately) | 1      |
| M12 4-pin  | 5      |
| mini-DIN   | 6      |
| 3 m (10') submersible cable  | GW     |

† Other cable lengths are available; please contact Factors for price and availability

## [\*\*] OUTPUT OPTIONS

| INTRINSICALLY SAFE AMPLIFIERS   | SUFFIX |
|---|--------|
| FM Intrinsically Safe 4 to 20 mA Output (calibrated 0 to full scale in tension)     | C2IS   |
| FM Intrinsically Safe 4-12-20 mA Output [calibrated (-)full scale to (+)full scale] | BC2IS  |

## [\*\*\*] FINAL SUFFIX OPTIONS

| DESCRIPTION                         | SUFFIX |
|-------------------------------------|--------|
| Potentiometers Standard (No Suffix) |        |
| No Potentiometers                   | NP     |

| To Order       |   |
|----------------|---|
| TENSION PLATES |   |
| MODEL NO.      | DESCRIPTION                               |
| LCMHD-TP450    | Tension plate, 7500 to 15,000 lb ranges   |
| LCMHD-TP488    | Tension plate, 20,000 to 50,000 lb ranges |



DP41-E, shown smaller than actual size.



DP25B, shown smaller than actual size.

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# STYLE LOAD CELLS **STANDARD** AND **METRIC** MODELS

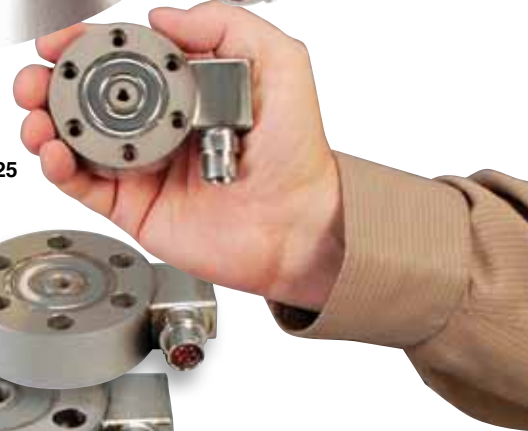
**Tension/Compression  
Calibrated in Tension  
5 to 500,000 lb Capacities  
2.5 kgf to 10,000 kgf Capacities**

## LCHD/LCMHD Series



LCHD-5K, shown actual size. See next page for dimensions.

LCHD-25



LCHD-100

LCHD-2K

LCHD-7.5K

LCHD-30K

LCHD-75K

LCHD-150K

## TEDS Option Now Available

- ✓ 0.25% Interchangeability for Scale Applications
- ✓ All Stainless Steel Construction
- ✓ Heavy-Duty Design
- ✓ High Accuracy
- ✓ Low Profile for Easy Installation
- ✓ 5-Point Calibration
- ✓ Mating Connector Included

**Models Available with Built-In Amplifiers!**

All models shown proportionally smaller than actual size.

## SPECIFICATIONS

**Excitation:** 10 Vdc (15 V max)

**Output (FSO):**

≤25 lb/10 kgf: 2 mV/V ±0.25%

≥50 lb/20 kgf: 3 mV/V ±0.25%

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

**Linearity:**

≤25 lb/10 kgf: ±0.20% FSO

≥50 lb/20 kgf: ±0.10% FSO

**Hysteresis:**

≤25 lb/10 kgf: ±0.10% FSO

≥50 lb/20 kgf: ±0.08% FSO

**Repeatability:**

≤25 lb/10 kgf: ±0.1% FSO

≥50 lb/20 kgf: ±0.03% FSO

**Zero Balance:** ±1% of FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

Zero: 0.0036% FSO/°C

Span: 0.0036% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 ±10 Ω

**Output Resistance:** 350 ±10 Ω

**FS Deflection:**

0.025 to 0.076 mm

(0.001 to 0.003") typical

**Construction:** 17-4 PH stainless steel

**Electrical:**

≤5000 lb/2000 kgf: DT02H-10-6P

>5000 lb/2500 kgf: MS3102E-14S-6P

(or equiv.)

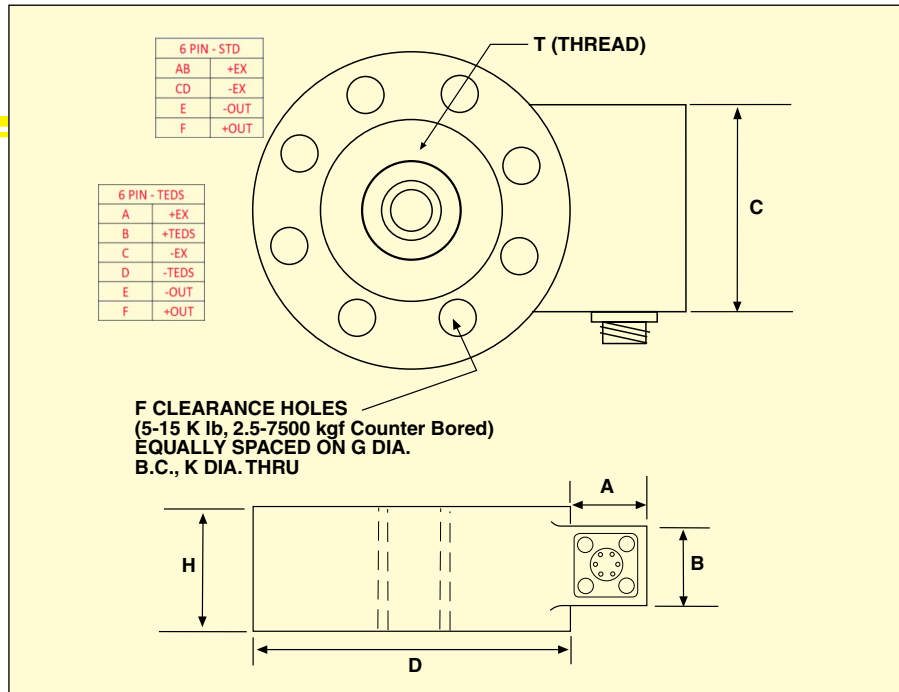
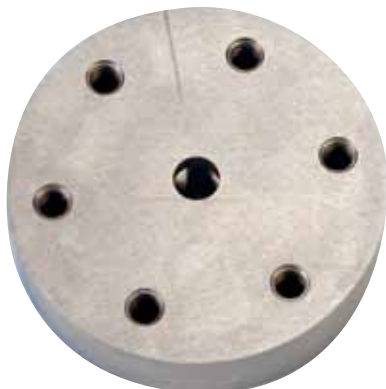
**Mating Connector (Included):**

≤5000 lb/2000 kgf: PT06F-10-6S

>5000 lb/2500 kgf: MS3102E-14S-6S

(or equiv.)

LCHD-TP263, optional tension plate for 2k to 5k LCHD load cells, shown smaller than actual size.



Dimensions: mm (inch)

| CAPACITY               | D            | H             | F  | G              | K             | T          | A            | B            | C            |
|------------------------|--------------|---------------|----|----------------|---------------|------------|--------------|--------------|--------------|
| <b>STANDARD MODELS</b> |              |               |    |                |               |            |              |              |              |
| 5 to 25 lb             | 64<br>(2.5)  | 20<br>(0.80)  | 6  | 51<br>(2.0)    | 4.6<br>(0.18) | ¼-28 UNF   | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 50 to 1K lb            | 76<br>(3.0)  | 25<br>(1.0)   | 6  | 57<br>(2.25)   | 7.1<br>(0.28) | ¾-24 UNF   | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 2K to 5K lb            | 89<br>(3.5)  | 25<br>(1.0)   | 6  | 67<br>(2.63)   | 8.6<br>(0.34) | ½-20 UNF   | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 7.5K to 15K lb         | 140<br>(5.5) | 46<br>(1.8)   | 8  | 114<br>(4.5)   | 10<br>(0.40)  | 1-14 UNS   | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 20K to 50K lb          | 152<br>(6.0) | 46<br>(1.8)   | 8  | 124<br>(4.88)  | 13<br>(0.53)  | 1½-12 UNF  | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 75K to 100K lb         | 229<br>(9.0) | 64<br>(2.5)   | 12 | 197<br>(7.75)  | 17<br>(0.66)  | 2-12 UN    | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 150K to 200K lb        | 279<br>(11)  | 76<br>(3.0)   | 12 | 241<br>(9.5)   | 20<br>(0.78)  | 2½-12 UN   | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 300K to 500K lb        | 356<br>(14)  | 108<br>(4.25) | 12 | 298<br>(11.75) | 25<br>(1.0)   | 3½-8 UN    | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| <b>METRIC MODELS</b>   |              |               |    |                |               |            |              |              |              |
| 2.5 to 10 kgf          | 64<br>(2.5)  | 20<br>(0.80)  | 6  | 51<br>(2.0)    | 4.6<br>(0.18) | M6 x 1.00  | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 25 to 500 kgf          | 76<br>(3.0)  | 25<br>(1.0)   | 6  | 57<br>(2.25)   | 7.1<br>(0.28) | M10 x 1.5  | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 1000 to 2500 kgf       | 89<br>(3.5)  | 25<br>(1.0)   | 6  | 67<br>(2.63)   | 8.6<br>(0.34) | M12 x 1.75 | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 5000 to 7500 kgf       | 140<br>(5.5) | 46<br>(1.8)   | 8  | 114<br>(4.5)   | 10<br>(0.40)  | M24 x 2.0  | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 10000 kgf              | 152<br>(6.0) | 46<br>(1.8)   | 8  | 124<br>(4.88)  | 13<br>(0.53)  | M36 x 2.0  | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |

## To Order

### TENSION PLATES

| MODEL NO.  | DESCRIPTION                                |
|------------|--|
| LCHD-TP200 | Tension plate, 5 to 25 lb ranges           |
| LCHD-TP225 | Tension plate, 50 to 1000 lb ranges        |
| LCHD-TP263 | Tension plate, 2000 to 5000 lb ranges      |
| LCHD-TP450 | Tension plate, 7500 to 15,000 lb ranges    |
| LCHD-TP488 | Tension plate, 20,000 to 50,000 lb ranges  |
| LCHD-TP775 | Tension plate, 75,000 to 100,000 lb ranges |

# LOW-PROFILE PANCAKE STYLE LOAD CELLS

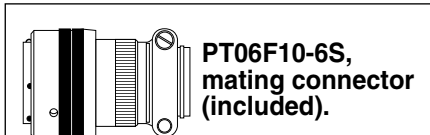


## To Order

| CAPACITY               |             | MODEL NO.         | COMPATIBLE METERS      |
|------------------------|-------------|-------------------|------------------------|
| <b>STANDARD MODELS</b> |             |                   |                        |
| 5 lb                   | 2.3 kgf     | <b>LCHD-5</b>     | DPiS, DP41-S, DP25B-S  |
| 10 lb                  | 4.5 kgf     | <b>LCHD-10</b>    | DPiS, DP41-S, DP25B-S  |
| 25 lb                  | 11 kgf      | <b>LCHD-25</b>    | DPiS, DP41-S, DP25B-S  |
| 50 lb                  | 23 kgf      | <b>LCHD-50</b>    | DPiS, DP41-S, DP25B-S  |
| 100 lb                 | 45 kgf      | <b>LCHD-100</b>   | DPiS, DP41-S, DP25B-S  |
| 250 lb                 | 114 kgf     | <b>LCHD-250</b>   | DPiS, DP41-S, DP25B-S  |
| 500 lb                 | 227 kgf     | <b>LCHD-500</b>   | DPiS, DP41-S, DP25B-S  |
| 1K lb                  | 455 kgf     | <b>LCHD-1K</b>    | DPiS, DP41-S, DP25B-S  |
| 2K lb                  | 909 kgf     | <b>LCHD-2K</b>    | DPiS, DP41-S, DP25B-S  |
| 3K lb                  | 1361 kgf    | <b>LCHD-3K</b>    | DPiS, DP41-S, DP25B-S  |
| 4K lb                  | 1815 kgf    | <b>LCHD-4K</b>    | DPiS, DP41-S, DP25B-S  |
| 5K lb                  | 2269 kgf    | <b>LCHD-5K</b>    | DPiS, DP41-S, DP25B-S  |
| 7.5K lb                | 3403 kgf    | <b>LCHD-7.5K</b>  | DPiS, DP41-S, DP25B-S  |
| 10K lb                 | 4537 kgf    | <b>LCHD-10K</b>   | DPiS, DP41-S, DP25B-S  |
| 15K lb                 | 6806 kgf    | <b>LCHD-15K</b>   | DPiS, DP41-S, DP25B-S* |
| 20K lb                 | 9074 kgf    | <b>LCHD-20K</b>   | DPiS, DP41-S, DP25B-S* |
| 30K lb                 | 13,612 kgf  | <b>LCHD-30K</b>   | DPiS, DP41-S, DP25B-S* |
| 50K lb                 | 22,686 kgf  | <b>LCHD-50K</b>   | DPiS, DP41-S, DP25B-S* |
| 75K lb                 | 34,029 kgf  | <b>LCHD-75K</b>   | DPiS, DP41-S, DP25B-S* |
| 100K lb                | 45,372 kgf  | <b>LCHD-100K</b>  | DPiS, DP41-S, DP25B-S* |
| 150K lb                | 68,058 kgf  | <b>LCHD-150K</b>  | DPiS, DP41-S, DP25B-S* |
| 200K lb                | 90,744 kgf  | <b>LCHD-200K</b>  | DPiS, DP41-S, DP25B-S* |
| 300K lb                | 136,116 kgf | <b>LCHD-300K</b>  | DPiS, DP41-S, DP25B-S* |
| 400K lb                | 181,488 kgf | <b>LCHD-400K</b>  | DPiS, DP41-S, DP25B-S* |
| 500K lb                | 226,860 kgf | <b>LCHD-500K</b>  | DPiS, DP41-S, DP25B-S* |
| <b>METRIC MODELS</b>   |             |                   |                        |
| 5.5 lb                 | 2.5 kgf     | <b>LCMHD-2.5</b>  | DPiS, DP41-S, DP25B-S  |
| 11 lb                  | 5 kgf       | <b>LCMHD-5</b>    | DPiS, DP41-S, DP25B-S  |
| 22 lb                  | 10 kgf      | <b>LCMHD-10</b>   | DPiS, DP41-S, DP25B-S  |
| 55 lb                  | 25 kgf      | <b>LCMHD-25</b>   | DPiS, DP41-S, DP25B-S  |
| 110 lb                 | 50 kgf      | <b>LCMHD-50</b>   | DPiS, DP41-S, DP25B-S  |
| 220 lb                 | 100 kgf     | <b>LCMHD-100</b>  | DPiS, DP41-S, DP25B-S  |
| 551 lb                 | 250 kgf     | <b>LCMHD-250</b>  | DPiS, DP41-S, DP25B-S  |
| 1102 lb                | 500 kgf     | <b>LCMHD-500</b>  | DPiS, DP41-S, DP25B-S  |
| 2205 lb                | 1000 kgf    | <b>LCMHD-1K</b>   | DPiS, DP41-S, DP25B-S  |
| 3307 lb                | 1500 kgf    | <b>LCMHD-1.5K</b> | DPiS, DP41-S, DP25B-S  |
| 4409 lb                | 2000 kgf    | <b>LCMHD-2K</b>   | DPiS, DP41-S, DP25B-S  |
| 5512 lb                | 2500 kgf    | <b>LCMHD-2.5K</b> | DPiS, DP41-S, DP25B-S  |
| 11,023 lb              | 5000 kgf    | <b>LCMHD-5K</b>   | DPiS, DP41-S, DP25B-S  |
| 16,535 lb              | 7500 kgf    | <b>LCMHD-7.5K</b> | DPiS, DP41-S, DP25B-S  |
| 22,046 lb              | 10,000 kgf  | <b>LCMHD-10K</b>  | DPiS, DP41-S, DP25B-S  |

## POPULAR OPTIONS

| DESCRIPTION   | SUFFIX             |
|---|--------------------|
| <b>5V Output</b><br>Calibrated 0 to 5 Vdc in tension. (Output is bi-directional $\pm 5$ Vdc)  | “-5T”              |
| <b>Overload Stops</b>   | “-OL”              |
| <b>Dual Bridge</b><br>$\leq 5000$ lb/2500 kgf<br>$> 5000$ lb/2500 kgf                         | “-DUAL”<br>“-DUAL” |
| <b>Extended Temperature Range</b><br>between: -45 to 93°C (-50 to 200°F) and to 163°C (325°F) | “-TC1”<br>“-TC2”   |
| <b>TEDS</b><br><b>IEEE 1451.4 module</b><br>(Other Custom Pinout Avail)                       | “-TEDS”            |



Comes complete with 5-point NIST-traceable calibration, mating connector, and 59 k $\Omega$  shunt data.

\* 4-digit meter.

\*\* DPiS meter suitable for one direction measurement only.

**Note:** Models  $> 300,000$  lb are calibrated at 300,000 lb—see Specifications.

**Ordering Examples:** **LCHD-500**, 500 lb capacity load cell.

**LCMHD-500**, 500 kgf capacity load cell.

**PT06F10-6S**, mating connector (included). **LCMHD-10K**, 10,000 kgf capacity load cell.

**MS3106E-14S-6S**, mating connector (included).

## ACCESSORIES

| MODEL NO.             | DESCRIPTION   |
|-----------------------|---|
| <b>MS3106E-14S-6S</b> | Spare mating connector for units above 5000 lb capacity |
| <b>PT06F10-6S</b>     | Spare mating connector for units below 7500 lb capacity |

0-500 lb to 0-20,000 lb Ranges

**LCJA Series**



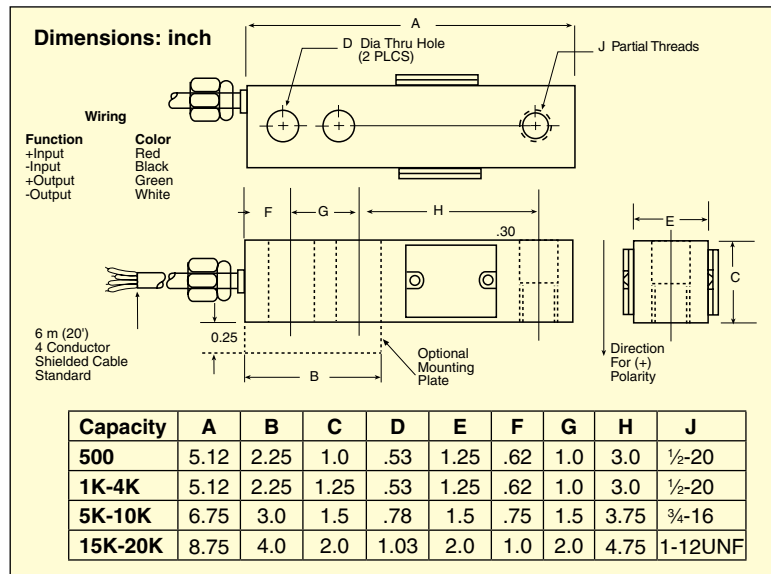
- ✓ Environmentally Protected for Washdown Applications
- ✓ Corrosion Resistant
- ✓ Calibration Certificate Supplied
- ✓ 0.25% Interchangeable
- ✓ Exact Full Scale Output Stated for Easy Equipment Setup and System Calibration



LCJA-500, with MFP mounting plate, sold separately, see "To Order" table below, shown close to actual size.

**SPECIFICATIONS**

**Rated Output:** 3 mV/V  $\pm 0.0075$  mV/V (actual output supplied with each load cell)  
**Excitation:** 10 Vdc (15 Vdc maximum)  
**Accuracy:**  $\pm 0.037\%$  Full Scale  
**Linearity:**  $\pm 0.03\%$  FS  
**Hysteresis:**  $\pm 0.02\%$  FS  
**Repeatability:**  $\pm 0.01\%$  FS  
**Zero Balance:**  $\pm 1\%$  FS  
**Creep In 20 min:**  $\pm 0.03\%$  FS  
**Operating Temperature:** 0 to 150°F (-18 to 66°C)  
**Compensated Temperature:** 0 to 150°F (-18 to 66°C)  
**Thermal effects:** Zero - 0.0015% FS/°F Span - 0.0008% RDG/°F  
**Maximum Load:** 200% FS  
**Side Load Rejection:** 500:1  
**Bridge Resistance:** 350  $\Omega$  nominal  
**Full Scale Deflection:** 0.015 in to 0.025 in  
**Construction:** Nickel Plated Steel  
**Cable:** 20 ft 4-conductor shielded 22-gage wire



**To Order**

| MODEL NO. | RATED CAPACITY | FS DEFL | WT LB | COMPATIBLE METERS**      | LOAD BUTTON | ROD END   | MOUNTING PLATES |
|-----------|----------------|---------|-------|--------------------------|-------------|-----------|-----------------|
|           |                |         |       |                          | MODEL NO.   | MODEL NO. | MODEL NO.       |
| LCJA-500  | 500 lb         | 0.013   | 4     | DP41-S, DP3002-S, DP25-S | LBJ-012     | REC-012M  | MFP-1           |
| LCJA-1K   | 1000 lb        | 0.013   | 4     | DP41-S, DP3002-S, DP25-S | LBJ-012     | REC-012M  | MFP-1           |
| LCJA-2K   | 2000 lb        | 0.015   | 4     | DP41-S, DP3002-S, DP25-S | LBJ-012     | REC-012M  | MFP-1           |
| LCJA-2.5K | 2500 lb        | 0.015   | 4     | DP41-S, DP3002-S, DP25-S | LBJ-012     | REC-012M  | MFP-1           |
| LCJA-4K   | 4000 lb        | 0.025   | 4     | DP41-S, DP3002-S, DP25-S | LBJ-012     | REC-012M  | MFP-1           |
| LCJA-5K   | 5000 lb        | 0.025   | 3.5   | DP41-S, DP87, DP25-S     | LBJ-034     | REC-034M  | MFP-2           |
| LCJA-10K  | 10000 lb       | 0.035   | 3.5   | DP41-S, DP87, DP25-S     | LBJ-034     | REC-034M  | MFP-2           |
| LCJA-15K  | 15000 lb       | 0.035   | 9     | DP41-S, DP87, DP25-S*    | LBJ-100     | REC-100M  | MFP-3           |
| LCJA-20K  | 20000 lb       | 0.035   | 9     | DP41-S, DP87, DP25-S*    | LBJ-100     | REC-100M  | MFP-3           |

\* 4-digit meter, counts by 10 or scale to tons. Visit OMEGA for weighing assemblies.

\*\* Visit us online for compatible meters.

Ordering Example: For a 2000 lb capacity system: LCJA-2K + TWA4-2K.

# Compression Load Cell

## Standard and Metric Models

**Compression**  
 0-2.2 lb to 0-1000 lb  
 0-10 to 0-5000 N

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

### LCKD/LCMKD Series



Standard

Small in size but not in performance, OMEGA's LCKD/LCMKD Series compression load cells are designed to measure load ranges from 1 kg to 1000 lb. Rugged all stainless steel construction and high-performance strain gages ensure superior linearity and stability. Temperature compensation is achieved through a miniature circuit board in the cable. These cells are designed to be mounted on a smooth, flat surface.

### SPECIFICATIONS

**Excitation:** 5 Vdc, 7 Vdc maximum

**Output:** 2 mV/V nominal

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Linearity:** ±0.25% FSO

**Hysteresis:** ±0.25% FSO

**Repeatability:** ±0.10% FSO

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Span:** ±0.018% FSO/°C

**Zero:** ±0.009% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

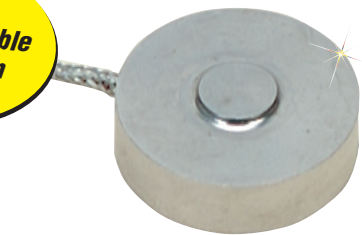
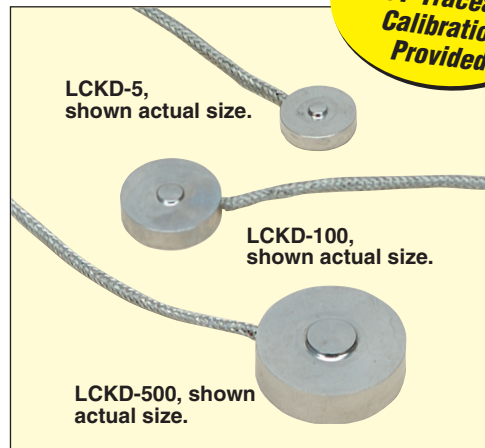
**Full Scale Deflection:** 0.001 to 0.003"

**Electrical Connection:** 1.5 m (5')

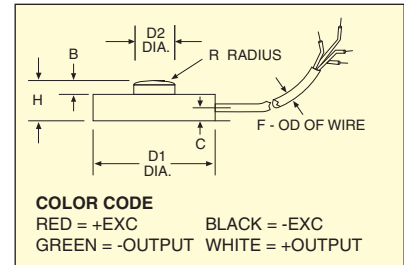
4-conductor insulated cable with temperature compensation board

**Weight:** <14 g (<0.5 oz)

**Protection Class:** IP54



LCKD-100, shown larger than actual size.



### Dimensions: mm (inch)

| CAPACITY                         | D1            | D2            | H             | B              | C             | F             | R             |
|----------------------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|
| 10 to 200 N<br>1 kg to 50 lb     | 9.6<br>(0.38) | 2.2<br>(0.09) | 3.0<br>(0.12) | 0.76<br>(0.03) | 1.0<br>(0.04) | 1.3<br>(0.05) | 6.3<br>(0.25) |
| 500 to 1000 N<br>100 to 250 lb   | 13<br>(0.50)  | 3.0<br>(0.12) | 3.8<br>(0.15) | 0.51<br>(0.02) | 1.5<br>(0.06) | 1.3<br>(0.05) | 13<br>(0.5)   |
| 2000 to 5000 N<br>500 to 1000 lb | 19<br>(0.75)  | 6.1<br>(0.24) | 6.4<br>(0.25) | 0.76<br>(0.03) | 2.5<br>(0.10) | 1.3<br>(0.05) | 101<br>(4)    |

### STANDARD MODELS

| CAPACITY |      | MODEL NO. | COMPATIBLE METERS     |
|----------|------|-----------|-----------------------|
| lb       | N    |           |                       |
| 2.2      | 9.8  | LCKD-1KG  | DPiS, DP41-S, DP25B-S |
| 5        | 22.2 | LCKD-5    | DPiS, DP41-S, DP25B-S |
| 10       | 46   | LCKD-10   | DPiS, DP41-S, DP25B-S |
| 25       | 111  | LCKD-25   | DPiS, DP41-S, DP25B-S |
| 50       | 222  | LCKD-50   | DPiS, DP41-S, DP25B-S |
| 100      | 445  | LCKD-100  | DPiS, DP41-S, DP25B-S |
| 250      | 1112 | LCKD-250  | DPiS, DP41-S, DP25B-S |
| 500      | 2224 | LCKD-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 4448 | LCKD-1000 | DPiS, DP41-S, DP25B-S |

### METRIC MODELS

| CAPACITY |      | MODEL NO.  | COMPATIBLE METERS        |
|----------|------|------------|--------------------------|
| N        | lb   |            |                          |
| 10       | 2.25 | LCMKD-10N  | DP41-S, DP25B-S, iSeries |
| 20       | 4.5  | LCMKD-20N  | DP41-S, DP25B-S, iSeries |
| 50       | 11.2 | LCMKD-50N  | DP41-S, DP25B-S, iSeries |
| 100      | 22.5 | LCMKD-100N | DP41-S, DP25B-S, iSeries |
| 200      | 45   | LCMKD-200N | DP41-S, DP25B-S, iSeries |
| 500      | 112  | LCMKD-500N | DP41-S, DP25B-S, iSeries |
| 1000     | 225  | LCMKD-1KN  | DP41-S, DP25B-S, iSeries |
| 2000     | 450  | LCMKD-2KN  | DP41-S, DP25B-S, iSeries |
| 5000     | 1124 | LCMKD-5KN  | DP41-S, DP25B-S, iSeries |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

**Ordering Examples:** LCKD-1KG, 1 kg capacity load cell.

LCKD-25, 25 lb capacity load cell.

LCMKD-10N, 10 Newton capacity load cell.

LCMKD-2KN, 2000 Newton capacity load cell.



# OMEGA® THIN BEAM LOAD CELLS

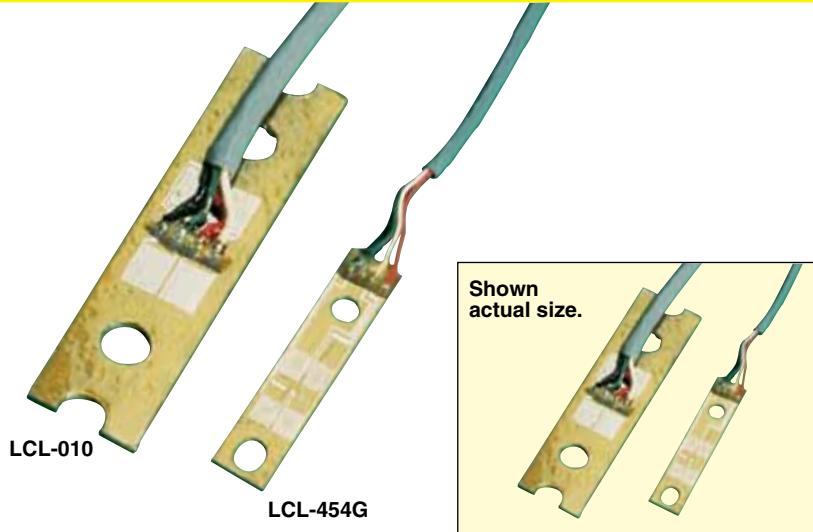
Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FOR LOADS 0-113 g to 0-18 kgf

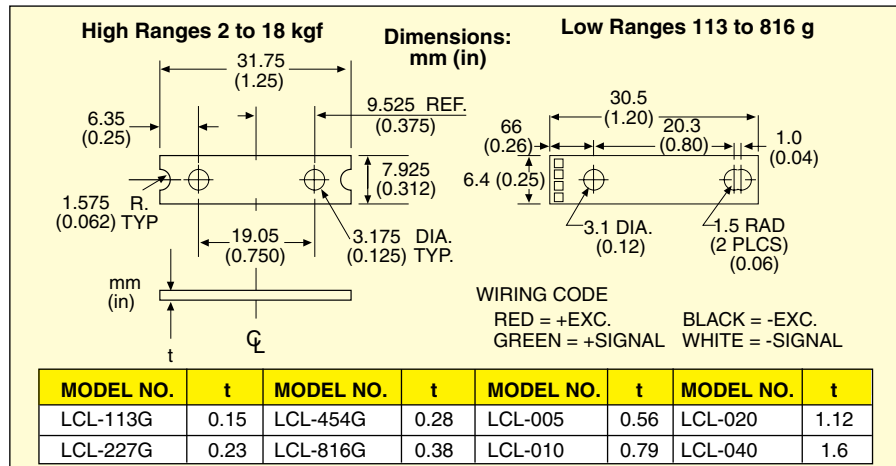
### LCL Series



- ✓ Measures Force or Displacement
- ✓ Thermally Matched, Fully Active, Full-Bridge Gage for Optimal Temperature Tracking



When frequent small-load measurements are required, OMEGA® LCL Series thin-beam load cells are the answer. The LCL Series is designed to measure many different parameters found in medical instrumentation, home appliances, process control, robotics, automotive, and other high-volume applications. A specially developed integrated strain gage includes all balancing, compensating, and conductive elements and is laminated to the beam to provide excellent stability and reliability.



### SPECIFICATIONS

- Excitation:** 5 Vdc, 12V max
- Rated Output:** 2mv/V nominal (to minimize tolerance, end user must calibrate with a known weight)
- Zero Balance:** +/- 0.75 mv/V
- Combined Error:** 0.5% FS
- Operating Temperature:** -54 to 93°C (-65 to 200°F)
- Compensated Temperature:** -7 to 49°C (20 to 120°F)
- Temperature Effects:** Zero balance 0.02% FS/°F; output 0.02%/°F
- Resistance (Input and Output):** 1200 ±300 Ω
- Insulation Resistance:** 1000 @ 50 Vdc
- Seal:** Urethane coated
- Safe Overload:** 150% FS
- Full Scale Deflection:** 0.25 to 1.27 mm (0.010 to 0.050")
- Lead Wire:** 9" shielded PVC 4-conductor 30 AWG
- Material:**
  - >816 gf (2 lb): 301 SS
  - ≤816 gf (2 lb): Beryllium copper

**To Order Visit [omega.com/lcl](http://omega.com/lcl) for Pricing and Details**

| CAPACITY  |         | MODEL NO.       | COMPATIBLE METERS       |
|-----------|---------|-----------------|-------------------------|
| 113 gf    | 0.25 lb | <b>LCL-113G</b> | DP2000S5, DP25B-S, DPiS |
| 227 gf    | 0.5 lb  | <b>LCL-227G</b> | DP2000S5, DP25B-S, DPiS |
| 454 gf    | 1 lb    | <b>LCL-454G</b> | DP2000S5, DP25B-S, DPiS |
| 816 gf    | 2 lb    | <b>LCL-816G</b> | DP2000S5, DP25B-S, DPiS |
| 2.27 kgf  | 5 lb    | <b>LCL-005</b>  | DP2000S5, DP25B-S, DPiS |
| 4.54 kgf  | 10 lb   | <b>LCL-010</b>  | DP2000S5, DP25B-S, DPiS |
| 9.07 kgf  | 20 lb   | <b>LCL-020</b>  | DP2000S5, DP25B-S, DPiS |
| 18.14 kgf | 40 lb   | <b>LCL-040</b>  | DP2000S5, DP25B-S, DPiS |

### MOUNTING HARDWARE

| MODEL NO.      | MOUNTING BRACKETS             |
|----------------|-------------------------------|
| <b>LCL-CL1</b> | For LCL-113G through LCL-816G |
| <b>LCM-CL1</b> | For LCL-005 through LCL-040   |

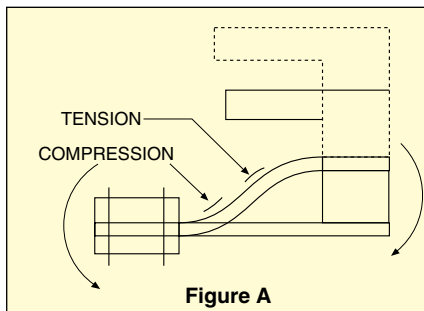
**Ordering Examples:** LCL-113G, beam and LCL-CL1, mounting bracket.  
 LCL-020, beam lead cell and LCM-CL1, mounting bracket.

# INSTALLATION CONSIDERATIONS

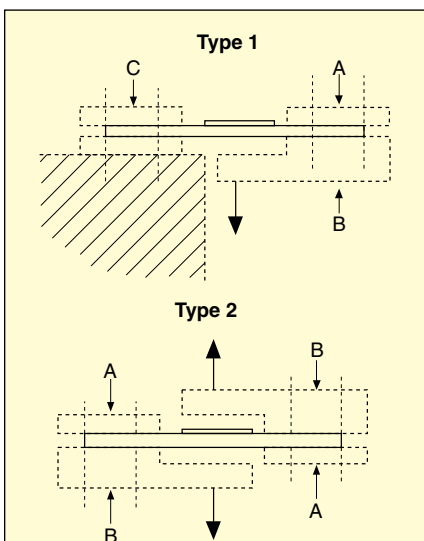
Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FOR THIN-BEAM LOAD CELLS

Careful design considerations must be taken into account when mounting OMEGA's LCL Series thin-beam load cells. The sensor's performance depends on the mechanical interface. All thin-beam load cells require mounting clamps to create a "double bend" during loading, as shown in Figure A. This illustration is exaggerated to show the clamp's effectiveness in producing opposing moments that create the double bend. An electrical output is generated as the double bend causes tension and compression on the sensor strain gage.



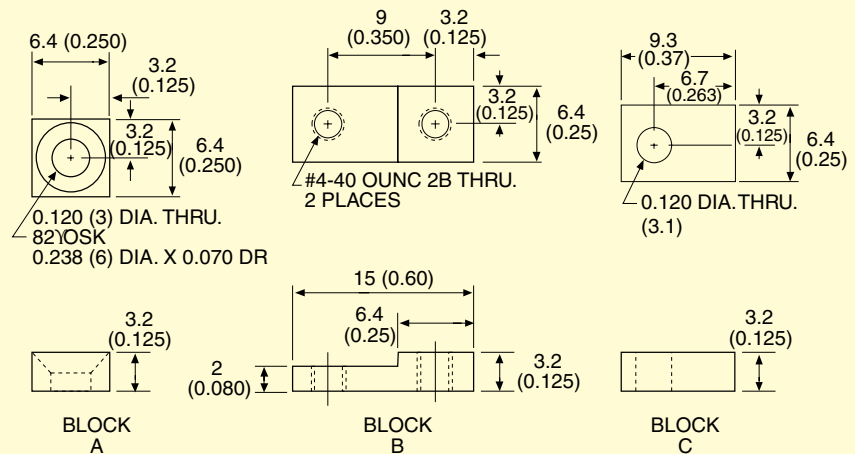
Two typical mounting arrangements are shown below. For high-accuracy applications, reinforcement plates should be slightly harder than the beam material, and the interfacing corners should be sharp. Because of low loads and sensor construction associated with the LCL113G through LCL-816G, in-line loading (Type 2) is not recommended.



### LCL-CL1 Mounting Kit

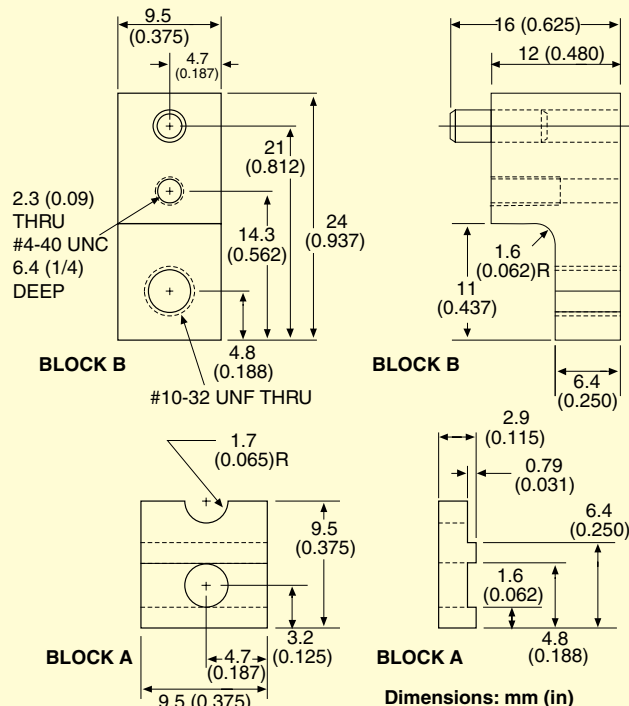
Mounting kit LCL-CL1 for thin-beam sensors LCL-113G through LCL-816G, Type 1 mounting only. Kit includes mounting blocks A, B, and C.

Dimensions: mm (in)



### LCM-CL1 Mounting Kit

Mounting kit LCM-CL1 for thin-beam sensors LCL-005 through LCL-040. Kit includes 4 mounting blocks, 2 each of blocks A and B. Type 2 mounting only.



# TOP AND BOTTOM MOUNTING DIAPHRAGM

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FOR LCM1001/LCM1011 SERIES LOAD CELLS—ALLOY, NICKEL-PLATED STEEL OR 17-4 PH STAINLESS STEEL

### Top Mounting Plates 250 kgf to 25,000 kgf

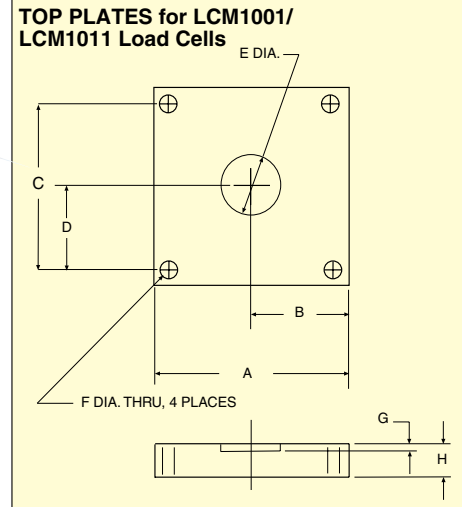
1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kg = 2204 lb

### LCM1000-TP4 Series



LC1000-TP4 top plates shown smaller than actual size.

LCM1011-5K shown smaller than actual size.



To Order Visit [omega.com/lcm1000-bp4\\_lcm1000-tp4](http://omega.com/lcm1000-bp4_lcm1000-tp4) for Pricing and Details

Dimensions: mm (inch)

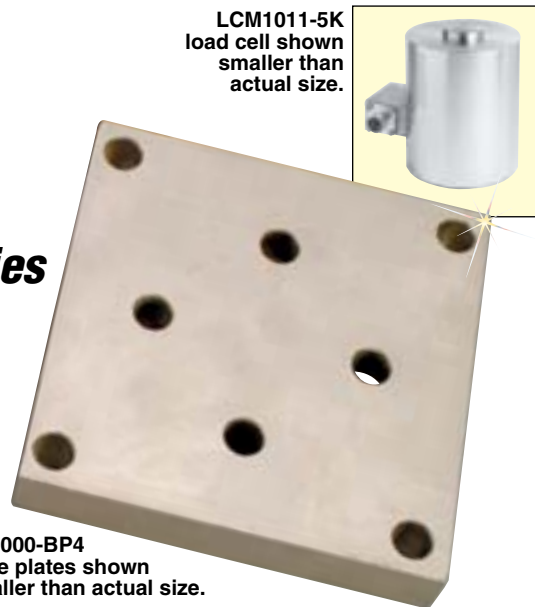
| CAPACITY kgF  | NI PLATED STEEL | STAINLESS STEEL | A          | B         | C         | D         | E         | F         | G           | H         |
|---------------|-----------------|-----------------|------------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|
| 250 to 25,000 | LCM1000-TP4     | LCM1000-TP4-SS  | 114 (4.50) | 57 (2.25) | 95 (3.75) | 46 (1.88) | 38 (1.50) | 10 (0.41) | 3.2 (0.125) | 19 (0.75) |

Ordering Examples: LCM1000-TP4-SS, stainless steel top plate for LCM1001/LCM1011 load cells with 250 to 25,000 kgf range.  
LCM1000-TP4, nickel-plated steel top plate for LCM1001/LCM1011 load cells with 250 to 25,000 kgf range.

### Bottom Mounting Plates 0-250 kgf to 0-25,000 kgf

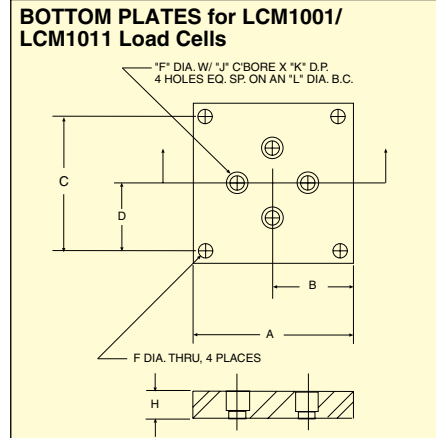
1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kg = 2204 lb

### LCM1000-BP4 Series



LC1000-BP4 base plates shown smaller than actual size.

LCM1011-5K load cell shown smaller than actual size.



| CAPACITY kgF  | PLATED STEEL | STAINLESS STEEL | A          | B         | C         | D         | F         | H          | J          | K         | L         |
|---------------|--------------|-----------------|------------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| 250 to 25,000 | LCM1000-BP4  | LCM1000-BP4-SS  | 114 (4.50) | 57 (2.25) | 95 (3.75) | 46 (1.88) | 10 (0.41) | 19 (0.750) | 16 (0.625) | 15 (0.59) | 60 (2.38) |

Ordering Examples: LCM1000-BP4-SS, stainless steel base plate for LCM1001/LCM1011 load cells with 250 to 25,000 kgf range.  
LCM1000-BP4, plated steel base plate for LCM1001/LCM1011 load cells with 250 to 25,000 kgf range.

# CANISTER STYLE COMPRESSION

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## LOAD CELLS

### STANDARD AND METRIC MODELS

#### Compression

0-500 lb to 0-2 M lb

0-250 to 0-10,000 kgf

LC1011-1K, connector style, shown actual size, see next page for dimensions.

### LC1001/LCM1001 Series LC1011/LCM1011 Series



Standard

- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ 5-Point NIST-Traceable Calibration (Standard)
- ✓ Canister Design Ideal for Axial Compression Applications
- ✓ Heavy-Duty, Environmentally Sealed Case for Harsh Environments
- ✓ Dual-Bridge Models Available



LC1011/LCM1011 models with twist-lock connector.

#### SPECIFICATIONS

**Excitation:** 10 Vdc (15 Vdc maximum)

**Output:** 2 mV/V  $\pm 0.25\%$

**5-Point Calibration (in Compression):**

0%, 50%, 100%, 50%, 0% calibrated to full scale up to 300,000 lb; load cells over 300,000 lb calibrated at 300,000 lb. For a full scale calibration over 300,000 lb, specify option “-FS” after model number (consult Sales for price and delivery).

**Protection Class:** IP67

**Linearity:**  $\pm 0.05\%$  FSO

**Hysteresis:**  $\pm 0.03\%$  FSO

**Repeatability:**  $\pm 0.02\%$  FSO

**Zero Balance:**  $\pm 1\%$  full scale

**Operating Temp Range:**  
-46 to 100°C (-50 to 212°F)

**Compensated Temp Range:**  
16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:**  $\pm 0.0018\%$  full scale/°C

**Span:**  $\pm 0.0018\%$  rdg/°C

**Safe Overload:** 150% of rated capacity

**Ultimate Overload:**  
300% of rated capacity

**Input Resistance:** 350  $\pm 10 \Omega$

**Output Resistance:** 350  $\pm 10 \Omega$

**Full Scale Deflection:** 0.18 to 0.50 mm (0.007 to 0.020") typical

**Construction:**

**Metric and Standard Ranges**

<500,000 lb: 17-4 PH stainless steel

Ranges  $\geq 500,000$  lb: High-alloy steel

**Electrical:**

**LC1001/LCM1001:** 4.8 m (15')

4-conductor shielded PVC cable

**LC1011/LCM1011:** PTIH-10-6P (or equivalent)

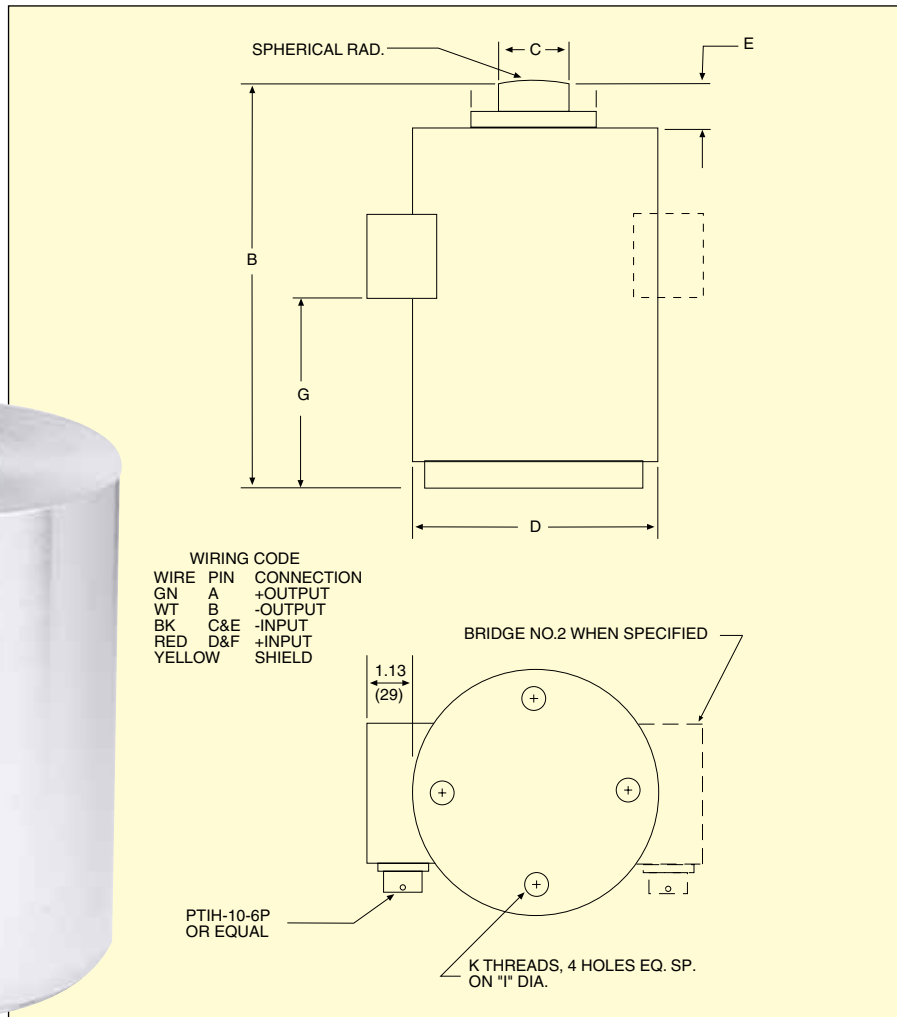
**Mating Connector:** PT06F10-6S, (sold separately)

**Cable Assembly with Twist-Lock Connector:** CA-6PC24-3-015 (sold separately)

# HEAVY-DUTY CANISTER STYLE COMPRESSION LOAD CELLS

**Models Available with Built-In Amplifiers!**

LC1011-10K, connector style, shown smaller than actual size.



## Dimensions: mm (inch)

| CAPACITY<br>kgf (lb)       | B             | C             | D              | E            | G             | I<br>±.005     | K (THREAD)                                   | WEIGHT<br>kg (lb) |
|----------------------------|---------------|---------------|----------------|--------------|---------------|----------------|--|-------------------|
| 250 to 1K<br>(500 to 2.5K) | 116<br>(4.6)  | 32<br>(1.25)  | 89<br>(3.50)   | 6<br>(0.25)  | 32<br>(1.25)  | 60<br>(2.375)  | M10 x 1.5 x 3/8 DP<br>3/8-24 UNF-2B x 3/8 DP | 2.7<br>(6)        |
| 2K to 5K<br>(5K to 10K)    | 151<br>(5.9)  | 32<br>(1.25)  | 89<br>(3.50)   | 19<br>(0.75) | 46<br>(1.81)  | 60<br>(2.375)  | M10 x 1.5 x 3/8 DP<br>3/8-24 UNF-2B x 3/8 DP | 4.5<br>(10)       |
| 10K<br>(20K to 50K)        | 191<br>(7.5)  | 32<br>(1.25)  | 114<br>(4.50)  | 19<br>(0.75) | 77<br>(3.44)  | 60<br>(2.375)  | M10 x 1.5 x 3/8 DP<br>3/8-24 UNF-2B x 3/8 DP | 9<br>(20)         |
| (100,000)                  | 232<br>(9.1)  | 44<br>(1.75)  | 141<br>(5.56)  | 27<br>(1.06) | 121<br>(4.75) | 102<br>(4.000) | 1/2-20 UNF-2B x 1/2 DP                       | 88<br>(40)        |
| (200,000)                  | 295<br>(11.6) | 64<br>(2.50)  | 168<br>(6.63)  | 27<br>(1.06) | 159<br>(6.25) | 140<br>(5.500) | 5/8-18 UNF-2B x 1 DP                         | 43<br>(95)        |
| (300,000)                  | 356<br>(14)   | 76<br>(3.00)  | 219<br>(8.63)  | 33<br>(1.31) | 194<br>(7.63) | 140<br>(5.500) | 3/4-16 UNF-2B x 1 1/4 DP                     | 48<br>(105)       |
| (400,000)                  | 356<br>(14)   | 89<br>(3.50)  | 219<br>(8.63)  | 33<br>(1.31) | 194<br>(7.63) | 140<br>(5.500) | 3/4-16 UNF-2B x 1 1/4 DP                     | 64<br>(140)       |
| (500,000)                  | 356<br>(14)   | 89<br>(3.50)  | 219<br>(8.63)  | 22<br>(0.88) | 194<br>(7.63) | 89<br>(3.500)  | 1/2-20 UNF-2B x 3/4 DP                       | 77<br>(170)       |
| (1,000,000)                | 356<br>(14)   | 140<br>(5.50) | 219<br>(8.63)  | 22<br>(0.88) | 140<br>(5.50) | 114<br>(4.500) | 5/8-18 UNF-2B x 1.0 DP                       | 115<br>(250)      |
| (2,000,000)                | 406<br>(16)   | 178<br>(7.00) | 273<br>(10.75) | 25<br>(1.00) | 152<br>(6.00) | 140<br>(5.500) | 1-14 UNS-2B x 1 1/4 DP                       | 182<br>(400)      |

## POPULAR OPTIONS (Additional Cost)

0 to 5 Vdc Output: (≥5000 kg) “-5V”

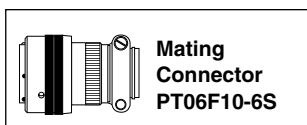
Overload Stops: “-OL”

Dual Bridge: “-DUAL”

Extended Temperature Range:

-45 to 93°C (-50 to 200°F) “-TC1”

-45 to 177°C (-50 to 350°F) “-TC2”



| <b>To Order</b>                              |           |                    |                        |                           |                               |                              |
|--|-----------|--------------------|------------------------|---------------------------|-------------------------------|------------------------------|
| <b>Canister-Style Compression Load Cells</b> |           |                    |                        |                           | <b>Accessories</b>            |                              |
| <b>CAPACITY</b>                              |           | <b>CABLE STYLE</b> | <b>CONNECTOR STYLE</b> | <b>COMPATABLE METERS*</b> | <b>BASE PLATE** MODEL NO.</b> | <b>TOP PLATE** MODEL NO.</b> |
| <b>kgf</b>                                   | <b>lb</b> |                    |                        |                           |                               |                              |
| <b>STANDARD MODELS</b>                       |           |                    |                        |                           |                               |                              |
| 227  | 500       | LC1001-500         | LC1011-500             | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 455  | 1000      | LC1001-1K          | LC1011-1K              | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 1134   | 2500      | LC1001-2.5K        | LC1011-2.5K            | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 2269   | 5000      | LC1001-5K          | LC1011-5K              | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 4537   | 10 K      | LC1001-10K         | LC1011-10K             | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 9074   | 20 K      | LC1001-20K         | LC1011-20K             | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 22,686                                       | 50 K      | LC1001-50K         | LC1011-50K             | DP41-W, DP41-S            | LC1000-BP4                    | LC1000-TP4                   |
| 45,372                                       | 100 K     | LC1001-100K        | LC1011-100K            | DP41-W, DP41-S            | LC1000-BP6                    | LC1000-TP6                   |
| 90,744                                       | 200 K     | LC1001-200K        | LC1011-200K            | DP41-W, DP41-S            | LC1000-BP8                    | LC1000-TP8                   |
| 136,116                                      | 300 K     | LC1001-300K        | LC1011-300K            | DP41-W, DP41-S            | LC1000-BP9                    | LC1000-TP9                   |
| 226,860                                      | 500 K     | LC1001-500K        | LC1011-500K            | DP41-W, DP41-S            | n/a                           | n/a                          |
| 453,721                                      | 1 M       | LC1001-1M          | LC1011-1M              | DP41-W, DP41-S            | n/a                           | n/a                          |
| 746,483                                      | 2 M       | LC1001-2M          | LC1011-2M              | DP41-W, DP41-S            | n/a                           | n/a                          |
| <b>METRIC MODELS</b>                         |           |                    |                        |                           |                               |                              |
| 250  | 551       | LCM1001-250        | LCM1011-250            | DP41-B, DP41-S            | LCM1000-BP4                   | LCM1000-TP4                  |
| 500  | 1102      | LCM1001-500        | LCM1011-500            | DP41-B, DP41-S            | LCM1000-BP4                   | LCM1000-TP4                  |
| 1000   | 2205      | LCM1001-1K         | LCM1011-1K             | DP41-B, DP41-S            | LCM1000-BP4                   | LCM1000-TP4                  |
| 2000   | 4409      | LCM1001-2K         | LCM1011-2K             | DP41-B, DP41-S            | LCM1000-BP4                   | LCM1000-TP4                  |
| 5000   | 11,023    | LCM1001-5K         | LCM1011-5K             | DP41-B, DP41-S            | LCM1000-BP4                   | LCM1000-TP4                  |
| 10,000                                       | 22,046    | LCM1001-10K        | LCM1011-10K            | DP41-B, DP41-S            | LCM1000-BP4                   | LCM1000-TP4                  |

**ACCESSORY**

| <b>MODEL NO.</b> | <b>DESCRIPTION</b>  |
|------------------|---|
| PT06F10-6S       | Mating connector for LC1011/LCM1011 series load cells                         |
| CA-6PC24-3-015   | Cable assembly with twist-lock connector for LC1011/LCM1011 series load cells |



LC1000-BP4, base plates shown smaller than actual size.

Visit us online for top mounting plates.

Visit us online for base plates.

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

\*\* Base plates and top plates referenced are carbon steel.

To order CSA-approved Intrinsically Safe version, add suffix "-CSA" to model number (no extra charge).

To order dual-bridge load cell, add suffix "-DUAL" to model number.

**Ordering Examples:** LC1001-100K, 100,000 lb capacity cable-style load cell.

LC1000-BP6, accompanying base plate. LC1000-TP6, accompanying top plate.

LCM1001-10K, 10 ton capacity cable-style load cell, LCM1000-BP4, accompanying base plate.

LCM1000-TP4, accompanying top plate.

LCM1011-500-Dual, dual-bridge 500 kgf capacity connector-style load cell.

PT06F10-6S, mating connector (not included).



LC1000-TP4, top plates shown smaller than actual size.

## BRIDGE/STRAIN GAGE INPUT SIGNAL CONDITIONER

- ✓ Five Field Configurable  
Output Ranges: 0 to 5 V,  
0 to 10 V, 0 to 1 mA,  
0 to 20 mA, and 4 to 20 mA
- ✓ Slim Housing Mounts on  
DIN Rail for High Density  
Installations
- ✓ 1800 V Isolation  
Between Input, Output  
and Power Supply



DRG-SC models are available for a wide variety of process signals shown smaller than actual size.

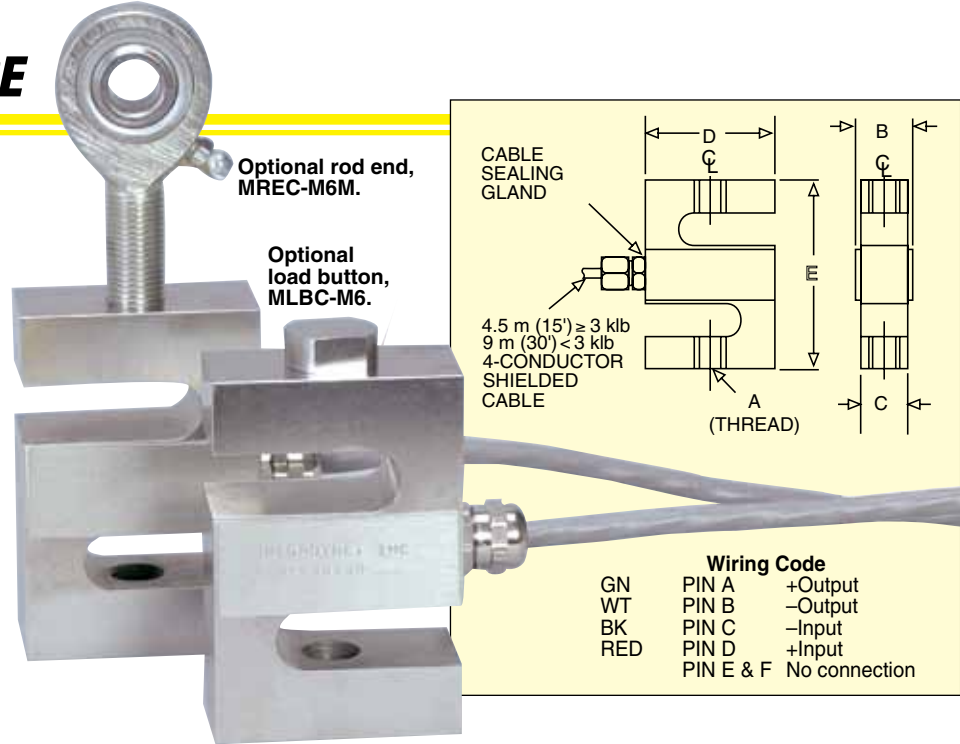


LOAD CELLS

**HIGH ACCURACY,  
 ECONOMICAL PRICE**

**Tension/Compression  
 LCM101 (Cable Style)  
 LCM111 (Connector Style)  
 10 kgf to 10,000 kgf**

**LCM101/  
 LCM111 Series**



LCM101-100, cable style,  
 shown smaller than actual size.

- ✓ All Stainless Steel for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ Calibrated in Tension
- ✓ 5-Point Calibration

Dimensions: mm (inch)

| CAPACITY (kgf) | A          | B         | C         | D        | E         | WEIGHT kg (lb) |
|----------------|------------|-----------|-----------|----------|-----------|----------------|
| 10 to 100      | M6 x 1.00  | 19 (0.75) | 13 (0.50) | 38 (1.5) | 64 (2.5)  | 0.45 (1.0)     |
| 250 to 1000    | M12 x 1.75 | 30 (1.17) | 25 (1.0)  | 51 (2.0) | 76 (3.0)  | 1.1 (2.5)      |
| 1500 to 2000   | M16 x 2.0  | 32 (1.25) | 25 (1.0)  | 51 (2.5) | 89 (3.5)  | 1.6 (3.5)      |
| 5 K to 10 K    | M24 x 2.00 | 44 (1.75) | 38 (1.5)  | 76 (3.0) | 108 (4.3) | 2.0 (4.5)      |

**Electrical (LCM101):**  
 <100 kg: 9 m (30') 24 AWG  
 ≥250 kg: 4.6 m (15') 20 AWG  
 ≥1500 kg: 4.6 m (15') 20 AWG  
 (4-conductor shielded cable)

**Mating Connector (LCM111):**  
 ≤100 kgf: PT06F8-4S (sold separately)  
 ≥250 kgf: PT06F10-6S (sold separately)

**SPECIFICATIONS**

Excitation: 10 Vdc, 15 Vdc maximum  
 Output: 3 mV/V ±0.0075 mV/V  
 Linearity: ±0.03% FSO  
 Hysteresis: ±0.02% FSO  
 Repeatability: ±0.01% FSO  
 Zero Balance: ±1% FSO  
 Operating Temp Range: -40 to 93°C (-40 to 200°F)  
 Compensated Temp Range: 17 to 71°C (60 to 160°F)  
 Thermal Effects:  
 Zero: 0.0018% FSO/°C  
 Span: 0.0018% FSO/°C  
 Safe Overload: 150% of capacity  
 Ultimate Overload: 300% of capacity  
 Input Resistance: 350 ±10 Ω  
 Output Resistance: 350 ±10 Ω  
 Full Scale Deflection: 0.25 to 0.50 mm  
 Construction: 17-4 PH stainless steel

**To Order**

| CAPACITY |        | MODEL       |             | COMPATIBLE* METERS       | LOAD BUTTON | ROD END   |
|----------|--------|-------------|-------------|--------------------------|-------------|-----------|
| kgf      | lbf    | CABLE       | CONNECTOR   |                          | MODEL NO.   | MODEL NO. |
| 10       | 22     | LCM101-10   | LCM111-10   | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 25       | 55     | LCM101-25   | LCM111-25   | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 50       | 110    | LCM101-50   | LCM111-50   | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 100      | 220    | LCM101-100  | LCM111-100  | iSeries, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 250      | 551    | LCM101-250  | LCM111-250  | iSeries, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |
| 500      | 1102   | LCM101-500  | LCM111-500  | iSeries, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |
| 1000     | 2205   | LCM101-1K   | LCM111-1K   | iSeries, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |
| 1500     | 3307   | LCM101-1.5K | LCM111-1.5K | iSeries, DP41-S, DP25B-S | MLBC-M16    | MREC-M16M |
| 2000     | 4409   | LCM101-2K   | LCM111-2K   | iSeries, DP41-S, DP25B-S | MLBC-M16    | MREC-M16M |
| 5000     | 11,023 | LCM101-5K   | LCM111-5K   | iSeries, DP41-S, DP25B-S | MLBC-M24    | MREC-M24M |
| 10,000   | 22,046 | LCM101-10K  | LCM111-10K  | iSeries, DP41-S, DP25B-S | MLBC-M24    | MREC-M24M |

Comes complete with 5-point NIST-traceable calibration.

\* Visit us online for compatible meters.

Ordering Examples: LCM111-100, 100 kgf capacity connector-style load cell.  
 PT06F8-4S, mating connector (not included). MREC-M6M, matching rod end.  
 MLBC-M6, matching load button. LCM101-2K, 2000 kgf capacity cable-style load cell  
 MREC-M16M, matching rod end.

# LOAD CELLS

**HIGH ACCURACY, ECONOMICAL PRICE**  
**STANDARD AND METRIC MODELS**

**Tension/Compression**  
**Calibrated in Tension**  
**0-25 lb to 0-1000 lb**  
**0-11 kgf to 0-455 kgf**

## **LC105/LCM105 Series** **LC115/LCM115 Series**



- ✓ Aluminum—for Light Weight and Durability
- ✓ 5-Point Calibration Provided (in Tension)



Low ranges **standard/metric**  
LC105-25 shown actual size.



REC-012M, rod end  
sold separately.

High ranges **standard/metric**  
LC105-500 shown actual size.

### **SPECIFICATIONS**

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 3 mV/V  $\pm 0.0075$  mV/V

**Linearity:**  $\pm 0.03\%$  FSO

**Hysteresis:**

$\pm 0.05\%$  FSO ( $\leq 250$  lbs or 100 kgf)

$\pm 0.02\%$  FSO ( $> 250$  lbs or 100 kgf)

**Repeatability:**  $\pm 0.01\%$  FSO

**Zero Balance:**  $\pm 1\%$  FSO

**Operating Temp Range:** -40 to 93°C (-40 to 200°F)

**Compensated Temp Range:** 17 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** 0.002% FSO/°C

**Span:** 0.002% rda/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:**  $350 \pm 5 \Omega$

**Full Scale Deflection:** 0.25 to 0.50 mm (0.010 to 0.020")

**Construction:** Aluminum

**Electrical (4-Conductor Shielded Cable):**

$\leq 100$  kgf/200 lb: 9 m (30') 24 AWG

$> 100$  kgf/200 lb: 9 m (30') 20 AWG

**LC115 Mating Connector:**

PT06F10-6S (sold separately)

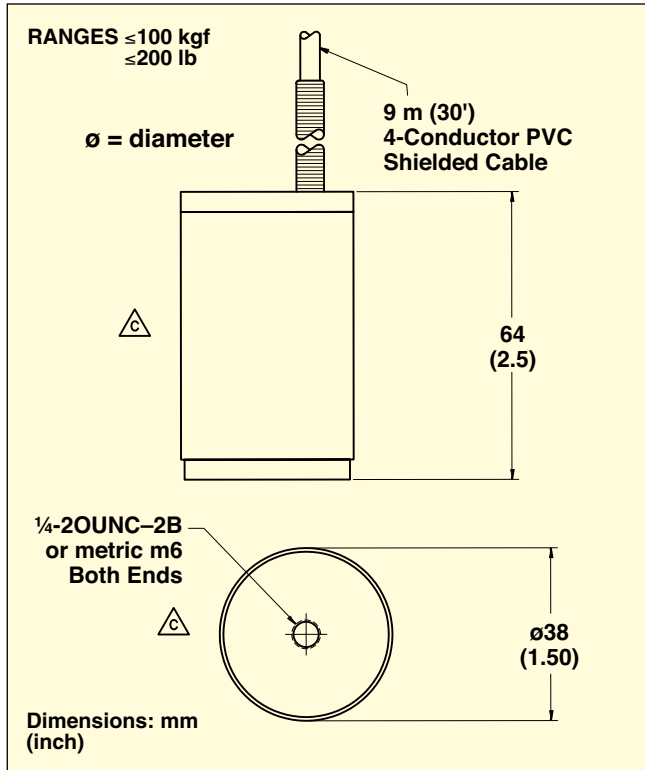
**LC115 Cable Assembly with Twist-Lock Connector:**

CA-4PC24-2-015 (sold separately)

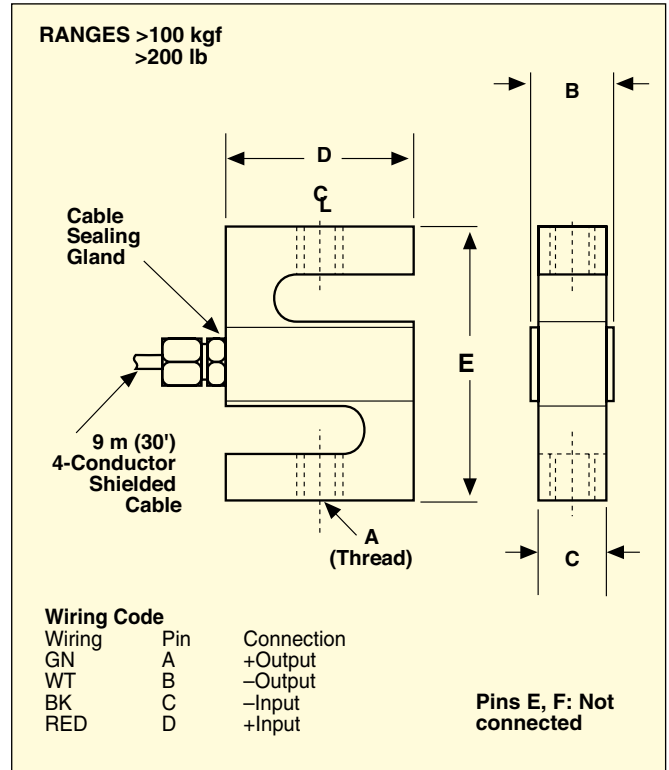
**Protection Class:** IP65



**Low Ranges**

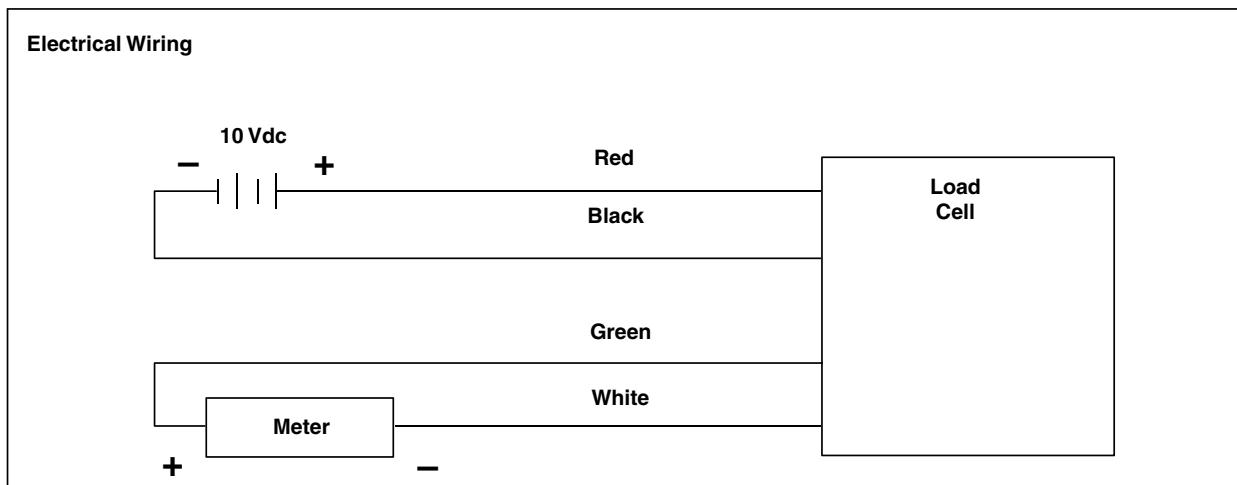


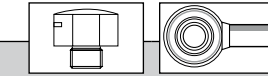
**High Ranges**



**Dimensions: mm (inch)**

| Capacity         | A                     | B         | C        | D        | E        | Weight<br>kg (lb) |
|------------------|-----------------------|-----------|----------|----------|----------|-------------------|
| 250 to 1000 (lb) | $\frac{1}{2}$ -20 UNF | 32 (1.25) | 25 (1.0) | 51 (2.0) | 76 (3.0) | 0.5 (1.1)         |
| 250 to 500 (kgf) | M12 x 1.75-6H         | 32 (1.25) | 25 (1.0) | 51 (2.0) | 76 (3.0) | 0.5 (1.1)         |





**To Order**

| Capacity               |     | Cable†<br>Model No. | Compatible Meters*      | Load Button | Rod End   |
|------------------------|-----|---------------------|-------------------------|-------------|-----------|
| lb                     | kgf |                     |                         | Model No.   | Model No. |
| <b>STANDARD MODELS</b> |     |                     |                         |             |           |
| 25                     | 11  | LC105-25            | DPiS, DP41-S, DP25B-S   | —           | —         |
| 50                     | 23  | LC105-50            | DPiS, DP41-S, DP25B-S   | —           | —         |
| 100                    | 45  | LC105-100           | DPiS, DP41-S, DP25B-S   | —           | —         |
| 200                    | 91  | LC105-200           | DPiS, DP41-S, DP25B-S   | —           | —         |
| 250                    | 114 | LC105-250†          | DPiS, DP41-S, DP25B-S   | LBC-012     | REC-012M  |
| 500                    | 227 | LC105-500†          | DPiS, DP41-S, DP25B-S   | LBC-012     | REC-012M  |
| 1000                   | 455 | LC105-1K†           | DPiS, DP41-S, DP25B-S   | LBC-012     | REC-012M  |
| <b>METRIC MODELS</b>   |     |                     |                         |             |           |
| 22                     | 10  | LCM105-10           | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 55                     | 25  | LCM105-25           | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 110                    | 50  | LCM105-50           | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 220                    | 100 | LCM105-100          | DP41-B, DP41-S, DP25B-S | MLBC-M6     | MREC-M6M  |
| 551                    | 250 | LCM105-250†         | DP41-B, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |
| 1102                   | 500 | LCM105-500†         | DP41-B, DP41-S, DP25B-S | MLBC-M12    | MREC-M12M |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

† Connector style available: change model number from LC105 to LC115, or from LCM105 to LCM115, no additional charge.

Ordering Examples: LC105-100, ±100 lb capacity load cell.

LCM105-250, 250 kgf capacity load cell. REC-012M, matching rod end. PT06F10-6S, mating connector (sold separately).

**Accessories**

| Model No.      | Description   |
|----------------|---|
| PT06F10-6S     | Mating connector for LC115/LCM115 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist lock connector for LC115/LCM115 series load cells |

**1/8 DIN STRAIN METERS WITH OPTIONAL RELAYS AND ANALOG OUTPUT**

**DP25B Series**



- ✓ Relay Output with Adjustable Deadband
- ✓ Isolated or Non-Isolated Analog Output
- ✓ Totally Programmable Color Display
- ✓ Low-Voltage Power Options

The OMEGA™ DP25B Series meters have the biggest, brightest display of any 1/8 DIN panel meter. The user can select the display color: **RED**, **AMBER**, or **GREEN**.

Along with the 4-digit, 9-segment display, these low-cost panel meters/controllers provide unparalleled accuracy in signal conditioning. Additional features include microprocessor-based operation; dual 5 A SPDT relays (optional); and isolated or non-isolated

**PATENTED**



DP25B shown smaller than actual size.

analog output in ranges of 0 to 10 Vdc, 0 to 20 mA, or 4 to 20 mA, which can be used for retransmission of the display value or as a proportional control output.

Because they accept a wide range of DC voltage and current inputs, the DP25B-E strain meters can handle most process and strain applications. Features include easy front-panel scaling to virtually any engineering units, a remote tare function for weighing applications, and a hardware lockout to prevent unauthorized changes in setup. In addition, the DP25B-E meters feature built-in excitation in 4 user-selectable voltages, which makes them compatible with most transducers and transmitters.

# 10 mm (0.75") DIAMETER SUBMINIATURE TENSION OR COMPRESSION LOAD CELLS STANDARD AND METRIC MODELS

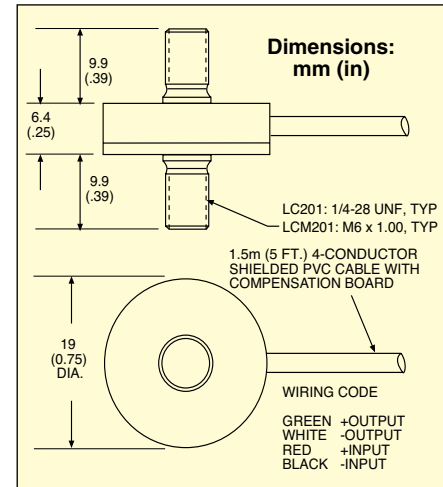
**Tension/Compression  
Calibrated in Tension  
0-25 lb to 0-300 lb  
0-100 to 0-500 N**

1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kg = 2204 lb

**STANDARD**  
LC201-50,  
shown larger  
than actual size.

**METRIC**  
LCM201-200N,  
shown larger than  
actual size.

## LC201/LCM201 Series



- ✓ Subminiature Package for Robotic Applications, 19 mm (0.75") Diameter
- ✓ Dual Mounting Studs for Easy Installation
- ✓ 5-Point Calibration Provided

**Thermal Effects:**  
Zero: 0.018% FSO/°C  
Span: 0.018% FSO/°C

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±10 Ω  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor shielded cable with compensation board

OMEGA's LC201/LCM201 Series subminiature load cells are designed for the demanding environment of industrial automation and robotics. With a diameter of only 19 mm (0.75") and all stainless steel construction, they can fit into small systems. They deliver high accuracy and long-term reliability in a subminiature package.

### STANDARD MODELS

| To Order |      |           |                    |          |
|----------|------|-----------|--------------------|----------|
| CAPACITY |      | MODEL NO. | COMPATIBLE METERS* | ROD END  |
| lb       | N    |           |                    |          |
| 25       | 111  | LC201-25  | DP41-S, DP25B-S    | REC-014F |
| 50       | 222  | LC201-50  | DP41-S, DP25B-S    | REC-014F |
| 75       | 334  | LC201-75  | DP41-S, DP25B-S    | REC-014F |
| 100      | 445  | LC201-100 | DP41-S, DP25B-S    | REC-014F |
| 300      | 1334 | LC201-300 | DP41-S, DP25B-S    | REC-014F |

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc max  
**Output:** 2 mV/V nominal  
**Accuracy:** ±1.0% FSO linearity, hysteresis, repeatability combined  
**5-Point Calibration (in Tension):** 0%, 50%, 100%, 50%, 0%  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 121°C (-65 to 250°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Protection Class:** IP54

### METRIC MODELS

| CAPACITY |     | MODEL NO.   | COMPATIBLE METERS* | ROD END  |
|----------|-----|-------------|--------------------|----------|
| N        | lb  |             |                    |          |
| 100      | 22  | LCM201-100N | DP41-S, DP25B-S    | MREC-M6F |
| 200      | 45  | LCM201-200N | DP41-S, DP25B-S    | MREC-M6F |
| 300      | 67  | LCM201-300N | DP41-S, DP25B-S    | MREC-M6F |
| 500      | 112 | LCM201-500N | DP41-S, DP25B-S    | MREC-M6F |

Comes complete with 5-point NIST traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC201-25, 25 lb capacity subminiature universal load cell.

LCM201-500N, 500 N capacity subminiature universal load cell.

# LOAD CELLS 51 mm (2") DIAMETER,

## DUAL STUD MOUNT STYLE STANDARD AND METRIC MODELS

**Tension/Compression  
 Calibrated in Tension  
 0-25 lb to 0-10,000 lb  
 0-11 kgf to 0-4537 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb

### LC203/LCM203 Series LC213/LCM213 Series



- ✓ 1.0% Interchangeability for Scale Applications
- ✓ Hermetically Sealed
- ✓ Miniature Package for Test Stands and Difficult Locations
- ✓ Heavy-Duty Construction
- ✓ 5-Point Calibration

OMEGA's LC203/LCM203 Series comprises high-accuracy, miniature, low-profile industrial load cells that come with a stud at each end for easy in-line mounting. The tough, corrosion-resistant steel construction and high-accuracy strain gages make them suitable for most industrial weighing applications.

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 2 mV/V ±1.0%

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

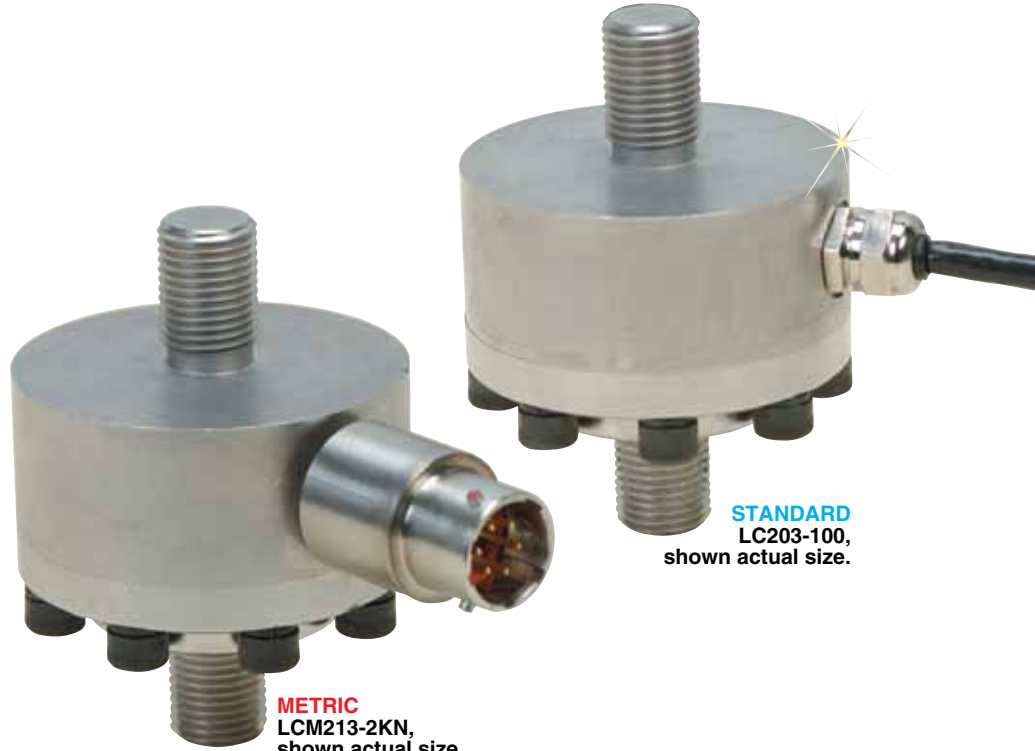
**Linearity:** ±0.15% FSO

**Hysteresis:** ±0.1% FSO

**Repeatability:** ±0.05% FSO

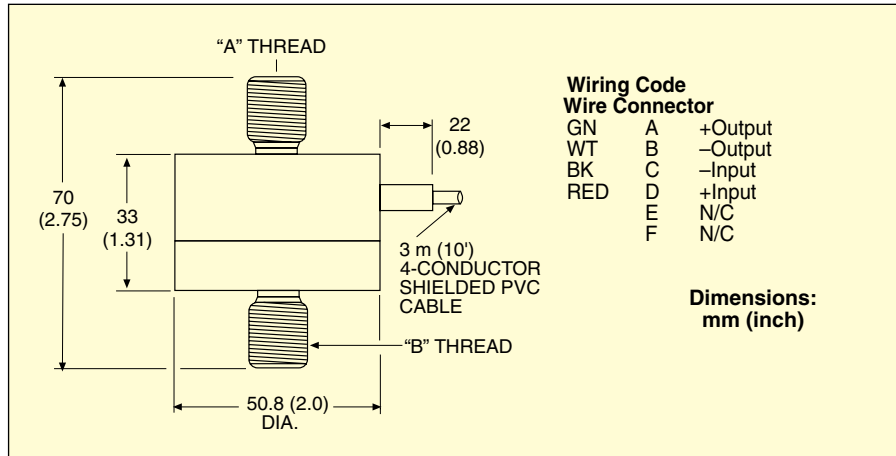
**Zero Balance:** ±2% FSO

**Deflection:** 0.025 to 0.075 mm (0.001 to 0.003")



**METRIC**  
 LCM213-2KN,  
 shown actual size.

**STANDARD**  
 LC203-100,  
 shown actual size.



**Dimensions:** mm (inch)

| MODEL         | A THREAD   | B THREAD   |
|---------------|------------|------------|
| LC203         | ½-20 UNF   | ½-20 UNF   |
| LCM203        | M12 x 1.75 | M12 x 1.75 |
| Thread Length | 19 (0.75)  | 17 (0.69)  |

**Protection Class:** IP65

**Operating Temp Range:**  
 -46 to 107°C (-50 to 225°F)

**Compensated Temp Range:**  
 16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** 0.006% FSO/°C

**Span:** 0.009% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 Ω minimum

**Output Resistance:** 350 ±10 Ω

**Construction:** Stainless steel

**Electrical:** 3 m (10') 4-conductor PVC shielded cable

**LC213/LCM213 Mating Connector:**  
 PT06F10-6S (sold separately)

# HIGH-ACCURACY MINIATURE UNIVERSAL LOAD CELLS

## 51 mm (2") DIAMETER, DUAL STUD MOUNT STYLE

**STANDARD**  
LC203-100



**METRIC**  
LCM213-2KN



All models shown slightly smaller than actual size.

**METRIC**  
LCM203-100



### STANDARD MODELS

| To Order |      |            |            |                       |
|----------|------|------------|------------|-----------------------|
| CAPACITY |      | MODEL NO.  |            | COMPATIBLE METERS**   |
| lb       | kgf  | CABLE      | CONNECTOR  |                       |
| 25       | 11   | LC203-25   | LC213-25   | DPiS, DP41-S, DP25B-S |
| 50       | 23   | LC203-50   | LC213-50   | DPiS, DP41-S, DP25B-S |
| 100      | 45   | LC203-100  | LC213-100  | DPiS, DP41-S, DP25B-S |
| 200      | 91   | LC203-200  | LC213-200  | DPiS, DP41-S, DP25B-S |
| 300      | 136  | LC203-300  | LC213-300  | DPiS, DP41-S, DP25B-S |
| 500      | 227  | LC203-500  | LC213-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 455  | LC203-1K   | LC213-1K   | DPiS, DP41-S, DP25B-S |
| 2000     | 909  | LC203-2K   | LC213-2K   | DPiS, DP41-S, DP25B-S |
| 2500     | 1134 | LC203-2.5K | LC213-2.5K | DPiS, DP41-S, DP25B-S |
| 5000     | 2269 | LC203-5K   | LC213-5K   | DPiS, DP41-S, DP25B-S |
| 8000     | 3630 | LC203-8K   | LC213-8K   | DPiS, DP41-S, DP25B-S |
| 10,000   | 4537 | LC203-10K  | LC213-10K  | DPiS, DP41-S, DP25B-S |

### ACCESSORIES

| MODEL NO.      | DESCRIPTION  |
|----------------|--|
| REC-012F       | Rod end for LC203/LC213  |
| PT06F10-6S     | Mating connector for LC213 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist-lock connector for LC213 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

Ordering Examples: LC203-500, 500 lb capacity cable style, dual stud mount load cell.

LC213-2K, 2000 lb capacity connector style, dual stud mount load cell, PT06F10-6S, mating connector.

### METRIC MODELS

| To Order |        |             |             |                        |
|----------|--------|-------------|-------------|------------------------|
| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS**    |
| N        | lb     | CABLE       | CONNECTOR   |                        |
| 100      | 22     | LCM203-100N | LCM213-100N | DPiS, DP41-S, DP25B-S  |
| 200      | 45     | LCM203-200N | LCM213-200N | DPiS, DP41-S, DP25B-S  |
| 500      | 112    | LCM203-500N | LCM213-500N | DPiS, DP41-S, DP25B-S  |
| 1000     | 225    | LCM203-1KN  | LCM213-1KN  | DPiS, DP41-S, DP25B-S  |
| 2000     | 450    | LCM203-2KN  | LCM213-2KN  | DPiS, DP41-S, DP25B-S  |
| 5000     | 1124   | LCM203-5KN  | LCM213-5KN  | DPiS, DP41-S, DP25B-S  |
| 10,000   | 2248   | LCM203-10KN | LCM213-10KN | DPiS, DP41-S, DP25B-S  |
| 20,000   | 4496   | LCM203-20KN | LCM213-20KN | DPiS, DP41-S, DP25B-S* |
| 50,000   | 11,241 | LCM203-50KN | LCM213-50KN | DPiS, DP41-S, DP25B-S* |

### ACCESSORIES

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| MREC-M12F      | Rod end for LCM203/LCM213   |
| PT06F10-6S     | Mating connector for LCM213 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist-lock connector for LCM213 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meters. \*\* Visit us online for compatible meters.

Ordering Examples: LCM203-500N, 500 Newton capacity dual stud-mount load cell.

MREC-M12F, accessory rod end.

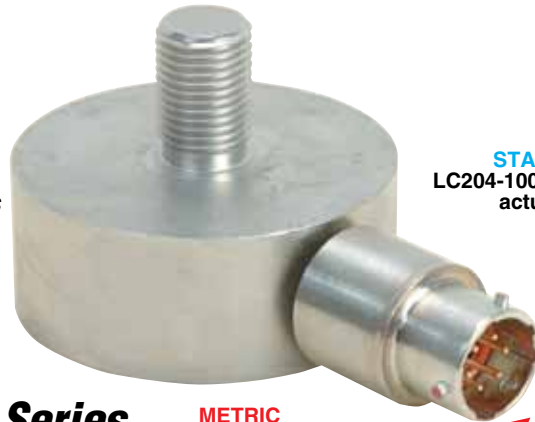
# CELLS SURFACE MOUNT STYLE

## 51 mm (2") DIAMETER STANDARD AND METRIC MODELS

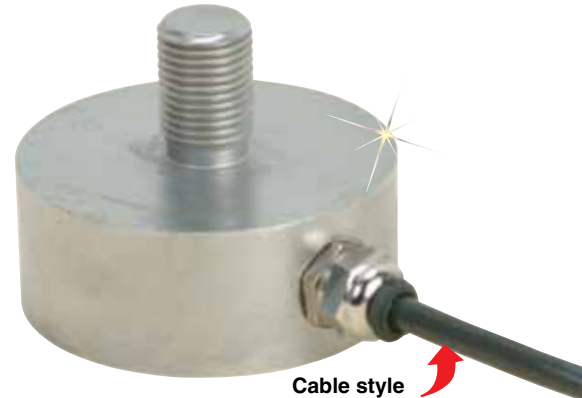


**Tension/Compression  
 Calibrated in Tension  
 0-25 lb to 0-10,000 lb  
 0-100 to 0-50,000 N**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kgf = 2204 lb



**STANDARD**  
 LC204-100 shown  
 actual size.



**Cable style**  
 LC204/LCM204 units.

### LC204/LCM204 Series LC214/LCM214 Series

**METRIC**  
 LCM214-100N  
 shown actual size.

**Twist-lock connector**  
 LC214/LCM214 units.



**Bottom view of all units,**  
 Shown smaller than actual size.



Standard

- ✓ FM Intrinsically Safe
- ✓ 1.0% Interchangeability for Scale Applications
- ✓ Miniature Package for Test Stands and Difficult Locations
- ✓ Designed to be Mounted on a Flat Surface
- ✓ 5-Point Calibration

OMEGA's LC204/LCM204 Series load cells are designed to be surface mounted with the load applied through the mounting stud. The high linearity (0.15%) and all stainless steel construction make them ideal for industrial and commercial weighing and for force measuring applications.

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 2 mV/V ±1.0%

**5-Point Calibration (in Tension):**  
 0%, 50%, 100%, 50%, 0%

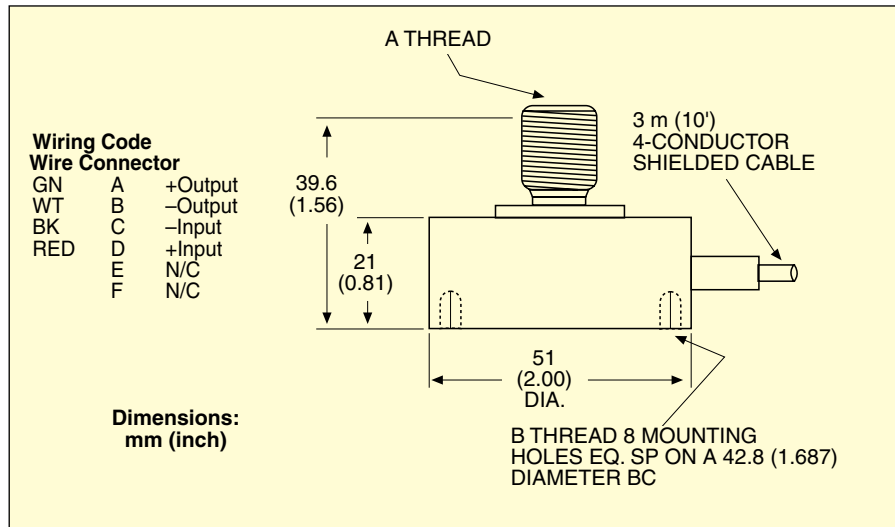
**Linearity:** ±0.15% FSO

**Hysteresis:** ±0.1% FSO

**Repeatability:** ±0.05% FSO

**Zero Balance:** ±2% FSO

**Operating Temp Range:**  
 -46 to 107°C (-50 to 225°F)



**Dimensions:** mm (inch)

| MODEL         | A THREAD                   | B THREAD                       |
|---------------|----------------------------|--------------------------------|
| LC204/LC214   | ½-20 UNF-2A<br>19 (0.75) L | 10-32 UNF<br>6.3 (0.25) DP min |
| LCM204/LCM214 | M12 x 1.75<br>19 (0.75) L  | M5 x 0.8<br>6.3 (0.25) DP min  |

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Protection Class:** IP65

**Thermal Effects:**

Zero: 0.0045% FSO/°F

Span: 0.009% FSO/°F

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 Ω minimum

**Output Resistance:** 350 ±10 Ω

**Construction:** Stainless steel

**Electrical:** 3 m (10') 4-conductor shielded cable

**LC214/LCM214 Mating Connector:**  
 PT06F10-6S (sold separately)

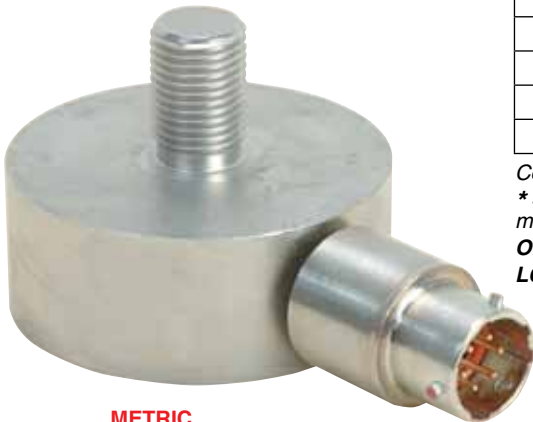
**LC214/LCM214 Cable Assembly with Twist Lock Connector:**  
 CA 1BC24 2 015 (sold separately)



**STANDARD**  
LC204-100 shown  
actual size.



Bottom view of all units,  
shown smaller than actual size.



**METRIC**  
LCM214-100N  
shown actual size.

### STANDARD MODELS

| To Order |        |            |            |                       |
|----------|--------|------------|------------|-----------------------|
| CAPACITY |        | MODEL NO.  |            | COMPATIBLE METERS**   |
| lb       | N      | CABLE      | CONNECTOR  |                       |
| 25       | 111    | LC204-25   | LC214-25   | DPiS, DP41-S, DP25B-S |
| 50       | 222    | LC204-50   | LC214-50   | DPiS, DP41-S, DP25B-S |
| 100      | 445    | LC204-100  | LC214-100  | DPiS, DP41-S, DP25B-S |
| 200      | 890    | LC204-200  | LC214-200  | DPiS, DP41-S, DP25B-S |
| 300      | 1334   | LC204-300  | LC214-300  | DPiS, DP41-S, DP25B-S |
| 500      | 2224   | LC204-500  | LC214-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 4448   | LC204-1K   | LC214-1K   | DPiS, DP41-S, DP25B-S |
| 2000     | 8897   | LC204-2K   | LC214-2K   | DPiS, DP41-S, DP25B-S |
| 2500     | 11,121 | LC204-2.5K | LC214-2.5K | DPiS, DP41-S, DP25B-S |
| 5000     | 22,242 | LC204-5K   | LC214-5K   | DPiS, DP41-S, DP25B-S |
| 8000     | 35,587 | LC204-8K   | LC214-8K   | DPiS, DP41-S, DP25B-S |
| 10,000   | 44,484 | LC204-10K  | LC214-10K  | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC204-25, 25 lb capacity surface mount load cell.

LC204-1K, 1000 lb capacity surface mount load cell.

### METRIC MODELS

| To Order |        |             |             |                        |
|----------|--------|-------------|-------------|------------------------|
| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS**    |
| N        | lb     | CABLE       | CONNECTOR   |                        |
| 100      | 22     | LCM204-100N | LCM214-100N | DPiS, DP41-S, DP25B-S  |
| 200      | 45     | LCM204-200N | LCM214-200N | DPiS, DP41-S, DP25B-S  |
| 500      | 112    | LCM204-500N | LCM214-500N | DPiS, DP41-S, DP25B-S  |
| 1000     | 225    | LCM204-1KN  | LCM214-1KN  | DPiS, DP41-S, DP25B-S  |
| 2000     | 450    | LCM204-2KN  | LCM214-2KN  | DPiS, DP41-S, DP25B-S  |
| 5000     | 1124   | LCM204-5KN  | LCM214-5KN  | DPiS, DP41-S, DP25B-S  |
| 10,000   | 2248   | LCM204-10KN | LCM214-10KN | DPiS, DP41-S, DP25B-S  |
| 20,000   | 4496   | LCM204-20KN | LCM214-20KN | DPiS, DP41-S, DP25B-S* |
| 50,000   | 11,241 | LCM204-50KN | LCM214-50KN | DPiS, DP41-S, DP25B-S* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

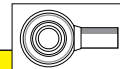
\* 4-digit meter. \*\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCM204-100, 100 N capacity surface-mount load cell.

LCM204-5KN, 5000 N capacity surface-mount load cell.

### ACCESSORIES

| MODEL NO.  | DESCRIPTION   |
|------------|---|
| REC-012F   | Rod end for LC204/LC214 Series                      |
| MREC-M12F  | Rod end for LCM204/LCM214 Series                    |
| PT06F10-6S | Mating connector for LC214/LCM214 series load cells |



# STAINLESS STEEL COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS

### Compression

0-25 lb to 0-1000 lb

0-100 to 0-5000 N

1 Newton = 0.2248 lb

1 daNewton = 10 Newtons

1 lb = 454 g

1 t = 1000 kg = 2204 lb

### LC302/LCM302 Series



- ✓ Small 19 mm (0.75") Dia.
- ✓ Low 13 mm (0.5") Profile
- ✓ Robotic and Test Bench Applications
- ✓ Built-In Load Button for Easy Installation
- ✓ 5-Point Traceable Calibration Provided

The LC302/LCM302 Series load cells are only 19 mm (¾") in diameter and fit in the smallest places. Their high ±0.5% accuracy and small package solve many industrial force measurement applications. The all stainless steel construction and high-quality strain gage ensure long-term reliability.

### SPECIFICATIONS

**Excitation:** 5 Vdc, 15 Vdc max

**Output:** 1 mV/V (nominal)

**Accuracy:** ±0.5% FSO linearity, hysteresis, repeatability combined

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-54 to 107°C (-65 to 225°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

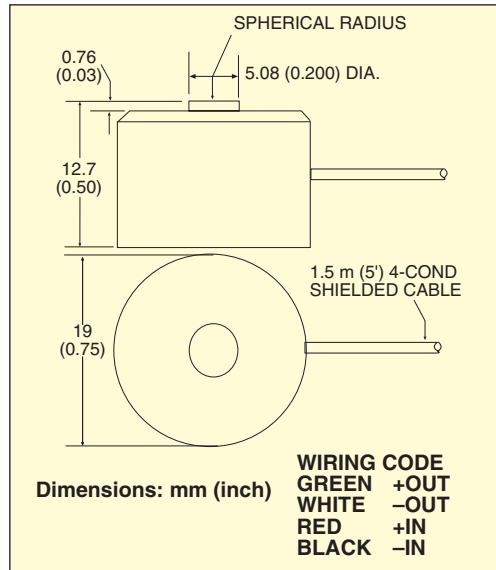
**Compensation Temp:**

**Zero:** 0.009% FSO/°C

**Span:** 0.036% FSO/°C

**Safe Overload:** 150% of capacity

**Protection Class:** IP54



**Deflection:** 0.03 to 0.08 mm (0.001 to 0.003")

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Construction:** Stainless steel

**Electrical Connection:** 1.5 m (5')

4-conductor insulated cable with temperature compensation board

### STANDARD MODELS

| To Order |      |           |                       |
|----------|------|-----------|-----------------------|
| CAPACITY |      | MODEL NO. | COMPATIBLE METERS     |
| lb       | N    |           |                       |
| 25       | 111  | LC302-25  | DPiS, DP41-S, DP25B-S |
| 50       | 222  | LC302-50  | DPiS, DP41-S, DP25B-S |
| 100      | 445  | LC302-100 | DPiS, DP41-S, DP25B-S |
| 250      | 1112 | LC302-250 | DPiS, DP41-S, DP25B-S |
| 500      | 2224 | LC302-500 | DPiS, DP41-S, DP25B-S |
| 1000     | 4448 | LC302-1K  | DPiS, DP41-S, DP25B-S |

### METRIC MODEL

| CAPACITY |      | MODEL NO.   | COMPATIBLE METERS        |
|----------|------|-------------|--------------------------|
| N        | lb   |             |                          |
| 100      | 22.5 | LCM302-100N | iSeries, DP41-S, DP25B-S |
| 200      | 45   | LCM302-200N | iSeries, DP41-S, DP25B-S |
| 500      | 112  | LCM302-500N | iSeries, DP41-S, DP25B-S |
| 1000     | 225  | LCM302-1KN  | iSeries, DP41-S, DP25B-S |
| 2000     | 450  | LCM302-2KN  | iSeries, DP41-S, DP25B-S |
| 5000     | 1124 | LCM302-5KN  | iSeries, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

**Ordering Examples:** LC302-25, 25 lb capacity load cell.

LC302-100, 100 lb capacity load cell.

LCM302-100N, 100 Newton capacity load cell.

LCM302-2KN, 2000 N capacity load cell.



# COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS



### Compression

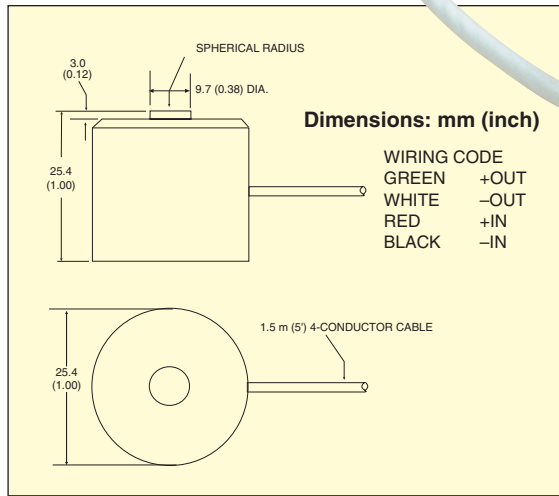
**0-100 lb to 0-10,000 lb**  
**0-500 to 0-50,000 N**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

## LC304/LCM304 Series



- ✓ Heavy-Duty Design
- ✓ Built-In Load Button for Easy Installation
- ✓ Miniature 25 mm (1") Diameter and 25 mm (1") High Case
- ✓ 5-Point Calibration Provided



LC304-1K, shown actual size.

**Deflection:** 0.025 to 0.076 mm (0.001 to 0.003")  
**Protection Class:** IP65  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor cable

### STANDARD MODELS

OMEGA's LC304/LCM304 Series load cells offer the highest output of all miniature load cells. Their small 25 mm (1") diameter makes it easy to mount them in a pocket or on a flat surface. The rugged stainless steel case and high-quality construction ensure reliability.

| To Order |        |            |                          |
|----------|--------|------------|--------------------------|
| CAPACITY |        | MODEL NO.  | COMPATIBLE METERS        |
| lb       | N      |            |                          |
| 100      | 445    | LC304-100  | iSeries, DP41-S, DP25B-S |
| 500      | 2224   | LC304-500  | iSeries, DP41-S, DP25B-S |
| 1000     | 4448   | LC304-1K   | iSeries, DP41-S, DP25B-S |
| 3000     | 13,345 | LC304-3K   | iSeries, DP41-S, DP25B-S |
| 5000     | 22,242 | LC304-5K   | iSeries, DP41-S, DP25B-S |
| 7500     | 33,363 | LC304-7.5K | iSeries, DP41-S, DP25B-S |
| 10,000   | 44,484 | LC304-10K  | iSeries, DP41-S, DP25B-S |

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum  
**Output:** 2 mV/V nominal  
**Accuracy:** ±0.5% FSO linearity, hysteresis, repeatability combined  
**5-Point Calibration:** 0%, 50%, 100%, 50%, 0%  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
 Zero: 0.009% FSO/°C  
 Span: 0.036% FSO/°C

### METRIC MODELS

| CAPACITY |        | MODEL NO.   | COMPATIBLE METERS        |
|----------|--------|-------------|--------------------------|
| N        | lb     |             |                          |
| 500      | 112    | LCM304-500N | DP41-S, DP25B-S, iSeries |
| 2000     | 450    | LCM304-2KN  | DP41-S, DP25B-S, iSeries |
| 5000     | 1124   | LCM304-5KN  | DP41-S, DP25B-S, iSeries |
| 10,000   | 2248   | LCM304-10KN | DP41-S, DP25B-S, iSeries |
| 20,000   | 4496   | LCM304-20KN | DP41-S, DP25B-S, iSeries |
| 50,000   | 11,240 | LCM304-50KN | DP41-S, DP25B-S, iSeries |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
**Ordering Examples:** LC304-100, 100 lb capacity load cell.  
 LC304-5K, 5000 lb capacity load cell.  
 LCM304-5KN, 5000 N capacity load cell.

# 51 mm (2") MINIATURE STAINLESS STEEL

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## COMPRESSION LOAD CELL WITH MOUNTING HOLES STANDARD AND METRIC MODELS

**LC305/LCM305 (Cable Style)**  
**LC315/LCM315 (Connector Style)**  
**Compression**  
**0-25 lb to 0-20,000 lb**  
**0-100 to 50,000 N**

### LC305/LC315 Series LCM305/LCM315



Standard

- ✓ 0.25% Interchangeability
- ✓ Built-In Load Button for Easy Installation
- ✓ 5-Point Calibration

OMEGA's LC305/LCM305 Series consists of heavy-duty miniature (2" diameter) compression load cells. A small size and a low profile make these cells ideal for test benches, prototype structures, and industrial weighing applications.

### SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 2 mV/V ( $\pm 0.25\%$ )

**5-Point Calibration:**  
0%, 50%, 100%, 50%, 0%

**Linearity:**  $\pm 0.15\%$  FSO

**Hysteresis:**  $\pm 0.1\%$  FSO

**Repeatability:**  $\pm 0.05\%$  FSO

**Zero Balance:**  $\pm 2\%$  FSO

**Deflection:** 0.025 to 0.075 mm  
(0.001 to 0.003")

**Operating Temp Range:**  
-46 to 107°C (-50 to 225°F)

**Compensated Temp Range:**  
16 to 71°C (60 to 160°F)

**Thermal Effects:**

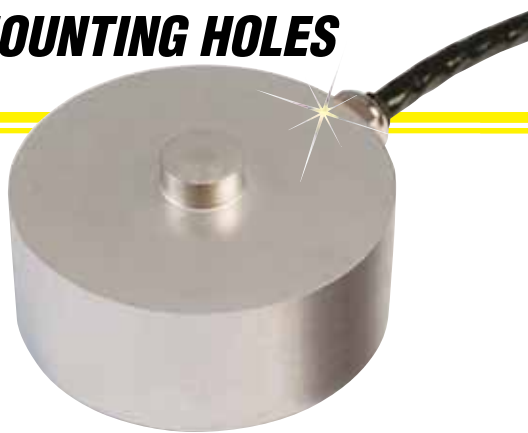
**Zero:** 0.0025% FSO/°F

**Span:** 0.005% FSO/°F



LC315-2KN, shown actual size.

LC305-1K, shown actual size.

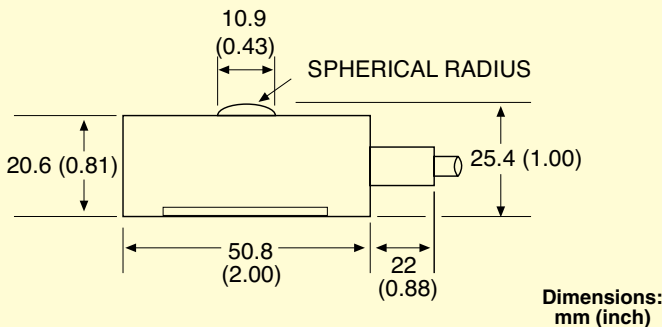


Available with cable or twist-lock connector.

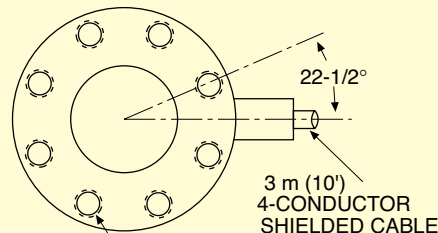
Bottom view of all models shows mounting holes.



**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Protection Class:** IP65  
**Input Resistance:** 360  $\Omega$  minimum  
**Output Resistance:** 350  $\Omega \pm 10 \Omega$   
**Construction:** Stainless steel  
**Electrical:** 3 m (10') 4-conductor, color-coded, shielded PVC cable; LC315 mating connector, PT06F10-6S, (sold separately)



| Wiring Code    |         |
|----------------|---------|
| Wire Connector |         |
| GN             | +Output |
| WT             | -Output |
| BK             | -Input  |
| RED            | +Input  |
| E              | N/C     |
| F              | N/C     |



LC305: 10-32 UNF x 10.2 (0.40) DP  
 LCM305: M5 x 0.8 x 10.2 (0.40) DP  
 8 MOUNTING HOLES EQ. SP  
 ON A 42.8 (1.687) DIAMETER

**STANDARD MODELS**



LC315-500, shown actual size.

LC315/LCM315 models with twist-lock connector.

Bottom view of all models shows mounting holes.



LC305/LCM305 models with 3 m (10') cable.



LCM305-2KN, shown actual size.

| CAPACITY |        | MODEL NO.  |            | COMPATIBLE METERS      |
|----------|--------|------------|------------|------------------------|
| lb       | N      | CABLE      | CONNECTOR  |                        |
| 25       | 111    | LC305-25   | LC315-25   | DPiS, DP41-S, DP25B-S  |
| 50       | 222    | LC305-50   | LC315-50   | DPiS, DP41-S, DP25B-S  |
| 100      | 445    | LC305-100  | LC315-100  | DPiS, DP41-S, DP25B-S  |
| 200      | 890    | LC305-200  | LC315-200  | DPiS, DP41-S, DP25B-S  |
| 300      | 1334   | LC305-300  | LC315-300  | DPiS, DP41-S, DP25B-S  |
| 500      | 2224   | LC305-500  | LC315-500  | DPiS, DP41-S, DP25B-S  |
| 1000     | 4448   | LC305-1K   | LC315-1K   | DPiS, DP41-S, DP25B-S  |
| 2000     | 8896   | LC305-2K   | LC315-2K   | DPiS, DP41-S, DP25B-S  |
| 2500     | 11,120 | LC305-2.5K | LC315-2.5K | DPiS, DP41-S, DP25B-S  |
| 5000     | 22,240 | LC305-5K   | LC315-5K   | DPiS, DP41-S, DP25B-S  |
| 8000     | 35,584 | LC305-8K   | LC315-8K   | DPiS, DP41-S, DP25B-S  |
| 10,000   | 44,480 | LC305-10K  | LC315-10K  | DPiS, DP41-S, DP25B-S  |
| 20,000   | 88,960 | LC305-20K  | LC315-20K  | DPiS, DP41-S, DP25B-S* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.  
\* 4-digit meter.

Ordering Examples: LC305-1K, 1000 lb capacity cable-style load cell.

LC315-20K, 20,000 lb capacity connector-style load cell, and PT06F10-6S, mating connector (sold separately).

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS        |
|----------|--------|-------------|-------------|--------------------------|
| N        | lb     | CABLE       | CONNECTOR   |                          |
| 100      | 22.5   | LCM305-100N | LCM315-100N | iSeries, DP41-S, DP25B-S |
| 200      | 45     | LCM305-200N | LCM315-200N | iSeries, DP41-S, DP25B-S |
| 500      | 112    | LCM305-500N | LCM315-500N | iSeries, DP41-S, DP25B-S |
| 1000     | 225    | LCM305-1KN  | LCM315-1KN  | iSeries, DP41-S, DP25B-S |
| 2000     | 450    | LCM305-2KN  | LCM315-2KN  | iSeries, DP41-S, DP25B-S |
| 5000     | 1124   | LCM305-5KN  | LCM315-5KN  | iSeries, DP41-S, DP25B-S |
| 10,000   | 2248   | LCM305-10KN | LCM315-10KN | iSeries, DP41-S, DP25B-S |
| 20,000   | 4496   | LCM305-20KN | LCM315-20KN | iSeries, DP41-S, DP25B-S |
| 50,000   | 11,240 | LCM305-50KN | LCM315-50KN | iSeries, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

Ordering Example: LCM315-10KN, 10,000 N capacity connector-style load cell.  
PT06F10-6S, mating connector, sold separately.

**ACCESSORY**

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| PT06F10-6S     | Mating connector for LC315/LCM315 series load cells                         |
| CA-4PC24-2-015 | Cable assembly with twist-lock connector for LC315/LCM315 series load cells |

**Compatible Meters/Controllers for LC305 Series Load Cells**

The iSeries is available in 1/32, 1/16, and 1/8 DIN programmable process controllers with serial and embedded Internet/Ethernet communications (Order EI Option CNI16D). The iSeries features programmable color displays, free software and ActiveX Controls, selectable full autotune PID control, and NEMA 4 (IP65) rated front bezel.

Ordering Examples: DPiS8, strain/process (monitor only), 1/8 DIN, CNI8, strain/process controller with 2 control outputs.



LOAD CELLS  
F

# “TOP HAT” LOAD CELL

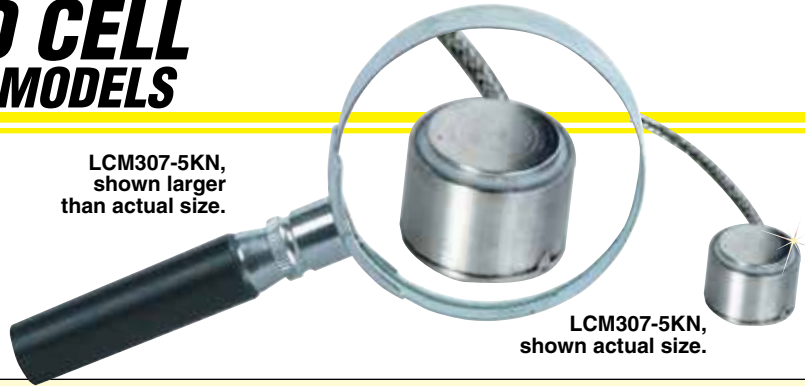
## STANDARD AND METRIC MODELS

### Compression

**0-250 lb to 0-100,000 lb**  
**0-1 to 0-500 kN**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

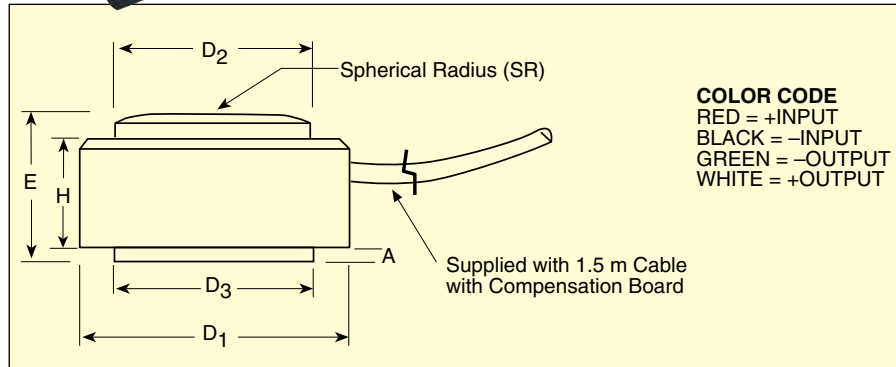
LCM307-5KN,  
 shown larger  
 than actual size.



### LC307/LCM307 Series



Standard



Small in size but not in performance, Series LC307/LCM307 top hat load cells are designed for applications with minimum space and high-capacity loads up to 100,000 lb. Rugged all stainless steel construction and high-performance strain gages ensure superior linearity and stability. Temperature compensation is done by a miniature circuit board in the load cell's cable. These cells are designed to be mounted on a smooth, flat surface.

### SPECIFICATIONS

**Excitation:** 5 Vdc  
**Output:** 1.75 mV/V nominal  
**Accuracy:** 0.75% FS BFSL (includes linearity, hysteresis and repeatability)  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 121°C (-65 to 250°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

### Thermal Effects:

**Span:** ±0.018% rdg/°C  
**Zero:** ±0.018% FSO/°C  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Bridge Resistance:** 350 Ω minimum  
**Full Scale Deflection:** 0.001 to 0.003"  
**Electrical Connection:** 1.5 m (5') 4-conductor cable with compensation board  
**Protection Class:** IP54

### STANDARD Dimensions: mm (inch)

| CAPACITY (lb) | D1          | D2          | D3          | E           | H           | A          |
|---------------|-------------|-------------|-------------|-------------|-------------|------------|
| 250           | 12.7 (0.5)  | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 500           | 12.7 (0.5)  | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 1000          | 12.7 (0.5)  | 10.2 (0.40) | 6.1 (0.24)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 2000          | 12.7 (0.5)  | 10.2 (0.40) | 7.1 (0.28)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 3000          | 12.7 (0.5)  | 10.2 (0.40) | 7.6 (0.30)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 5000          | 16 (0.63)   | 13.5 (0.53) | 13.5 (0.53) | 15.2 (0.60) | 13.5 (0.53) | 0.4 (0.02) |
| 7500          | 22.2 (0.88) | 19.3 (0.76) | 12.7 (0.50) | 16 (0.63)   | 14 (0.55)   | 0.4 (0.02) |
| 10,000        | 22.2 (0.88) | 19.3 (0.76) | 14 (0.55)   | 16 (0.63)   | 14 (0.55)   | 0.4 (0.02) |
| 50,000        | 44.5 (1.75) | 31.8 (1.25) | 25.4 (1.00) | 35.1 (1.38) | 31.4 (1.23) | 0.4 (0.02) |
| 100,000       | 50.8 (2.00) | 38.1 (1.50) | 30.5 (1.20) | 41.4 (1.63) | 37.3 (1.47) | 0.8 (0.03) |

### METRIC Dimensions: mm (inch)

| CAPACITY (kN) | D1          | D2          | D3          | E           | H           | A          |
|---------------|-------------|-------------|-------------|-------------|-------------|------------|
| 1             | 12.7 (0.50) | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 2             | 12.7 (0.50) | 10.2 (0.40) | 5.8 (0.23)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 5             | 12.7 (0.50) | 10.2 (0.40) | 6.1 (0.24)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 10            | 12.7 (0.50) | 10.2 (0.40) | 7.1 (0.28)  | 9.5 (0.38)  | 8.1 (0.32)  | 0.3 (0.01) |
| 20            | 16 (0.63)   | 13.5 (0.53) | 13.5 (0.53) | 15.2 (0.6)  | 13.5 (0.53) | 0.4 (0.02) |
| 50            | 22.2 (0.88) | 19.3 (0.76) | 14 (0.55)   | 16 (0.63)   | 14 (0.55)   | 0.4 (0.02) |
| 200           | 44.5 (1.75) | 31.8 (1.25) | 25.4 (1.00) | 35.1 (1.38) | 31.4 (1.23) | 0.4 (0.02) |
| 500           | 50.8 (2.00) | 38.1 (1.50) | 30.5 (1.20) | 41.4 (1.63) | 37.3 (1.47) | 0.8 (0.03) |

**STANDARD MODELS**

| <b>To Order</b> |           |                   |                            |
|-----------------|-----------|-------------------|----------------------------|
| <b>CAPACITY</b> |           | <b>MODEL NO.</b>  | <b>COMPATIBLE METERS**</b> |
| <b>lb</b>       | <b>kN</b> |                   |                            |
| 250             | 1.11      | <b>LC307-250</b>  | DPiS, DP41-S, DP25B-S      |
| 500             | 2.22      | <b>LC307-500</b>  | DPiS, DP41-S, DP25B-S      |
| 1000            | 4.45      | <b>LC307-1K</b>   | DPiS, DP41-S, DP25B-S      |
| 2000            | 8.90      | <b>LC307-2K</b>   | DPiS, DP41-S, DP25B-S      |
| 3000            | 13.3      | <b>LC307-3K</b>   | DPiS, DP41-S, DP25B-S      |
| 5000            | 22.2      | <b>LC307-5K</b>   | DPiS, DP41-S, DP25B-S      |
| 7500            | 33.4      | <b>LC307-7.5K</b> | DPiS, DP41-S, DP25B-S      |
| 10,000          | 44.5      | <b>LC307-10K</b>  | DPiS, DP41-S, DP25B-S      |
| 50,000          | 222       | <b>LC307-50K</b>  | DPiS, DP41-S, DP25B-S*     |
| 100,000         | 445       | <b>LC307-100K</b> | DPiS, DP41-S, DP25B-S*     |

LCM307-500, shown larger than actual size.

**METRIC MODELS**

| <b>CAPACITY</b> |           | <b>MODEL NO.</b>    | <b>COMPATIBLE METERS</b> |
|-----------------|-----------|---------------------|--------------------------|
| <b>kN</b>       | <b>lb</b> |                     |                          |
| 1               | 225       | <b>LCM307-1KN</b>   | DPiS, DP41-S, DP25B-S    |
| 2               | 450       | <b>LCM307-2KN</b>   | DPiS, DP41-S, DP25B-S    |
| 5               | 1124      | <b>LCM307-5KN</b>   | DPiS, DP41-S, DP25B-S    |
| 10              | 2248      | <b>LCM307-10KN</b>  | DPiS, DP41-S, DP25B-S    |
| 20              | 4496      | <b>LCM307-20KN</b>  | DPiS, DP41-S, DP25B-S    |
| 50              | 11,240    | <b>LCM307-50KN</b>  | DPiS, DP41-S, DP25B-S    |
| 200             | 44,960    | <b>LCM307-200KN</b> | DPiS, DP41-S, DP25B-S    |
| 500             | 112,400   | <b>LCM307-500KN</b> | DPiS, DP41-S, DP25B-S    |

Comes complete with 5-point NIST-traceable calibration and 90 kΩ shunt data.

\* 4-digit meter.

**Ordering Examples:** **LC307-5K**, 5000 lb capacity top hat load cell.

**LC307-500**, 500 lb capacity top hat load cell.

**LCM307-50KN**, 50 kN capacity top hat load cell.

**LCM307-10KN**, 10 kN capacity top hat load cell.

# MAKE IT WIRELESS!

## ADD WIRELESS CAPABILITY TO YOUR PROCESS MEASUREMENT SYSTEM!



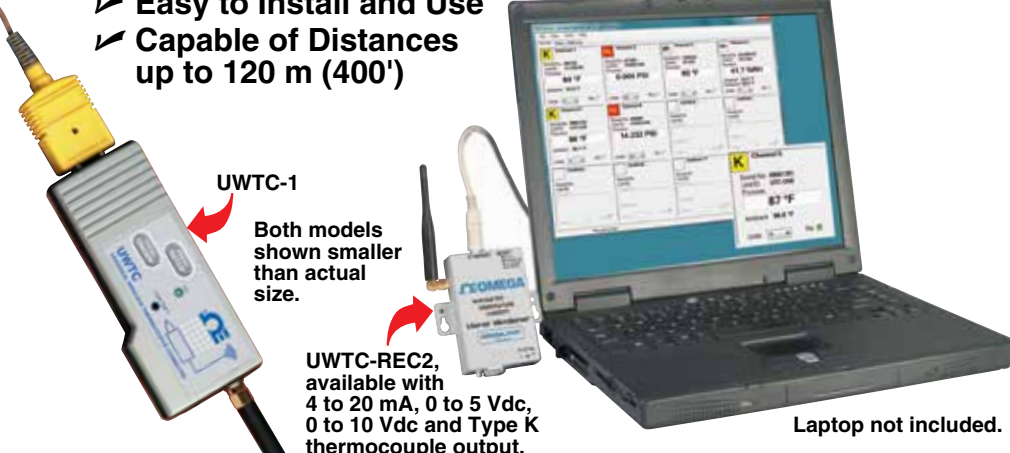
WRS232-USB wireless transmitter, shown close to actual size.

**Wireless Connections From Your Sensor to Your Instrumentation:**

- ✓ Thermocouple, RTD, Infrared Temperature, Humidity, pH, as well as Process Voltage/Current
- ✓ Easy to Install and Use
- ✓ Capable of Distances up to 120 m (400')

**Wireless Communications From Your Instrument to a PC:**

- ✓ Convert the RS232 Signal on Your Meter, Controller or PLC
- ✓ Works with any PC with a USB Port
- ✓ Easy to Install with Seamless Operation
- ✓ Capable of Distances up to 120 m (400')



UWTC-1

Both models shown smaller than actual size.

UWTC-REC2, available with 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc and Type K thermocouple output.

Laptop not included.

# COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS

**Models Available  
 with Dual Bridge or  
 Built-In Amplifiers!**

**LC401 (Cable Style)**  
**LC411 (Connector Style)**  
**Compression**  
**0-50 lb to 0-400,000 lb**  
**0-25 kg to 0-5000 kgf**



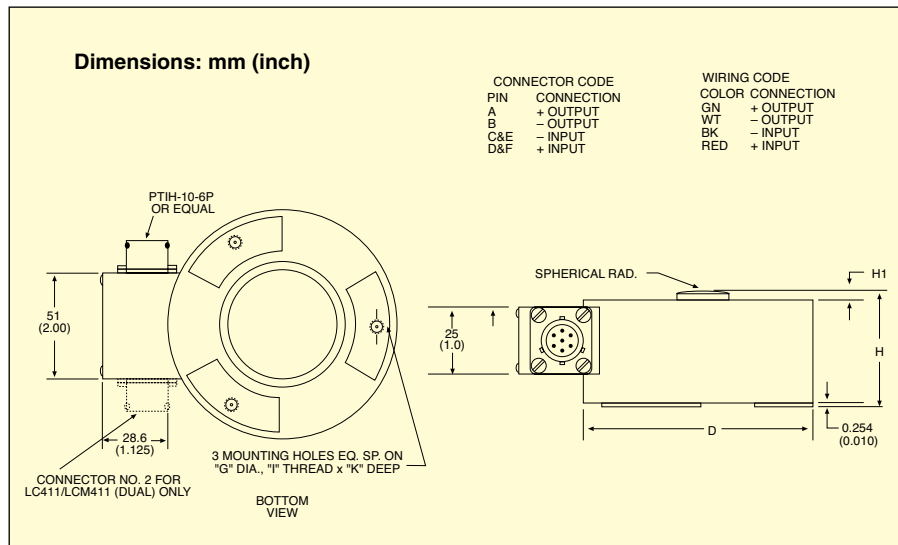
PT06F10-6S,  
 mating connector  
 required. Sold  
 separately.

LC411-20K connector style,  
 shown actual size.

### LC401/LCM401 Series LC411/LCM411 Series



- Dual-Bridge Models Available
- Models Available with Built-In 5V Amplifiers
- All Stainless Steel for Harsh Industrial Applications
- 0.25% Interchangeability for Multiple Load Cell Applications
- 5-Point Calibration Provided



Dimensions: mm (inch)

| CAPACITY               |                  | D           | H          | H1         | K          | G           | I             |
|------------------------|------------------|-------------|------------|------------|------------|-------------|---------------|
| lb                     | kg               |             |            |            |            |             |               |
| <b>STANDARD MODELS</b> |                  |             |            |            |            |             |               |
| 50 to 10,000           | 23 to 4537       | 66 (2.62)   | 32 (1.25)  | 2.3 (0.09) | 6.4 (0.25) | 56 (2.188)  | 6-40 UNF-2    |
| 15,000 to 25,000       | 6806 to 11,343   | 83 (3.25)   | 41 (1.62)  | 2.3 (0.09) | 6.4 (0.25) | 69 (2.719)  | 10-32 UNF-2   |
| 50,000 to 75,000       | 22,686 to 34,029 | 127 (5.00)  | 64 (2.50)  | 3.0 (0.12) | 6.4 (0.25) | 105 (4.125) | 5/16-24 UNF-2 |
| 100,000                | 45,372           | 152 (6.00)  | 89 (3.50)  | 3.8 (0.15) | 9.4 (0.37) | 124 (4.875) | 7/16-20 UNF-2 |
| 200,000                | 90,744           | 203 (8.00)  | 121 (4.75) | 4.6 (0.18) | 13 (0.50)  | 164 (6.438) | 5/8-18 UNF-2  |
| 300,000                | 136,116          | 229 (9.00)  | 121 (4.75) | 4.6 (0.18) | 16 (0.63)  | 191 (7.500) | 3/4-16 UNF-2  |
| 400,000                | 181,488          | 254 (10.00) | 121 (4.75) | 6.4 (0.25) | 19 (0.75)  | 216 (8.500) | 7/8-14 UNF-2  |
| <b>METRIC MODELS</b>   |                  |             |            |            |            |             |               |
| 55 to 11.023           | 25 to 5000       | 66 (2.62)   | 32 (1.25)  | 2.3 (0.09) | 6.4 (0.25) | 56 (2.188)  | M4 x 0.7      |

**STANDARD MODELS**

**SPECIFICATIONS**

**Excitation:** 10 Vdc (15 Vdc maximum)

**Output:** 3 mV/V ±0.25%

**5-Point Calibration:** Calibrated at 0%, 50%, 100%, 50%, 0%.

**Note:** Models >300,000 lb are calibrated to 300,000 lb. Full scale calibration above 300,000 lb within ±1% available.

**Linearity:**

>3000 lb: 0.10% FSO

≤3000 lb: 0.13% FSO

**Hysteresis:**

>3000 lb: 0.10% FSO

≤3000 lb: 0.12 % FSO

**Repeatability:** 0.05% FSO

**Zero Balance:** ±1% FSO

**Operating Temp Range:**

-54 to 107°C (-65 to 225°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** 0.0045% FSO/°C

**Span:** 0.006% FSO/°C

**Safe Overload:** 150% full scale capacity

**Ultimate Overload:** 300% full scale capacity

**Bridge Resistance:** 350 ±5Ω

**FS Deflection:** 0.001 to 0.003" typical

**Construction:** 17-4 PH stainless steel

**Electrical Connection:**

**LC401:** 4.8 m (15') 4-conductor shielded PVC cable

**LC411:** PTIH-10-6P twist-lock connector (or equivalent)

**Mating Connector:** PT06F10-6S (sold separately)

**Cable Assembly with Twist-Lock**

**Connector:** CA-6PC24-3-015 (sold separately)

**Protection Class:** IP65

**POPULAR OPTIONS (Additional Cost)**

**0 to 5 Vdc Output:** (≥5000 kg) “-5V”

**Overload Stops:** “-OL”

**Dual Bridge:** “-DUAL”

**Extended Temperature Range:**

-45 to 93°C (-50 to 200°F) “-TC1”

-45 to 163°C (-50 to 325°F) “-TC2”

**To Order**

| CAPACITY |         | MODEL NO.  |            | COMPATIBLE METERS**      |
|----------|---------|------------|------------|--------------------------|
| lb       | kgf     | CABLE      | CONNECTOR  |                          |
| 50       | 23      | LC401-50   | LC411-50   | DP41-B, DP41-S, DP25B-S  |
| 100      | 45      | LC401-100  | LC411-100  | DP41-B, DP41-S, DP25B-S  |
| 250      | 114     | LC401-250  | LC411-250  | DP41-B, DP41-S, DP25B-S  |
| 500      | 227     | LC401-500  | LC411-500  | DP41-B, DP41-S, DP25B-S  |
| 1000     | 455     | LC401-1K   | LC411-1K   | DP41-B, DP41-S, DP25B-S  |
| 1500     | 682     | LC401-1.5K | LC411-1.5K | DP41-B, DP41-S, DP25B-S  |
| 2000     | 909     | LC401-2K   | LC411-2K   | DP41-B, DP41-S, DP25B-S  |
| 3000     | 1361    | LC401-3K   | LC411-3K   | DP41-B, DP41-S, DP25B-S  |
| 5000     | 2269    | LC401-5K   | LC411-5K   | DP41-B, DP41-S, DP25B-S  |
| 10,000   | 4537    | LC401-10K  | LC411-10K  | DP41-B, DP41-S, DP25B-S  |
| 15,000   | 6806    | LC401-15K  | LC411-15K  | DP41-B, DP41-S, DP25B-S* |
| 20,000   | 9074    | LC401-20K  | LC411-20K  | DP41-B, DP41-S, DP25B-S* |
| 25,000   | 11,343  | LC401-25K  | LC411-25K  | DP41-B, DP41-S, DP25B-S* |
| 50,000   | 22,686  | LC401-50K  | LC411-50K  | DP41-B, DP41-S, DP25B-S* |
| 75,000   | 34,029  | LC401-75K  | LC411-75K  | DP41-B, DP41-S, DP25B-S* |
| 100,000  | 45,372  | LC401-100K | LC411-100K | DP41-B, DP41-S, DP25B-S* |
| 200,000  | 90,744  | LC401-200K | LC411-200K | DP41-B, DP41-S, DP25B-S* |
| 300,000  | 136,116 | LC401-300K | LC411-300K | DP41-B, DP41-S, DP25B-S* |
| 400,000  | 181,488 | LC401-400K | LC411-400K | DP41-B, DP41-S, DP25B-S* |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter.

To order dual-bridge models, add suffix “-DUAL” to model number and additional cost to price. To order optional 0 to 5 V output, add suffix “-5V” to model number and additional cost to price.

**Note:** Models >300,000 lb are calibrated at 300,000 lb. Full scale calibration above 300,000 lb within ±1% available. Add suffix “-FS” to the model number; consult Sales for price and availability.

**Ordering Examples:** LC401-1K, 1000 lb capacity cable-style load cell.

LC411-10K-DUAL, 10,000 lb capacity connector-style load cell with dual-bridge option, PT06F10-6S, mating connector (2 required on dual models), sold separately.

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS**      |
|----------|--------|-------------|-------------|--------------------------|
| kgf      | lb     | CABLE       | CONNECTOR   |                          |
| 25       | 55     | LCM401-25   | LCM411-25   | iSeries, DP41-S, DP25B-S |
| 50       | 110    | LCM401-50   | LCM411-50   | iSeries, DP41-S, DP25B-S |
| 100      | 220    | LCM401-100  | LCM411-100  | iSeries, DP41-S, DP25B-S |
| 150      | 331    | LCM401-150  | LCM411-150  | iSeries, DP41-S, DP25B-S |
| 250      | 551    | LCM401-250  | LCM411-250  | iSeries, DP41-S, DP25B-S |
| 500      | 1102   | LCM401-500  | LCM411-500  | iSeries, DP41-S, DP25B-S |
| 750      | 1653   | LCM401-750  | LCM411-750  | iSeries, DP41-S, DP25B-S |
| 1000     | 2205   | LCM401-1K   | LCM411-1K   | iSeries, DP41-S, DP25B-S |
| 1500     | 3307   | LCM401-1.5K | LCM411-1.5K | iSeries, DP41-S, DP25B-S |
| 2500     | 5512   | LCM401-2.5K | LCM411-2.5K | iSeries, DP41-S, DP25B-S |
| 5000     | 11,023 | LCM401-5K   | LCM411-5K   | iSeries, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\*\* Visit us online for compatible meters.

To order dual-bridge models, add suffix “-DUAL” to model number and additional cost to price. To order optional 0 to 5 V output, add suffix “-5V” to model number and additional cost to price.

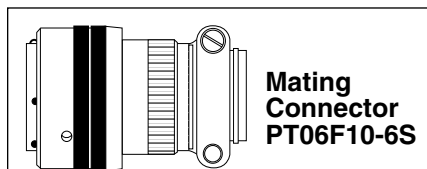
**Ordering Examples:** LCM401-500, 500 kgf capacity cable-style load cell;

LCM401-2.5K-DUAL, 2500 kgf capacity cable-style dual-bridge load cell.

PT06F10-6S, mating connector (2 required on dual-bridge models), sold separately.

**ACCESSORY**

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| PT06F10-6S     | Mating connector for LC411/LCM411 series load cells                         |
| CA-6PC24-3-015 | Cable assembly with twist-lock connector for LC411/LCM411 series load cells |



# LOW-PROFILE LOAD CELLS

## STANDARD AND METRIC MODELS

**Tension/Compression**  
 50 lb to 750,000 lb, 25 kgf to 10,000 kgf

### LC402/LCM402 Series LC412/LCM412 Series



- ✓ Industrial Weighing
- ✓ All Stainless Steel for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ 5 Point NIST Traceable Calibration Included



### SPECIFICATIONS

**Excitation:** 10 Vdc (15 Vdc maximum)

**Output:** 3 mV/V ±0.25%

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0% in compression.

Units ordered with optional tension plate calibrated in tension.

**Linearity:** 0.10% FSO

**Hysteresis:** 0.10% FSO

**Repeatability:** 0.05% FSO

**Zero Balance:** ±1% FSO

**Operating Temperature Range:**

LC402/LCM402: -54 to 121°C

(-65 to 250°F)

LC412/LCM412: -54 to 127°C

(-65 to 260°F)

**Compensated Temperature Range:**

16 to 71°C (60 to 160°F)

**Protection Class:** IP65

**Thermal Effects:**

**Zero:** 0.0045% FSO/°C

**Span:** 0.0045% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

for ranges ≤400,000 lb;

200% of capacity for ranges >400,000 lb

**Bridge Resistance:** 350 ±10 Ω

**Full Scale Deflection:** 0.025 to

0.075 mm (0.001 to 0.003") typical

**Construction:** 17-4 PH stainless steel

**Electrical Connection:**

LC402/LCM402: 4.8 m (15')

4-conductor shielded PVC cable

LC412/LCM412: DT02H-10-6P

connector (or equivalent)

### POPULAR OPTIONS (Additional Cost)

0 to 5 Vdc Output: (≥5000 kg) **"-5V"**

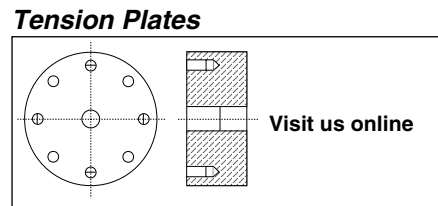
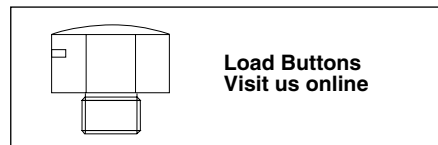
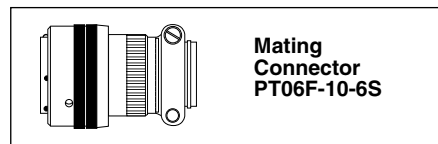
Overload Stops: **"-OL"**

Dual Bridge: **"-DUAL"**

Extended Temperature Range:

-45 to 93°C (-50 to 200°F) **"-TC1"**

-45 to 163°C (-50 to 325°F) **"-TC2"**



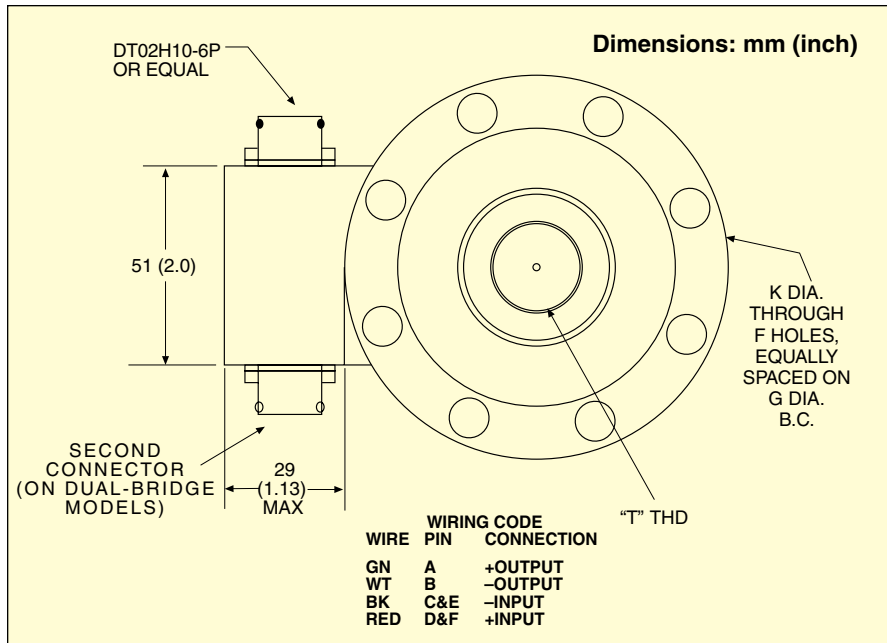


# "PANCAKE" STYLE HIGH-ACCURACY

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## LOW-PROFILE LOAD CELLS

## STANDARD AND METRIC MODELS



### STANDARD LOAD BUTTONS

| MODEL      | THREAD   |
|------------|----------|
| LBC-038    | 3/8-24   |
| LBC-012    | 1/2-20   |
| LBC-034    | 3/4-16   |
| LBC-100    | 1-14     |
| LBC-112    | 1 1/2-12 |
| LBC-200-12 | 2-12     |

\* Consult Engineering.

### METRIC LOAD BUTTONS

| MODEL NO. | THREAD     |
|-----------|------------|
| MLBC-M10  | M10 x 1.5  |
| MLBC-M12  | M12 x 1.75 |
| MLBC-M20  | M20 x 1.5  |
| MLBC-M24  | M24 x 2.0  |

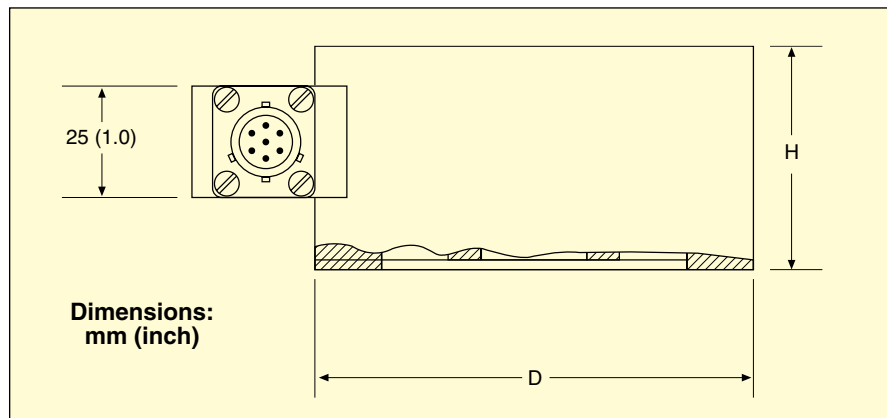
### STANDARD MALE ROD ENDS

| MODEL NO. | THREAD UNF-3A |
|-----------|---------------|
| REC-038M  | 3/8-24        |
| REC-012M  | 1/2-20        |
| REC-034M  | 3/4-16        |
| REC-100M  | 1-14          |
| REC-112M  | 1 1/2-12      |

### METRIC MALE ROD ENDS

| MODEL NO. | THREAD     |
|-----------|------------|
| MREC-M10M | M10 x 1.5  |
| MREC-M12M | M12 x 1.75 |
| MREC-M20M | M20 x 1.5  |
| MREC-M24M | M24 x 2.0  |

Visit us online for load button and rod end dimensions



Dimensions: mm (inch)

| CAPACITY               | D DIA.     | H HEIGHT   | F  | G           | K            | T          | WEIGHT kg (lb) |
|------------------------|------------|------------|----|-------------|--------------|------------|----------------|
| <b>STANDARD MODELS</b> |            |            |    |             |              |            |                |
| 50 to 300 lb           | 76 (3.00)  | 38 (1.50)  | 8  | 57 (2.25)   | 6.7 (0.266)  | 3/8-24     | 1.1 (2.5)      |
| 500 to 3K lb           | 89 (3.50)  | 38 (1.50)  | 8  | 73 (2.875)  | 6.7 (0.266)  | 1/2-20     | 1.4 (3)        |
| 5000 to 10K lb         | 95 (3.75)  | 38 (1.50)  | 8  | 83 (3.25)   | 6.7 (0.266)  | 3/4-16     | 2.3 (5)        |
| 15K to 25K lb          | 102 (4.00) | 51 (2.00)  | 8  | 89 (3.50)   | 10.3 (0.406) | 1-14       | 3.4 (7.5)      |
| 30K to 50K lb          | 178 (7.00) | 76 (3.00)  | 8  | 143 (5.625) | 13.5 (0.531) | 1 1/2-12   | 15 (33)        |
| 75K lb                 | 203 (8.00) | 89 (3.50)  | 8  | 171 (6.750) | 16.7 (0.656) | 1 3/4-12   | 23 (50)        |
| 100K lb                | 241 (9.50) | 102 (4.00) | 8  | 203 (8.00)  | 19.8 (0.781) | 2-12       | 37 (81)        |
| 150K to 200K lb        | 279 (11.0) | 102 (4.00) | 12 | 235 (9.25)  | 26 (1.030)   | 2 1/2-12   | 46 (102)       |
| 300K to 400K lb        | 279 (11.0) | 102 (4.00) | 12 | 235 (9.25)  | 26 (1.030)   | 3-12       | 46 (102)       |
| 500K lb                | 305 (12.0) | 102 (4.00) | 12 | 280 (10.25) | 29 (1.156)   | 3 1/2-8    | 52 (115)       |
| 750K lb                | 330 (13.0) | 114 (4.50) | 12 | 279 (11.00) | 33 (1.281)   | 4-8        | 61 (135)       |
| <b>METRIC MODELS</b>   |            |            |    |             |              |            |                |
| 25 to 100 kgf          | 76 (3.00)  | 38 (1.50)  | 8  | 57 (2.25)   | 6.7 (0.266)  | M10 x 1.5  | 1.1 (2.5)      |
| 250 to 1500 kgf        | 89 (3.50)  | 38 (1.50)  | 8  | 73 (2.875)  | 6.7 (0.266)  | M12 x 1.75 | 1.4 (3)        |
| 2.5K to 5K kgf         | 95 (3.75)  | 38 (1.50)  | 8  | 83 (3.25)   | 6.7 (0.266)  | M20 x 1.5  | 2.3 (5)        |
| 7.5K to 10K kgf        | 102 (4.00) | 51 (2.00)  | 8  | 89 (3.50)   | 10.3 (0.406) | M24 x 2.0  | 3.4 (7.5)      |

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## STANDARD MODELS

| To Order |         |            |            | TENSION BASE PLATE      |               |
|----------|---------|------------|------------|-------------------------|---------------|
| CAPACITY |         | MODEL NO.  |            | COMPATIBLE METERS*      | MODEL NO.     |
| lb       | kgf     | CABLE      | CONNECTOR  |                         |               |
| 50       | 23      | LC402-50   | LC412-50   | DPiS, DP41-S, DP25B-S   | LC412-TP225   |
| 100      | 45      | LC402-100  | LC412-100  | DPiS, DP41-S, DP25B-S   | LC412-TP225   |
| 250      | 114     | LC402-250  | LC412-250  | DPiS, DP41-S, DP25B-S   | LC412-TP225   |
| 500      | 227     | LC402-500  | LC412-500  | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 1000     | 455     | LC402-1K   | LC412-1K   | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 2000     | 909     | LC402-2K   | LC412-2K   | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 3000     | 1361    | LC402-3K   | LC412-3K   | DPiS, DP41-S, DP25B-S   | LC412-TP288   |
| 5000     | 2269    | LC402-5K   | LC412-5K   | DPiS, DP41-S, DP25B-S   | LC412-TP325   |
| 10,000   | 4537    | LC402-10K  | LC412-10K  | DPiS, DP41-S, DP25B-S   | LC412-TP325   |
| 15,000   | 6806    | LC402-15K  | LC412-15K  | DPiS, DP41-S, DP25B-S** | LC412-TP350   |
| 20,000   | 9074    | LC402-20K  | LC412-20K  | DPiS, DP41-S, DP25B-S** | LC412-TP350   |
| 25,000   | 11,343  | LC402-25K  | LC412-25K  | DPiS, DP41-S, DP25B-S** | LC412-TP350   |
| 50,000   | 22,686  | LC402-50K  | LC412-50K  | DPiS, DP41-S, DP25B-S** | LC412-TP563   |
| 75,000   | 34,029  | LC402-75K  | LC412-75K  | DPiS, DP41-S, DP25B-S** | LC412-TP675   |
| 100,000  | 45,372  | LC402-100K | LC412-100K | DPiS, DP41-S, DP25B-S** | LC412-TP800   |
| 200,000  | 90,744  | LC402-200K | LC412-200K | DPiS, DP41-S, DP25B-S** | LC412-TP925   |
| 300,000  | 136,116 | LC402-300K | LC412-300K | DPiS, DP41-S, DP25B-S** | LC412-TP925-3 |
| 400,000  | 181,488 | LC402-400K | LC412-400K | DPiS, DP41-S, DP25B-S** | LC412-TP925-3 |
| 500,000  | 226,860 | LC402-500K | LC412-500K | DPiS, DP41-S, DP25B-S** | LC412-TP1025  |
| 750,000  | 340,290 | LC402-750K | LC412-750K | DPiS, DP41-S, DP25B-S** | LC412-TP1100  |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

DPiS suitable for one direction measurement only. \* Visit us online for compatible meters. \*\* 4-digit meter.

To order dual-bridge models, add suffix “-DUAL” to the model number. Consult sales for price and availability.

**Note:** Models >300,000 lb are calibrated at 300,000 lb. Full scale calibration above 300,000 lb within ±1% available; add suffix “-FS” to the model number and consult Sales for price and delivery.

**Ordering Examples:** LC412-10K-DUAL, dual-bridge 10,000 lb capacity connector-style load cell.

PT06F10-6S, mating connector, 2 required (sold separately), LC412-TP325, optional tension plate.

LC412-20K-5V, 20,000 lb capacity connector-style load cell with optional 0 to 5 Vdc output, PT06F10-6S, mating connector (sold separately), LC412-TP350, optional tension plate.

## METRIC MODELS

| CAPACITY |        | MODEL NO.   |             | COMPATIBLE METERS*        | TENSION BASE PLATE<br>MODEL NO. |
|----------|--------|-------------|-------------|---------------------------|---------------------------------|
| kgf      | lb     | CABLE       | CONNECTOR   |                           |                                 |
| 25       | 55     | LCM402-25   | LCM412-25   | DP41-B, DP41-S, DP25B-S   | LCM412-TP225                    |
| 50       | 110    | LCM402-50   | LCM412-50   | DP41-B, DP41-S, DP25B-S   | LCM412-TP225                    |
| 100      | 220    | LCM402-100  | LCM412-100  | DP41-B, DP41-S, DP25B-S   | LCM412-TP225                    |
| 250      | 551    | LCM402-250  | LCM412-250  | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                    |
| 500      | 1102   | LCM402-500  | LCM412-500  | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                    |
| 1000     | 2205   | LCM402-1K   | LCM412-1K   | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                    |
| 1500     | 3307   | LCM402-1.5K | LCM412-1.5K | DP41-B, DP41-S, DP25B-S   | LCM412-TP288                    |
| 2500     | 5512   | LCM402-2.5K | LCM412-2.5K | DP41-B, DP41-S, DP25B-S   | LCM412-TP325                    |
| 5000     | 11,023 | LCM402-5K   | LCM412-5K   | DP41-B, DP41-S, DP25B-S   | LCM412-TP325                    |
| 7500     | 16,535 | LCM402-7.5K | LCM412-7.5K | DP41-B, DP41-S, DP25B-S   | LCM412-TP350                    |
| 10,000   | 22,046 | LCM402-10K  | LCM412-10K  | DP41-B, DP41-S, DP25B-S** | LCM412-TP350                    |

## ACCESSORIES

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| PT06F10-6S     | Mating connector for LC412/LCM412 load cells                                |
| CA-6PC24-3-015 | Cable assembly with twist-lock connector for LC412/LCM412 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data. \* Visit us online for compatible meters. \*\* 4-digit meter.

To order dual-bridge models, add suffix “-DUAL” to model number. Consult sales for price and availability.

**Ordering Examples:** LCM412-10K-DUAL, dual-bridge 10,000 kgf capacity connector-style load cell.

PT06F10-6S, mating connector, 2 required (sold separately). LCM412-TP350, optional tension plate, LCM402-100, 100 kgf capacity cable-style load cell, CA-6PC24-3-015, optional cable assembly.

# INTRINSICALLY SAFE LOW PROFILE LOAD CELLS FOR HAZARDOUS LOCATIONS STANDARD AND METRIC MODELS

**Tension or Compression**  
**50 to 750,000 lb Capacities**  
**25 to 10,000 kgf Metric Models**

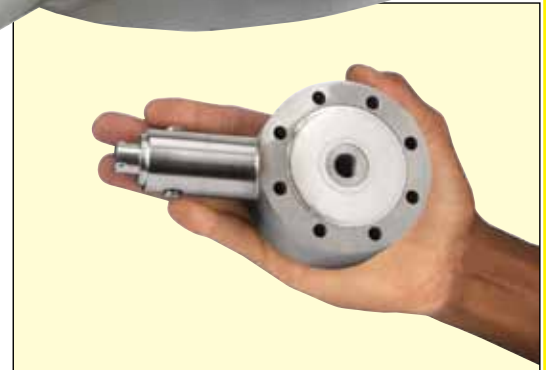
**Please Note:**  
**Not for export,**  
**USA and Canada only**

## LC412/LCM412-IS Series



Standard

- ✓ FM Intrinsically Safe Rating Standard
- ✓ 4 to 20 mA Output
- ✓ 5-Point NIST Traceable Calibration Included
- ✓ 0.25% Interchangeability
- ✓ All Stainless Steel Construction for Harsh Industrial Environments
- ✓ Heavy-Duty Industrial Design
- ✓ Low Profile for Easy Installations



LC412-IS, twist-lock termination shown.

The LC412-IS Series intrinsically safe load cells are FM rated intrinsically safe for use in hazardous locations. They are available with 5 different electrical terminations. Three connector options and 2 cable options, one of which is a submersible waterproof cable. Standard models have an amplified 4 to 20 mA output for uni-directional applications and a 4-12-20 mA output for bi-directional applications.

### SPECIFICATIONS

**Excitation mV/V Output:** 10-28 Vdc  
**Output (One Direction C2):** 4 to 20 mA,  $\pm 10\%$  adjustable  
**Output (Two Directions BC2):** 4-12-20 mA,  $\pm 10\%$  adjustable  
**Nonlinearity (%F.S.O.):** 0.10  
**Hysteresis (%F.S.O.):** 0.10  
**Repeatability (%F.S.O.):** 0.05  
**Zero Balance:** 4 mA, 10%, -2% adjustable

**Operating Temperature:** -40 to 75°C (-40 to 167°F)  
**Compensated Temperature:** 16 to 71°C (60 to 160°F)  
**Temperature Effects:**  
**Zero (%FSO/°F):**  $\pm 0.005 (\pm 0.009\% \text{FSO}/^\circ\text{C})$   
**Span (%Reading/°F):**  $\pm 0.005 (\pm 0.009\% \text{Reading}/^\circ\text{C})$   
**Safe Overload (% of Capacity):** 150  
**Ultimate Overload (% of Capacity):** 300  
**Material:** Stainless steel

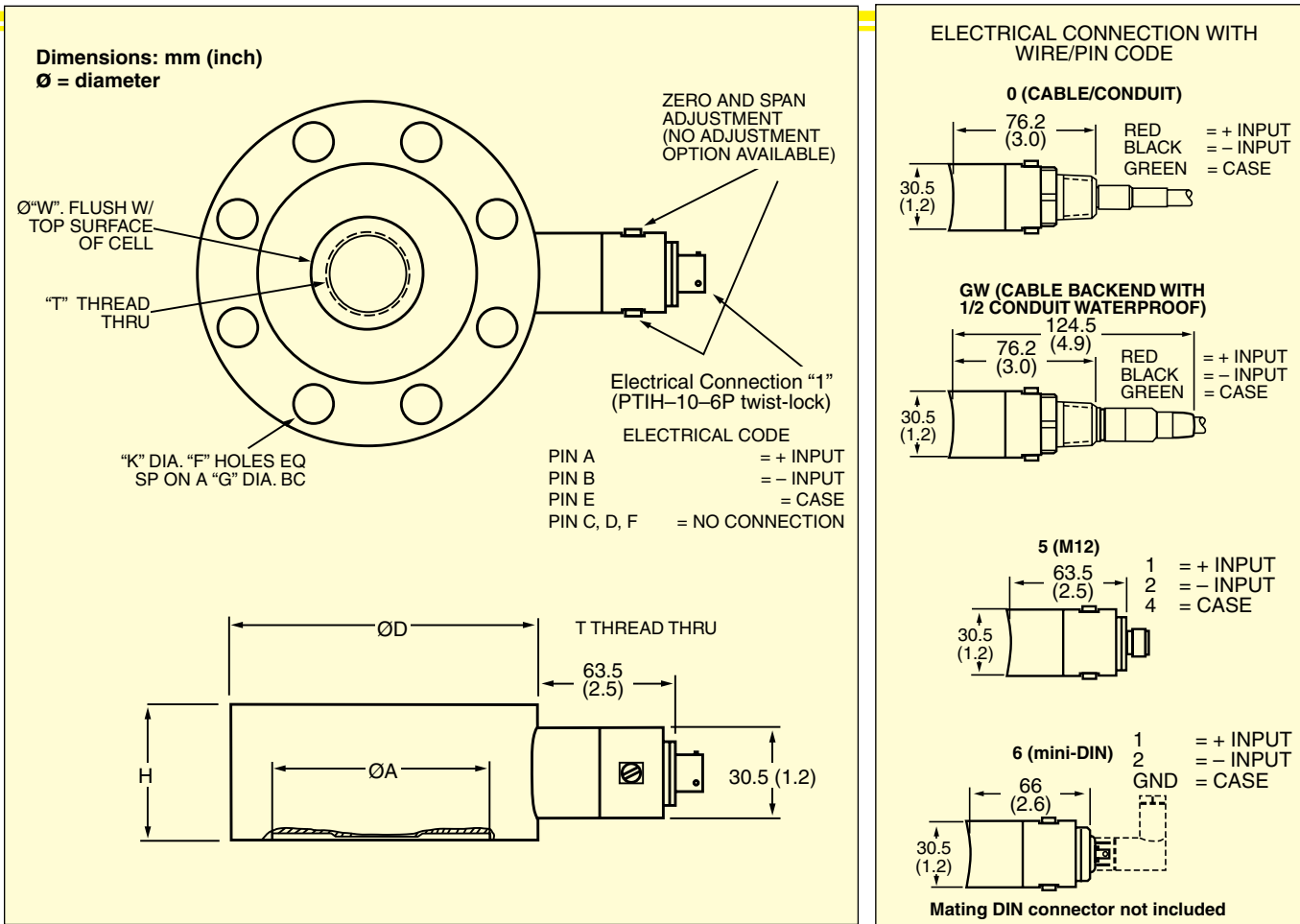
### AGENCY APPROVALS

| TYPE                               | AGENCY | APPROVAL LISTINGS  |
|------------------------------------|--------|--|
| Intrinsically Safe (US and Canada) | FM     | Hazardous (Classified) Location, Rated Intrinsically Safe, Securite Intrinsic Class I, II, III, Division 1 Gr A, B, C, D, E, F, G<br>Class I, Zone 0 Aex ia IIc (US), Class I, Zone 0 Ex ia IIC (Canada), T4, Ta = -40 to 75°C |
| Non-Incendive                      | FM     | FM Hazardous (Classified) Location, Rated Non-Incendive Class I Division 2 Groups A, B, C, D (US and Canada)<br>T4, Ta = -40 to 75°C, Conduit electrical connections only  |

**NOTE:** Please refer to [www.omega.com/approvals/](http://www.omega.com/approvals/) for downloadable copies of FM Approvals Certificate of Compliance and installation control drawings.

# INDIVIDUAL CASE I/O CELLS

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| CAPACITY (lbs)                | D           | H          | F  | G           | K            | T                       | W            | A            |
|-------------------------------|-------------|------------|----|-------------|--------------|-------------------------|--------------|--------------|
| <b>STANDARD MODEL (LC412)</b> |             |            |    |             |              |                         |              |              |
| 50 to 300                     | 76 (3.00)   | 38 (1.50)  | 8  | 57 (2.25)   | 6.7 (0.266)  | $\frac{3}{8}$ -24UNF-2B | 14.2 (0.56)  | 45.2 (1.78)  |
| 500 to 3000                   | 89 (3.50)   | 38 (1.50)  | 8  | 73 (2.875)  | 6.7 (0.266)  | $\frac{1}{2}$ -20UNF-2B | 22.1 (0.87)  | 63.0 (2.48)  |
| 5000 to 10,000                | 95 (3.75)   | 38 (1.50)  | 8  | 83 (3.25)   | 6.7 (0.266)  | $\frac{3}{4}$ -16UNF-2B | 28.7 (1.13)  | 66.8 (2.63)  |
| 15,000 to 25,000              | 102 (4.00)  | 51 (2.00)  | 8  | 89 (3.50)   | 10.3 (0.406) | 1-14UNF-2B              | 33 (1.30)    | 74.9 (2.95)  |
| 30,000 to 50,000              | 178 (7.00)  | 76 (3.00)  | 8  | 143 (5.625) | 13.4 (0.531) | $1\frac{1}{2}$ -12UN-2B | 77.5 (3.05)  | 113.0 (4.45) |
| 75,000                        | 203 (8.00)  | 89 (3.50)  | 8  | 171 (6.75)  | 16.7 (0.656) | $1\frac{3}{4}$ -12UN-2B | 104.9 (4.13) | 140.7 (5.54) |
| 100,000                       | 242 (9.50)  | 102 (4.00) | 8  | 203 (8.00)  | 19.8 (0.781) | 2-12UN-2B               | 110.2 (4.34) | 169.2 (6.66) |
| 150,000 to 200,000            | 279 (11.00) | 102 (4.00) | 12 | 235 (9.25)  | 26 (1.030)   | $2\frac{1}{2}$ -12UN-2B | 124.5 (4.90) | 183.4 (7.22) |
| 300,000 to 400,000            | 279 (11.00) | 102 (4.00) | 12 | 235 (9.25)  | 26 (1.030)   | 3-12UN-2B               | 124.5 (4.90) | 183.4 (7.22) |
| 440,000 to 500,000            | 305 (12.00) | 102 (4.00) | 12 | 280 (10.25) | 29 (1.156)   | $3\frac{1}{2}$ -8UN-2B  | 137.2 (5.4)  | 196.1 (7.72) |
| 600,000 to 750,000            | 330 (13.00) | 114 (4.50) | 12 | 279 (11.00) | 33 (1.281)   | 4-8UN-2B                | 149.9 (5.9)  | 208.8 (8.22) |
| <b>METRIC MODEL (LCM412)</b>  |             |            |    |             |              |                         |              |              |
| 25 to 100                     | 76 (3.00)   | 38 (1.50)  | 8  | 57 (2.25)   | 6.7 (0.266)  | M10 x 1.5-6G            | 14.2 (.56)   | 45.2 (1.78)  |
| 250 to 1500                   | 89 (3.50)   | 38 (1.50)  | 8  | 73 (2.875)  | 6.7 (0.266)  | M12 x 1.75-6G           | 22.1 (.87)   | 63 (2.48)    |
| 2500 to 5000                  | 95 (3.75)   | 38 (1.50)  | 8  | 83 (3.25)   | 6.7 (0.266)  | M20 x 1.5-6G            | 28.7 (1.13)  | 66.8 (2.63)  |
| 7500 to 10,000                | 102 (4.00)  | 50 (2.00)  | 8  | 89 (3.50)   | 10.3 (0.406) | M24 x 2.0-6G            | 33.0 (1.30)  | 74.9 (2.95)  |

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# METRIC MODELS

| <b>To Order</b>                           |         |                           |                         |                    |
|---|---------|---------------------------|-------------------------|--------------------|
| CAPACITY                                  |         | MODEL NO.                 | COMPATIBLE METERS       | TENSION BASE PLATE |
| lb  | kgf     |                           |                         | MODEL NO.          |
| <b>INTRINSICALLY SAFE STANDARD MODELS</b> |         |                           |                         |                    |
| 50  | 23      | LC412-50 [*] [**] [***]   | DP41-E, 6-digit display | LC412-TP225        |
| 100                                       | 45      | LC412-100 [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP225        |
| 250                                       | 114     | LC412-250 [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP225        |
| 500                                       | 227     | LC412-500 [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP288        |
| 1000                                      | 455     | LC412-1K [*] [**] [***]   | DP41-E, 6-digit display | LC412-TP288        |
| 2000                                      | 909     | LC412-2K [*] [**] [***]   | DP41-E, 6-digit display | LC412-TP288        |
| 3000                                      | 1361    | LC412-3K [*] [**] [***]   | DP41-E, 6-digit display | LC412-TP288        |
| 5000                                      | 2269    | LC412-5K [*] [**] [***]   | DP41-E, 6-digit display | LC412-TP325        |
| 10,000                                    | 4537    | LC412-10K [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP325        |
| 15,000                                    | 6806    | LC412-15K [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP350        |
| 20,000                                    | 9074    | LC412-20K [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP350        |
| 25,000                                    | 11,343  | LC412-25K [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP350        |
| 50,000                                    | 22,686  | LC412-50K [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP563        |
| 75,000                                    | 34,029  | LC412-75K [*] [**] [***]  | DP41-E, 6-digit display | LC412-TP675        |
| 100,000                                   | 45,372  | LC412-100K [*] [**] [***] | DP41-E, 6-digit display | LC412-TP800        |
| 200,000                                   | 90,744  | LC412-200K [*] [**] [***] | DP41-E, 6-digit display | LC412-TP925        |
| 300,000                                   | 136,116 | LC412-300K [*] [**] [***] | DP41-E, 6-digit display | LC412-TP925-3      |
| 400,000                                   | 181,488 | LC412-400K [*] [**] [***] | DP41-E, 6-digit display | LC412-TP925-3      |
| 500,000                                   | 226,860 | LC412-500K [*] [**] [***] | DP41-E, 6-digit display | LC412-TP1025       |
| 750,000                                   | 340,290 | LC412-750K [*] [**] [***] | DP41-E, 6-digit display | LC412-TP1100       |

All models come complete with 5-point NIST traceable calibration.

**Note:** Ranges over 300,000 lb are calibrated at 300,000 lb. Full calibration is available by adding a "ZXX" at the end of the part number.

**Ordering Example:** LC412-100K0BC2IS, 100,000 lb capacity, bidirectional, with PVC cable and FMIS approvals.

| CAPACITY                                |        | MODEL NO.                  | COMPATIBLE METERS       | TENSION BASE PLATE |
|---|--------|----------------------------|-------------------------|--------------------|
| kgf                                     | lb     |                            |                         | MODEL NO.          |
| <b>INTRINSICALLY SAFE METRIC MODELS</b> |        |                            |                         |                    |
| 25                                      | 55     | LCM412-25 [*] [**] [***]   | DP41-E, 6-digit display | LCM412-TP225       |
| 50                                      | 110    | LCM412-50 [*] [**] [***]   | DP41-E, 6-digit display | LCM412-TP225       |
| 100                                     | 220    | LCM412-100 [*] [**] [***]  | DP41-E, 6-digit display | LCM412-TP225       |
| 250                                     | 551    | LCM412-250 [*] [**] [***]  | DP41-E, 6-digit display | LCM412-TP288       |
| 500                                     | 1102   | LCM412-500 [*] [**] [***]  | DP41-E, 6-digit display | LCM412-TP288       |
| 1000                                    | 2205   | LCM412-1K [*] [**] [***]   | DP41-E, 6-digit display | LCM412-TP288       |
| 1500                                    | 3307   | LCM412-1.5K [*] [**] [***] | DP41-E, 6-digit display | LCM412-TP288       |
| 2500                                    | 5512   | LCM412-2.5K [*] [**] [***] | DP41-E, 6-digit display | LCM412-TP325       |
| 5000                                    | 11,023 | LCM412-5K [*] [**] [***]   | DP41-E, 6-digit display | LCM412-TP325       |
| 7500                                    | 16,535 | LCM412-7.5K [*] [**] [***] | DP41-E, 6-digit display | LCM412-TP350       |
| 10,000                                  | 22,046 | LCM412-10K [*] [**] [***]  | DP41-E, 6-digit display | LCM412-TP350       |

All models come complete with 5-point NIST traceable calibration.

**Ordering Example:** LCM412-5K1C2IS, 5000 kg capacity load cell.

**[\*] ELECTRICAL TERMINATIONS**

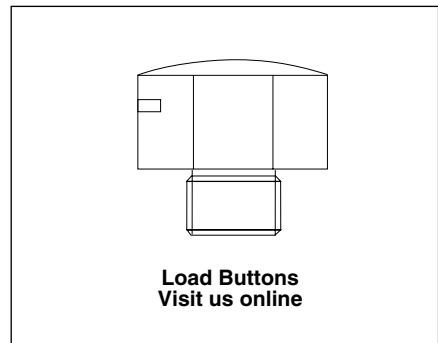
| TERMINATIONS   | SUFFIX |
|--|--------|
| 2 m (6.6') PVC cable with ½ NPT conduit†                               | 0      |
| PTIH-10-6P twist-lock mating connector<br>PT06F10-6S (sold separately) | 1      |
| M12 4-pin  | 5      |
| mini-DIN (mating DIN connector not included)                           | 6      |
| 3 m (10') submersible cable with ½ NPT conduit                         | GW     |

† Other cable lengths are available; please contact Factors for price and availability

Any cable or connector must meet the requirements of the environment where it is being installed. The safety engineer should specify the cables and connectors.

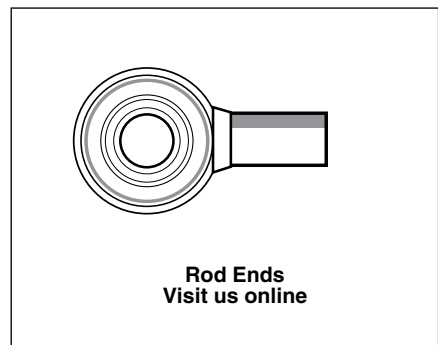
**[\*\*] OUTPUT OPTIONS**

| INTRINSICALLY SAFE AMPLIFIERS   | SUFFIX |
|---|--------|
| FM Intrinsically Safe 4 to 20 mA Output (calibrated 0 to full scale in compression) | C2IS   |
| FM Intrinsically Safe 4-12-20 mA Output [calibrated (-)full scale to (+)full scale] | BC2IS  |



**[\*\*\*] FINAL SUFFIX OPTIONS**

| DESCRIPTION                         | SUFFIX |
|-------------------------------------|--------|
| Potentiometers Standard (No Suffix) |        |
| No Potentiometers                   | NP     |



**STANDARD LOAD BUTTONS**

| MODEL      | THREAD |
|------------|--------|
| LBC-038    | ¾-24   |
| LBC-012    | ½-20   |
| LBC-034    | ¾-16   |
| LBC-100    | 1-14   |
| LBC-112    | 1½-12  |
| LBC-200-12 | 2-12   |

**STANDARD MALE ROD ENDS**

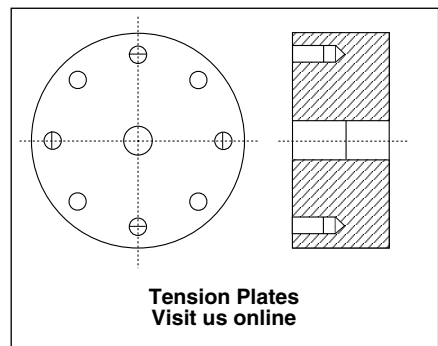
| MODEL NO. | THREAD |
|-----------|--------|
| REC-038M  | ¾-24   |
| REC-012M  | ½-20   |
| REC-034M  | ¾-16   |
| REC-100M  | 1-14   |
| REC-112M  | 1½-12  |

**METRIC LOAD BUTTONS**

| MODEL NO. | THREAD     |
|-----------|------------|
| MLBC-M10  | M10 x 1.5  |
| MLBC-M12  | M12 x 1.75 |
| MLBC-M20  | M20 x 1.5  |
| MLBC-M24  | M24 x 2.0  |

**METRIC MALE ROD ENDS**

| MODEL NO. | THREAD     |
|-----------|------------|
| MREC-M10M | M10 x 1.5  |
| MREC-M12M | M12 x 1.75 |
| MREC-M20M | M20 x 1.5  |
| MREC-M24M | M24 x 2.0  |



Visit us online for load button and rod end dimensions

**FOR LCM402/LCM412 SERIES LOAD CELLS**  
**17-4 PH STAINLESS STEEL**

**LCM412-TP Series**

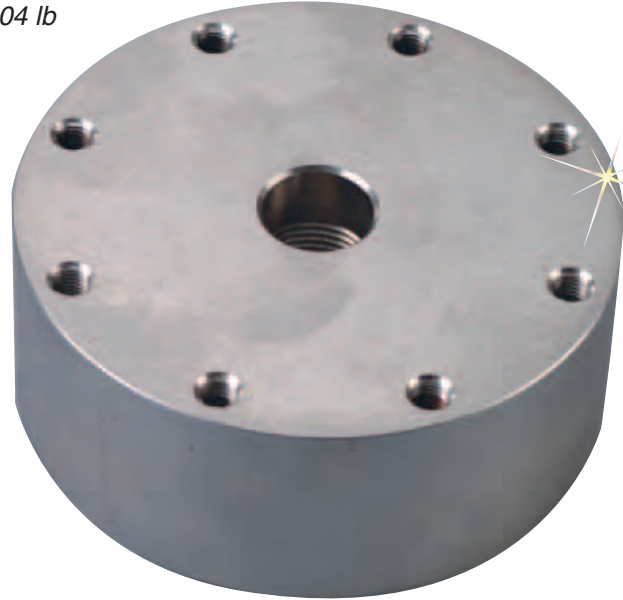
**Tension Plates**

**For LCM402/LCM412 Load Cells**

**Ranges**

**25 kgf to 10,000 kgf**

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb



LCM412-TP225, \$110,  
shown actual size.

Starts at  
**\$110**

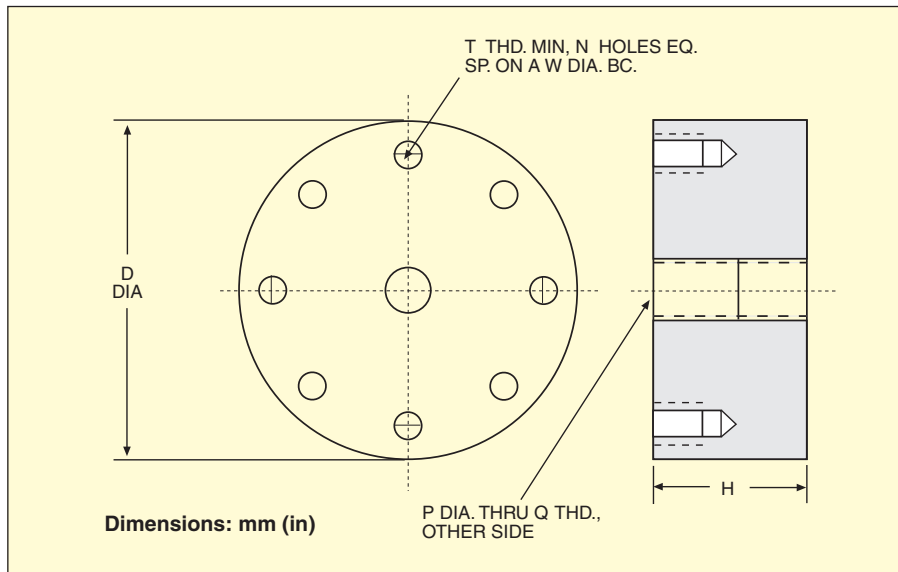


**Mounting Hardware Included**

LCM412 tension plates attach to the base of LCM402/LCM412 Series load cells and provide a second threaded center hole for tension applications.

The LCM412-TP288 tension plate attaches to the base of the LCM412-3K load cell (see diagram).

Recommended Reference Book:  
 Measure for Measure,  
**OP-17, \$15**  
 See Section Y  
 For Additional Books



**MOST POPULAR MODELS HIGHLIGHTED!**

| CAPACITY       |            | Dimensions: mm (in) |       |            |           |             |            |           |   |           |
|----------------|------------|---------------------|-------|------------|-----------|-------------|------------|-----------|---|-----------|
| kgf            | lb         | MODEL NO.           | PRICE | D          | H         | P           | Q          | T         | N | W         |
| 25 to 100      | 50 to 300  | LCM412-TP225        | \$110 | 76 (3.00)  | 38 (1.50) | 8.4 (0.332) | M10 x 1.5  | M6 x 1.0  | 8 | 57 (2.25) |
| 250 to 1500    | 500 to 3K  | LCM412-TP288        | 110   | 89 (3.50)  | 38 (1.50) | 12 (0.453)  | M12 x 1.75 | M6 x 1.0  | 8 | 73 (2.88) |
| 2500 to 5000   | 5K to 10K  | LCM412-TP325        | 110   | 95 (3.75)  | 38 (1.50) | 18 (0.688)  | M20 x 1.5  | M6 x 1.0  | 8 | 83 (3.26) |
| 7500 to 10,000 | 15K to 25K | LCM412-TP350        | 250   | 102 (4.00) | 51 (2.00) | 24 (0.933)  | M24 x 2.0  | M10 x 1.5 | 8 | 89 (3.50) |

Comes complete with mounting hardware.

Ordering Example: LCM412-TP350, fits LCM412 load cells from 7500 to 10,000 kgf, \$250.



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• **Flow and Level**

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

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# CANTILEVER BEAMS

## STANDARD AND METRIC MODELS

**Tension/Compression**  
**0-50 lb to 0-30,000 lb-**  
**Standard Models**  
**0-25 kgf to 0-10,000 kgf-**  
**Metric Models**

**STANDARD**  
LC501-20K, shown  
smaller than actual size.

**METRIC**  
LCM501-10K, shown  
smaller than actual size.

### LC501/LCM501 Series LC511/LCM511 Series



Standard

- ✓ All Stainless Steel Construction for Harsh Industrial Applications
- ✓ 0.25% Interchangeability for Multiple Cell Applications
- ✓ 5-Point Calibration Provided

**IP65  
Protection  
Level**

TWA5-750 self adjusting weigh module, shown smaller than actual size.

## SPECIFICATIONS

**Excitation:** 10 Vdc, 15 Vdc maximum

**Output:** 3 mV/V  $\pm 0.25\%$

**5-Point Calibrated (in Compression):**

0%, 50%, 100%, 50%, 0%

**Linearity:**  $\pm 0.03\%$  FSO

**Hysteresis:**  $\pm 0.02\%$  FSO

**Repeatability:**  $\pm 0.02\%$  FSO

**Zero Balance:**  $\pm 1\%$  FSO

**Operating Temp Range:**

-34 to 82°C (-30 to 180°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:**  $\pm 0.001\%$  FSO/°F (0.0018%/°C)

**Span:**  $\pm 0.001\%$  FSO/°F (0.0018%/°C)

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 360  $\Omega$  minimum

**Output Resistance:** 350  $\pm 10 \Omega$

**FS Deflection:** 0.5 mm (0.02") typical

**Construction:** 17-4 PH stainless steel,  
>30,000 lb, high-alloy steel

**Electrical:**

**LC501/LCM501:** 4.6 m (15')

4 conductor shielded cable

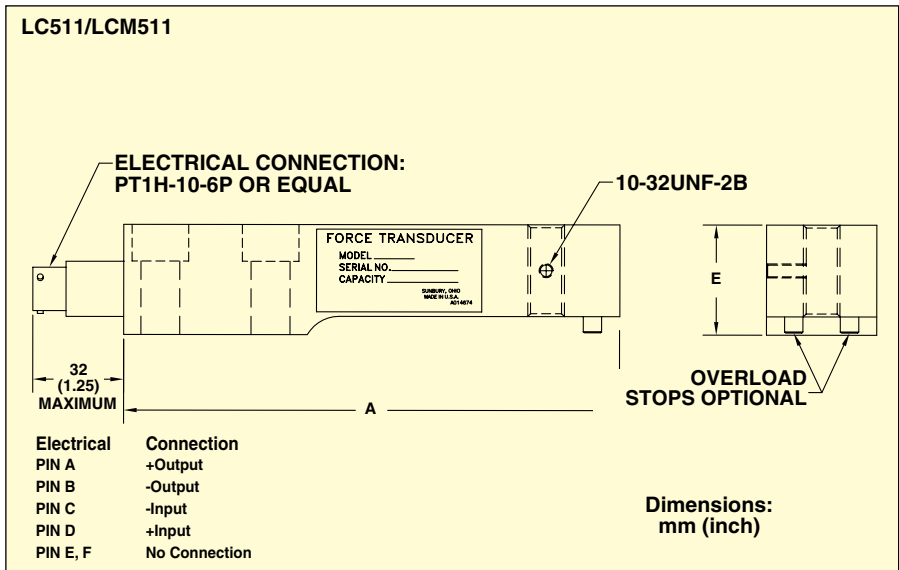
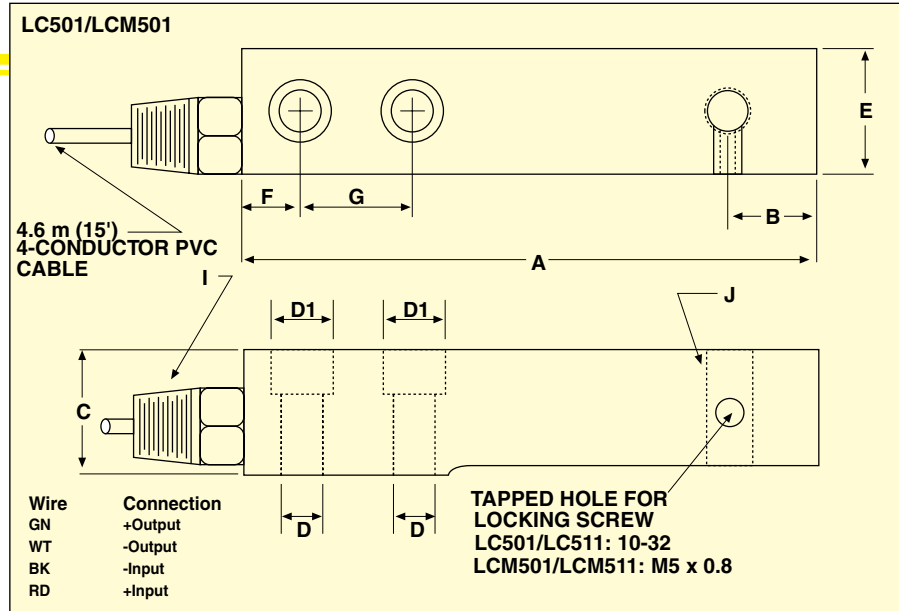
**LC511/LCM511:** 6-pin DT02H-10-6P  
or equivalent

**Mating Connector:** PT06F10-6S

(sold separately)

## Accessory Hardware:

TWA/TWAM Series  
Self-Adjusting Weigh Modules  
Nickel-Plated Carbon Steel or  
Stainless Steel


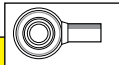


Dimensions: mm (inch)

| CAPACITY           | A             | B            | C           | D             | D1           | E           | F            | G            | I          | J          | WEIGHT<br>kg (lb) |
|--------------------|---------------|--------------|-------------|---------------|--------------|-------------|--------------|--------------|------------|------------|-------------------|
| <b>STANDARD</b>    |               |              |             |               |              |             |              |              |            |            |                   |
| 50 to<br>750 lb    | 121<br>(4.75) | 19<br>(0.75) | 25<br>(1.0) | 9.9<br>(0.39) | 15<br>(0.59) | 25<br>(1.0) | 13<br>(0.50) | 25<br>(1.0)  | 3/8-18 UNC | 1/2-20     | 0.9<br>(2)        |
| 1K to 6.5K lb      | 173<br>(6.75) | 25<br>(1.0)  | 38<br>(1.5) | 13<br>(0.53)  | 20<br>(0.77) | 38<br>(1.5) | 13<br>(0.50) | 38<br>(1.5)  | 1/2-14 UNC | 1/2-20     | 1.8<br>(4)        |
| 7.5K to 10K lb     | 197<br>(7.75) | 25<br>(1.0)  | 38<br>(1.5) | 20<br>(0.77)  | n/a          | 38<br>(1.5) | 19<br>(0.75) | 51<br>(2.0)  | 1/2-14 UNC | 3/8-16     | 2.3<br>(5)        |
| 20K lb             | 241<br>(9.50) | 25<br>(1.0)  | 64<br>(2.5) | 20<br>(0.77)  | n/a          | 51<br>(2.0) | 25<br>(1.00) | 57<br>(2.25) | 1/2-14 UNC | 1-12       | 5<br>(11)         |
| 30K lb             | 241<br>(9.50) | 25<br>(1.0)  | 64<br>(2.5) | 27<br>(1.06)  | n/a          | 51<br>(2.0) | 25<br>(1.00) | 57<br>(2.25) | 1/2-14 UNC | 1-12       | n/a               |
| <b>METRIC</b>      |               |              |             |               |              |             |              |              |            |            |                   |
| 25 to<br>250 kgf   | 121<br>(4.75) | 19<br>(0.75) | 25<br>(1.0) | 9.9<br>(0.39) | 15<br>(0.59) | 25<br>(1.0) | 13<br>(0.50) | 25<br>(1.0)  | 3/8-18 UNC | M12 x 1.75 | 0.9<br>(2)        |
| 500 to<br>2500 kgf | 173<br>(6.75) | 25<br>(1.0)  | 38<br>(1.5) | 13<br>(0.53)  | 20<br>(0.77) | 38<br>(1.5) | 13<br>(0.50) | 38<br>(1.5)  | 1/2-14 UNC | M12 x 1.75 | 1.8<br>(4)        |
| 5000 kgf           | 197<br>(7.75) | 25<br>(1.0)  | 38<br>(1.5) | 20<br>(0.77)  | n/a          | 38<br>(1.5) | 19<br>(0.75) | 51<br>(2.0)  | 1/2-14 UNC | M20 x 1.5  | 2.3<br>(5)        |
| 10,000 kgf         | 241<br>(9.50) | 25<br>(1.0)  | 64<br>(2.5) | 20<br>(0.77)  | n/a          | 51<br>(2.0) | 25<br>(1.00) | 57<br>(2.25) | 1/2-14 UNC | M24 x 2.0  | 5<br>(11)         |

| <b>To Order</b>        |        |             |                 |                          |               |
|------------------------|--------|-------------|-----------------|--------------------------|---------------|
| CAPACITY               |        | MODEL NO.   |                 | COMPATIBLE METERS        | BASE PLATE    |
| kgf                    | lb     | CABLE STYLE | CONNECTOR STYLE |                          |               |
| <b>STANDARD MODELS</b> |        |             |                 |                          |               |
| 45                     | 100    | LC501-100   | LC511-100       | DP41-B, DP41-S, DP25B-S  | <b>BP-10</b>  |
| 91                     | 200    | LC501-200   | LC511-200       | DP41-B, DP41-S, DP25B-S  |               |
| 227                    | 500    | LC501-500   | LC511-500       | DP41-B, DP41-S, DP25B-S  |               |
| 341                    | 750    | LC501-750   | LC511-750       | DP41-B, DP41-S, DP25B-S  |               |
| 455                    | 1000   | LC501-1K    | LC511-1K        | DP41-B, DP41-S, DP25B-S  | <b>BP-15</b>  |
| 909                    | 2000   | LC501-2K    | LC511-2K        | DP41-B, DP41-S, DP25B-S  |               |
| 1361                   | 3000   | LC501-3K    | LC511-3K        | DP41-B, DP41-S, DP25B-S  |               |
| 2269                   | 5000   | LC501-5K    | LC511-5K        | DP41-B, DP41-S, DP25B-S  |               |
| 3402                   | 7500   | LC501-7.5K  | LC511-7.5K      | DP41-B, DP41-S, DP25B-S  |               |
| 4537                   | 10,000 | LC501-10K   | LC511-10K       | DP41-B, DP41-S, DP25B-S  | <b>BP-20</b>  |
| 9074                   | 20,000 | LC501-20K   | LC511-20K       | DP41-B, DP41-S, DP25B-S* |               |
| 13,612                 | 30,000 | LC501-30K   | LC511-30K       | DP41-B, DP41-S, DP25B-S* |               |
| <b>METRIC MODELS</b>   |        |             |                 |                          |               |
| 25                     | 55     | LCM501-25   | LCM511-25       | DPiS, DP41-S, DP25B-S    | <b>MBP-10</b> |
| 50                     | 110    | LCM501-50   | LCM511-50       | DPiS, DP41-S, DP25B-S    |               |
| 250                    | 551    | LCM501-250  | LCM511-250      | DPiS, DP41-S, DP25B-S    |               |
| 500                    | 1102   | LCM501-500  | LCM511-500      | DPiS, DP41-S, DP25B-S    | <b>MBP-15</b> |
| 1000                   | 2205   | LCM501-1K   | LCM511-1K       | DPiS, DP41-S, DP25B-S    |               |
| 2500                   | 5512   | LCM501-2.5K | LCM511-2.5K     | DPiS, DP41-S, DP25B-S    |               |
| 5000                   | 11,023 | LCM501-5K   | LCM511-5K       | DPiS, DP41-S, DP25B-S    |               |
| 10,000                 | 22,046 | LCM501-10K  | LCM511-10K      | DPiS*, DP41-S, DP25B-S*  | <b>MBP-20</b> |

**ACCESSORIES**

| MODEL NO.              | DESCRIPTION  |  LOAD BUTTON |  ROD END |
|------------------------|--|---|---|
| <b>STANDARD MODELS</b> |  |   |   |
| <b>LBC-012</b>         | Load button for ranges 100 to 7500 lb                              |   |   |
| <b>LBC-034</b>         | Load button for LC501/511-10K                                      |   |   |
| <b>LBC-101</b>         | Load button for LC501/511-20K, LC501/511-30 K                      |   |   |
| <b>REC-012M</b>        | Rod end for ranges 100 to 7500 lb                                  |   |   |
| <b>REC-034M</b>        | Rod end for LC501/511-10K  |   |   |
| <b>METRIC MODELS</b>   |  |   |   |
| <b>MLBC-M12</b>        | Load button for ranges 25 to 2500 kgf                              |   |   |
| <b>MLBC-M20</b>        | Load button for LCM501-5K, LCM511-5K                               |   |   |
| <b>MLBC-M24</b>        | Load button for LCM501-10K, LCM511-10K                             |   |   |
| <b>MREC-M12M</b>       | Rod end for ranges 25 to 2500 kgf                                  |   |   |
| <b>MREC-M20M</b>       | Rod end for LCM501-5K, LCM511-5K                                   |   |   |
| <b>MREC-M24M</b>       | Rod end for LCM501-10K, LCM511-10K                                 |   |   |
| <b>COMMON</b>          |  |   |   |
| <b>PT06F10-6S</b>      | Mating connector for LC511/LCM511 series load cells                |   |   |
| <b>CA-4PC24-2-015</b>  | 4.6 m (15') PVC cable with PT06F10-6S, LC511/LCM511 cable assembly |   |   |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

**Note:** Base plates are nickel-plated carbon steel.

To order stainless steel base plates (see Accessories), specify **BP-10-SS, BP-15-SS, BP-20-SS**.

To order load cells with a twist-lock 6 pin connector, specify **LC511** (standard) or **LCM511** (metric), no extra charge. **PT06F10-6S**, mating connector (sold separately).

**Ordering Examples:** **LC501-5K**, 5000 lb capacity load cell. **REC-012M**, optional rod end, **BP-15**, optional base plate.

**LCM511-5K**, 5000 kgf capacity load cell with twist-lock 6 pin connector, **PT06F10-6S**, mating connector.

# LOAD CELLS

## STANDARD AND METRIC MODELS

**Tension/Compression**  
**0-1 lb to 0-25 lb**  
**0-0.4 kgf to 0-11 kgf**

### LC601/LCM601 Series



- ✓ 4-Direction Overload Stops
- ✓ 0.25% Interchangeability
- ✓ High-Quality All Stainless Steel Construction
- ✓ Rugged Industrial Design
- ✓ 5-Point Calibration

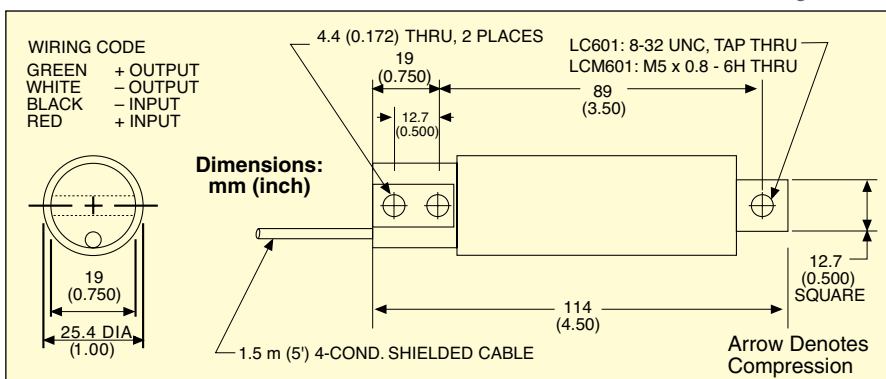
OMEGA's LC601/LCM601 Series comprises extremely low-capacity industrial load cells with built-in overload stops in all 4 directions for added durability. They offer high accuracy and rugged construction in a small package and are ideal for small scales and for industrial weighing applications.

#### SPECIFICATIONS

- Excitation:** 10 Vdc, 15V maximum
- Output:** 2 mV/V  $\pm 0.25\%$
- 5-Point Calibration (in Compression):** 0%, 50%, 100%, 50%, 0%
- Linearity:**  $\pm 0.03\%$  FSO
- Hysteresis:**  $\pm 0.03\%$  FSO
- Repeatability:**  $\pm 0.02\%$  FSO
- Zero Balance:**  $\pm 1\%$  FSO
- Operating Temperature Range:** -34 to 82°C (-30 to 180°F)
- Compensated Temperature Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero:**  $\pm 0.0025\%$  FSO/°F
  - Span:**  $\pm 0.0010\%$  FSO/°F
- Safe Overload:** 150% of rated capacity
- Ultimate Overload:** 300% of capacity
- Input Resistance:** 360  $\Omega$  minimum
- Output Resistance:** 350  $\pm 10 \Omega$



LC601-25 shown actual size.



**Full Scale Deflection:** 0.005 to 0.015" typical  
**Construction:** Stainless steel

**Electrical Connections:** 1.5 m (5') 4-conductor shielded color-coded cable

| To Order               |     |           |                       |
|------------------------|-----|-----------|-----------------------|
| CAPACITY               |     | MODEL NO. | COMPATIBLE METERS*    |
| kgf                    | lb  |           |                       |
| <b>STANDARD MODELS</b> |     |           |                       |
| 0.4                    | 1   | LC601-1   | DPiS, DP41-S, DP25B-S |
| 909 g                  | 2   | LC601-2   | DPiS, DP41-S, DP25B-S |
| 2.3                    | 5   | LC601-5   | DPiS, DP41-S, DP25B-S |
| 4.5                    | 10  | LC601-10  | DPiS, DP41-S, DP25B-S |
| 7                      | 15  | LC601-15  | DPiS, DP41-S, DP25B-S |
| 11                     | 25  | LC601-25  | DPiS, DP41-S, DP25B-S |
| <b>METRIC MODELS</b>   |     |           |                       |
| 1                      | 2.2 | LCM601-1  | DPiS, DP41-S, DP25B-S |
| 2                      | 4.4 | LCM601-2  | DPiS, DP41-S, DP25B-S |
| 5                      | 11  | LCM601-5  | DPiS, DP41-S, DP25B-S |
| 10                     | 22  | LCM601-10 | DPiS, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 k $\Omega$  shunt data.  
 \* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC601-5, 5 lb capacity load cell.  
 LC601-10, 10 lb capacity load cell.  
 LCM601-5, 5 kgf capacity load cell.  
 LCM601-10, 10 kgf capacity load cell.

# HEAVY-DUTY CONSTANT MOMENT BEAM LOAD CELLS STANDARD AND METRIC MODELS

**Tension/Compression**  
**50 to 10,000 lb**  
**23 to 4537 kgf**

## LC602/LCM602 Series



- ✓ 5 Point NIST Traceable Calibration with 59  $\Omega$  Short Data
- ✓ 0.25% Interchangeability for Scale Applications
- ✓ High-Quality Stainless Steel Construction
- ✓ Environmentally Sealed IP65

The LC602/LCM602 Series comprises heavy-duty load cells designed for industrial weighing and scale applications. They are highly accurate, rugged load cells that are economically designed.



**STANDARD**  
LC602-5K shown  
approximately 50% of  
actual size.

### SPECIFICATIONS

**Excitation:** 10 Vdc (15V maximum)

**Output:**

≤500 lb/250 kgf: 2 mV/V

>500 lb/250 kgf: 3 mV/V ±0.25 % FSO

**5-Point Calibration (in Compression):**

0%, 50%, 100%, 50%, 0%

**Linearity:** ±0.03% FSO

**Hysteresis:**

≤500 lb/250 kgf: ±0.05% FSO

>500 lb/250 kgf: ±0.03% FSO

**Repeatability:** ±0.02% FSO

**Zero Balance:** ±1.0% FSO

**Operating Temp Range:**

-34 to 82°C (-30 to 180°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** ±0.002% FSO/°F

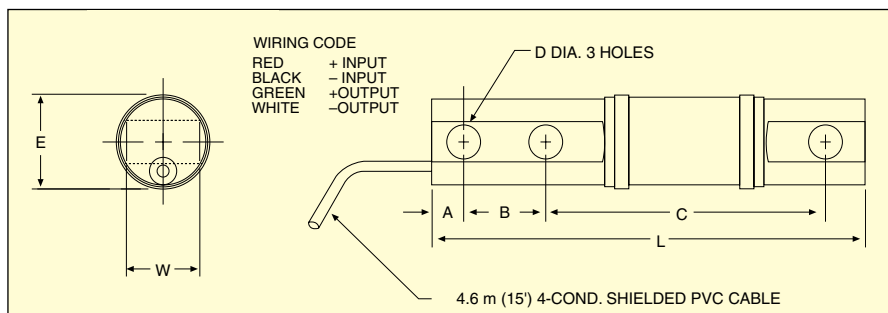
**Span:** ±0.001% FSO/°F

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350  $\Omega$  minimum

**Protection Class:** IP65



**Dimensions: mm (inch)**

| CAPACITY                              | L              | E            | W            | A             | B             | C             | D             |
|---------------------------------------|----------------|--------------|--------------|---------------|---------------|---------------|---------------|
| 50 to 100 lb<br>25 to 50 kgf          | 152<br>(6.00)  | 35<br>(1.37) | 27<br>(1.06) | 9.3<br>(0.37) | 22<br>(0.875) | 108<br>(4.25) | 7.9<br>(0.31) |
| 250 to 2000 lb<br>250 to 750 kgf      | 169<br>(6.66)  | 35<br>(1.37) | 27<br>(1.06) | 13<br>(0.50)  | 29<br>(1.13)  | 108<br>(4.25) | 13<br>(0.53)  |
| 2500 lb<br>1000 kgf                   | 289<br>(11.38) | 57<br>(2.25) | 32<br>(1.25) | 13<br>(0.50)  | 44<br>(1.75)  | 210<br>(8.25) | 13<br>(0.53)  |
| 5000 to 10,000 lb<br>2500 to 5000 kgf | 323<br>(12.75) | 95<br>(3.75) | 70<br>(2.75) | 19<br>(0.75)  | 51<br>(2.00)  | 216<br>(8.50) | 20<br>(0.78)  |

**Output Resistance:** 350 ±10  $\Omega$

**Full Scale Deflection:**

0.010 to 0.015" typical

**Construction:** Stainless steel

**Electrical:** 4.6 m (15') PVC insulated,  
4-conductor shielded color-coded cable

# HIGH PERFORMANCE METER



DP41-B shown smaller than actual size.

## DP41-B

- ✓ Universal Inputs
- ✓ ±0.005% Rdg Accuracy
- ✓ 6-Digit Color-Changing LED Display
- ✓ Up to 166 Readings per Second
- ✓ Optional Ethernet or RS232/RS485

| To Order               |      |             |                         |
|------------------------|------|-------------|-------------------------|
| CAPACITY               |      | MODEL NO.   | COMPATIBLE METERS*      |
| lb                     | kgf  |             |                         |
| <b>STANDARD MODELS</b> |      |             |                         |
| 50                     | 23   | LC602-50    | DP41-B, DP41-S, DP25B-S |
| 100                    | 45   | LC602-100   | DP41-B, DP41-S, DP25B-S |
| 250                    | 114  | LC602-250   | DP41-B, DP41-S, DP25B-S |
| 500                    | 227  | LC602-500   | DP41-B, DP41-S, DP25B-S |
| 1000                   | 455  | LC602-1K    | DP41-B, DP41-S, DP25B-S |
| 1500                   | 682  | LC602-1.5K  | DP41-B, DP41-S, DP25B-S |
| 2000                   | 909  | LC602-2K    | DP41-B, DP41-S, DP25B-S |
| 2500                   | 1134 | LC602-2.5K  | DP41-B, DP41-S, DP25B-S |
| 5000                   | 2269 | LC602-5K    | DP41-B, DP41-S, DP25B-S |
| 7500                   | 3403 | LC602-7.5   | DP41-B, DP41-S, DP25B-S |
| 10,000                 | 4537 | LC602-10K   | DP41-B, DP41-S, DP25B-S |
| <b>METRIC MODELS</b>   |      |             |                         |
| 55                     | 25   | LCM602-25   | DP41-B, DP41-S, DP25B-S |
| 110                    | 50   | LCM602-50   | DP41-B, DP41-S, DP25B-S |
| 551                    | 250  | LCM602-250  | DP41-B, DP41-S, DP25B-S |
| 1102                   | 500  | LCM602-500  | DP41-B, DP41-S, DP25B-S |
| 1653                   | 750  | LCM602-750  | DP41-B, DP41-S, DP25B-S |
| 2205                   | 1000 | LCM602-1K   | DP41-B, DP41-S, DP25B-S |
| 5512                   | 2500 | LCM602-2.5K | DP41-B, DP41-S, DP25B-S |
| 11,023                 | 5000 | LCM602-5K   | DP41-B, DP41-S, DP25B-S |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters.

Ordering Examples: LC602-250, 250 lb capacity load cell.

LCM602-250, 250 kgf capacity load cell.

## ECONOMICAL BENDING BEAM LOAD CELLS

**Bi-directional**  
**0-1 kgf to 0-5 kgf**  
**0-2.2 lb to 0-11 lb**

## LCEA Series

- ✓ Economical Design— Ideal for OEM Use
- ✓ All-Aluminum Construction
- ✓ 1, 2, and 5 kg Ranges

### SPECIFICATIONS

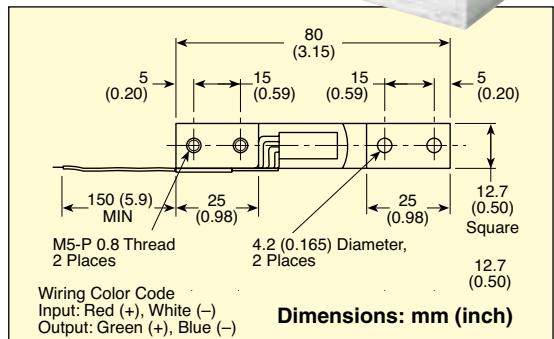
**Output:** 0.5 mV/V ±10%  
 (end user must calibrate to eliminate 10%)

**Excitation:** 5 Vdc (8 Vdc maximum)

**Non-Linearity:** 0.5% full scale

LCEA-2KG shown actual size.

**Hysteresis:** 0.3% FS  
**Zero Balance:** ±1 mV/V  
**Bridge Resistance:** 350 Ω  
**Construction:** Aluminum with acrylic resin protective coating  
**Operating Temperature:** -10 to 80°C (14 to 176°F)  
**Compensated Temperature:** 0 to 65°C (32 to 140°F)  
**Temp Effect:**  
**Zero:** ±0.1% full scale /°C  
**Span:** ±0.1% rdg/°C  
**Safe Overload:** 200% full scale  
**Lead Wire:** 6", 30 AWG, pigtail leads



| To Order |     |           |                       |
|----------|-----|-----------|-----------------------|
| CAPACITY |     | MODEL NO. | COMPATIBLE METERS*    |
| kgf      | lb  |           |                       |
| 1        | 2.2 | LCEA-1KG  | DP25B-S, DP41-S, DP87 |
| 2        | 4.4 | LCEA-2KG  | DP25B-S, DP41-S, DP87 |
| 5        | 11  | LCEA-5KG  | DP25B-S, DP41-S, DP87 |

\* Visit us online for compatible meters.

Ordering Example: LCEA-2KG, 2 kgf load cell.

# LOW CAPACITY

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# TENSION LINK LOAD CELLS INTERNAL THREAD DESIGN

## STANDARD AND METRIC MODELS

**Calibrated in Tension**  
**0-100 lb to 0-2000 lb**  
**0-50 kgf to 0-1000 kgf**

**LC701/LCM701 Series**  
**LC711/LCM711 Series**



- ✓ All Stainless Steel Construction
- ✓ Accuracy 0.15%
- ✓ Rugged Design for Industrial Applications
- ✓ 5-Point NIST Traceable Calibration in Tension

The LC701/LCM701 Series tension links have a 1.8 m (6') cable with stripped end termination. The LC711/LCM711 Series units have an integral connector on the body. These stainless steel load cells are ideal for measuring in-line tension forces. Applications include cables on cranes, support rods in architectural designs, engine test beds, and industrial weighing.

### SPECIFICATIONS

**Output:** 3 mV/V ±0.25 % FSO

**Excitation:** 10 Vdc (15V maximum)

**Linearity:**

>100 lb: ±0.10% FSO

≤100 lb: ±0.20% FSO

**Hysteresis:** ±0.10% FSO

**Repeatability:** ±0.05% FSO

**Zero Balance:** ±1.0% FSO

**Operating Temp. Range:**

-46 to 121°C (-50 to 250°F)

**Compensated Temp. Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** ±0.0045% FSO/°C

**Span:** ±0.007% rdg/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω

**Full Scale Deflection:** 0.025 to 0.102 mm (0.001 to 0.004")

**Protection Class:** IP65

**Construction:** Stainless steel

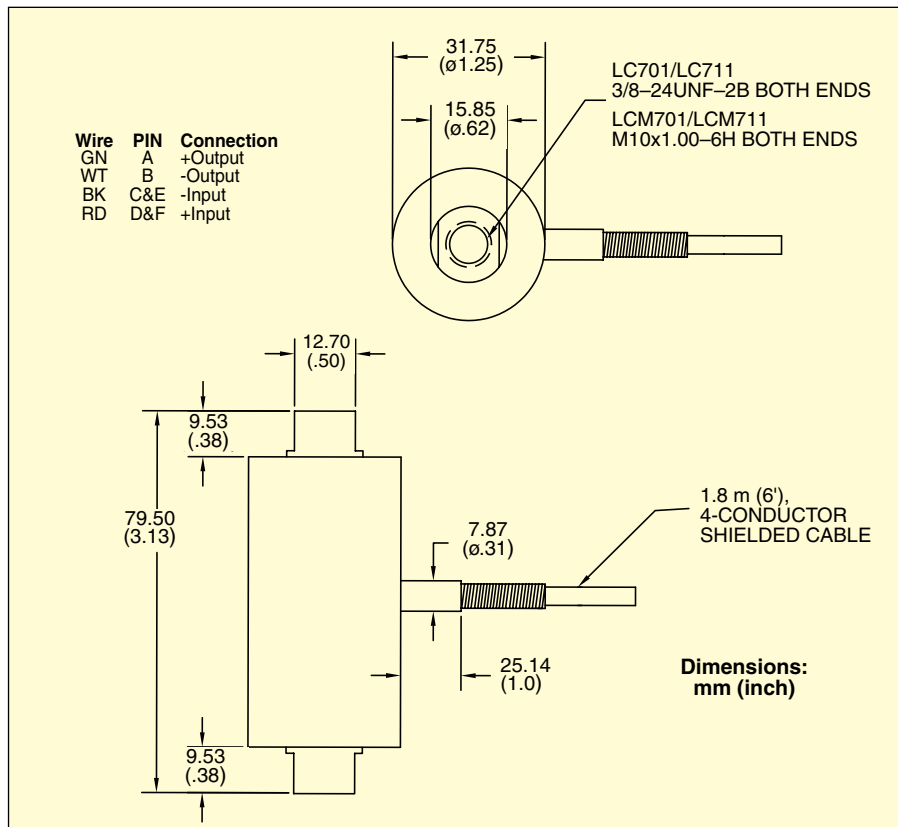


### Electrical:

**LC701/LCM701:** 1.8 m (6') insulated 4-conductor shielded cable

**LC711/LCM711:** DT02H-10-6P integral connector; mating connector sold separately, **PT06F10-6S**

**Weight:** 0.45 kg (1 lb)



LOAD CELLS  
F

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## LOW-CAPACITY TENSION LINK LOAD CELLS

| To Order               |         |                       |                           |                       |
|------------------------|---------|-----------------------|---------------------------|-----------------------|
| CAPACITY               |         | CABLE STYLE MODEL NO. | CONNECTOR STYLE MODEL NO. | COMPATIBLE METERS*    |
| <b>STANDARD MODELS</b> |         |                       |                           |                       |
| 100 lb                 | 45 kgf  | LC701-100             | LC711-100                 | DPiS, DP41-S, DP25B-S |
| 250 lb                 | 114 kgf | LC701-250             | LC711-250                 | DPiS, DP41-S, DP25B-S |
| 750 lb                 | 341 kgf | LC701-750             | LC711-750                 | DPiS, DP41-S, DP25B-S |
| 1000 lb                | 455 kgf | LC701-1K              | LC711-1K                  | DPiS, DP41-S, DP25B-S |
| 2000 lb                | 909 kgf | LC701-2K              | LC711-2K                  | DPiS, DP41-S, DP25B-S |
| <b>METRIC MODELS</b>   |         |                       |                           |                       |
| 50 kgf                 | 110 lb  | LCM701-50             | LCM711-50                 | DPiS, DP41-S, DP25B-S |
| 500 kgf                | 1100 lb | LCM701-500            | LCM711-500                | DPiS, DP41-S, DP25B-S |
| 1000 kgf               | 2200 lb | LCM701-1K             | LCM711-1K                 | DPiS, DP41-S, DP25B-S |

### ACCESSORIES

| MODEL NO.  | DESCRIPTION   |
|------------|---|
| REC-038M   | 3/8"-24 male rod end                                |
| PT06F10-6S | Mating connector for LC711/LCM711 series load cells |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

**Ordering Examples:** LC701-1K, 1000 lb capacity tension link with 1.8 m (6') cable.

LC711-250, 250 lb capacity tension link with integral connector on the body.

LCM701-1K, 1000 kgf capacity tension link with 1.8 m (6') cable.

LCM711-50, 50 kgf capacity tension link with integral connector on the body.

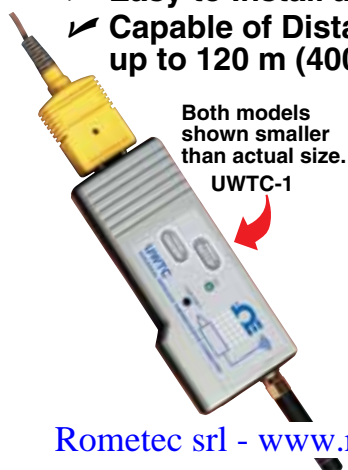
PT06F10-6S, mating connector (sold separately).

\* Visit us online for compatible meters.

## MAKE IT WIRELESS! ADD WIRELESS CAPABILITY TO YOUR PROCESS MEASUREMENT SYSTEM!

Wireless Connections  
From Your Sensor to Your  
Instrumentation:

- ✓ Thermocouple, RTD, Infrared Temperature, Humidity, pH, as well as Process Voltage/Current
- ✓ Easy to Install and Use
- ✓ Capable of Distances up to 120 m (400')



Both models shown smaller than actual size.  
UWTC-1



UWTC-REC2 available with 4 to 20 mA, 0 to 5 Vdc, 0 to 10 Vdc and Type K thermocouple output.

Laptop not included.



WRS232-USB wireless transmitter shown close to actual size.

Wireless Communications  
From Your Instrument to a PC:

- ✓ Convert the RS232 Signal on Your Meter, Controller or PLC
- ✓ Works with any PC with a USB Port
- ✓ Easy to Install with Seamless Operation
- ✓ Capable of Distances up to 120 m (400')



# MINIATURE LOW PROFILE TENSION LINKS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## LOW PROFILE 19 mm (0.75") TO 25 mm (1") HEIGHT

### STANDARD AND METRIC MODELS

**Tension/Compression  
Calibrated in Tension**  
**10 lb to 1000 lb**  
**5 kg to 500 kgf**

1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kgf = 2204 lb

## LC703/LCM703 Series



- ✓ Low Profile
- ✓ High Accuracy
- ✓ Rugged Industrial Design

The LC703/LCM703 Series comprises economical universal (tension/compression) load cells with a low profile. Ranges above 100 lb are stainless steel; ranges below 100 lb are aluminum. The low profile and rugged design make LC703 and LCM703 suitable for many industrial applications, including robotics, automated weighing systems, and batch-process control systems.

### SPECIFICATIONS

**Excitation:** 10 Vdc (15V max)

**Output:** 2 mV/V nominal

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Linearity:**

10 to 100 lb: ±0.15%

>100 lb: ±0.10 FSO

5 to 50 kgf: ±0.15%

75 to 500 kgf: ±0.10%

**Hysteresis:**

10 to 100 lb: ±0.15%

>100 lb: ±0.10 FSO

5 to 50 kgf: ±0.15%

75 to 500 kgf: ±0.10%

**Repeatability:** ±0.05%

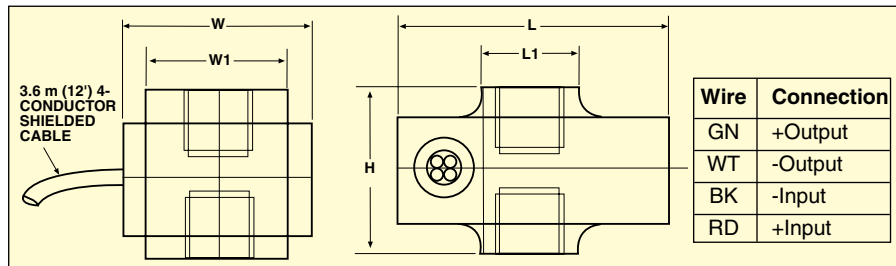
**Zero Balance:** ±1.0% FSO

**Operating Temp Range:**

-40 to 82°C (-40 to 180°F)

**STANDARD**  
LC703-25,  
shown actual size.

**METRIC**  
LCM703-150,  
shown actual size.



**Dimensions: mm (in)**

| CAPACITY      | L (MAX)   | L1        | W         | W1         | H         | THREAD       |
|---------------|-----------|-----------|-----------|------------|-----------|--------------|
| 10 lb         | 38 (1.50) | 14 (0.56) | 14 (0.54) | 9.5 (0.38) | 19 (0.75) | 10-32 x 0.20 |
| 5 kgf         |           |           |           |            |           | M5 x 0.8-6H  |
| 25 to 100 lb  | 41 (1.62) | 14 (0.56) | 17 (0.66) | 13 (0.50)  | 19 (0.75) | ¼-28 x 0.23  |
| 10 to 50 kgf  |           |           |           |            |           | M6 x 1.00-6H |
| 150 to 1K lb  | 44 (1.75) | 14 (0.56) | 24 (0.93) | 19 (0.75)  | 25 (1.0)  | ¾-24 x 0.38  |
| 75 to 500 kgf |           |           |           |            |           | M10 x 1.5-6H |

**Compensated Temp Range:**  
16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:** ±0.005% FSO/°F

**Span:** ±0.005% FSO/°F

**Protection Class:** IP54

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Output Resistance:** 350 ±10 Ω

**Input Resistance:** 360 Ω minimum

**Full Scale Deflection:** 0.003" nominal

**Construction:**

≤100 lb: Aluminum

>100 lb: 17-4 PH stainless steel

≤50 kg: Aluminum

>50 kg: 17-4 PH stainless steel

**Electrical:** 3.6 m (12') shielded 4-conductor PVC cable

**To Order**

| CAPACITY               |      | MODEL NO.  | COMPATIBLE METERS*    | ROD END   |
|------------------------|------|------------|-----------------------|-----------|
| kgf                    | lb   |            |                       |           |
| <b>STANDARD MODELS</b> |      |            |                       |           |
| 4.5                    | 10   | LC703-10   | DPiS, DP41-S, DP25B-S | REC-010M  |
| 11                     | 25   | LC703-25   | DPiS, DP41-S, DP25B-S | REC-014M  |
| 23                     | 50   | LC703-50   | DPiS, DP41-S, DP25B-S | REC-014M  |
| 34                     | 75   | LC703-75   | DPiS, DP41-S, DP25B-S | REC-014M  |
| 45                     | 100  | LC703-100  | DPiS, DP41-S, DP25B-S | REC-014M  |
| 68                     | 150  | LC703-150  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 91                     | 200  | LC703-200  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 136                    | 300  | LC703-300  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 227                    | 500  | LC703-500  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 341                    | 750  | LC703-750  | DPiS, DP41-S, DP25B-S | REC-038M  |
| 455                    | 1000 | LC703-1K   | DPiS, DP41-S, DP25B-S | REC-038M  |
| <b>METRIC MODELS</b>   |      |            |                       |           |
| 5                      | 11   | LCM703-5   | DPiS, DP41-S, DP25B-S | MREC-M5M  |
| 10                     | 22   | LCM703-10  | DPiS, DP41-S, DP25B-S | MREC-M6M  |
| 25                     | 55   | LCM703-25  | DPiS, DP41-S, DP25B-S | MREC-M6M  |
| 50                     | 110  | LCM703-50  | DPiS, DP41-S, DP25B-S | MREC-M6M  |
| 75                     | 165  | LCM703-75  | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 100                    | 220  | LCM703-100 | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 150                    | 331  | LCM703-150 | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 250                    | 551  | LCM703-250 | DPiS, DP41-S, DP25B-S | MREC-M10M |
| 500                    | 1102 | LCM703-500 | DPiS, DP41-S, DP25B-S | MREC-M10M |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LC703-200, 200 lb capacity universal link with 3.6 m (12') cable.

LCM703-100, 100 kgf capacity universal link with 3.6 m (12') cable, MREC-M10M, accessory rod ends.

**COMPATIBLE METERS**

**DP25B/DP41-B**



**PATENTED**

**MONOGRAM SERIES**



DP25B-E, shown smaller than actual size.

- ✓ mV, V, mA, Strain Gage Thermocouple, RTD Inputs
- ✓ Full Process Unit Scaling
- ✓ Built-In Transducer Power



DP41-B, shown smaller than actual size.

**To Order**

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| DP25B-E   | 4-digit voltage/current input meter with excitation   |
| DP25B-S   | 4-digit mV input meter with excitation                |
| DP41-B    | 6-digit 1/8 DIN universal input meter with excitation |

Comes complete with operator's manual.

**Ordering Examples:** DP25B-E, voltage/current input meter for use with 0 to 5 V, 0 to 10 V, 4 to 20 mA output transducers.

DP25B-S, mV input meter for use with mV/V output transducers, DP41-B, universal input meter for use with all standard transducer outputs.

## WITH MOUNTING WASHERS STANDARD AND METRIC MODELS

### Compression

0-2000 lb to 0-100,000 lb

0-10,000 N to 0-500,000 N

1 Newton = 0.2248 lb

1 daNewton = 10 Newtons

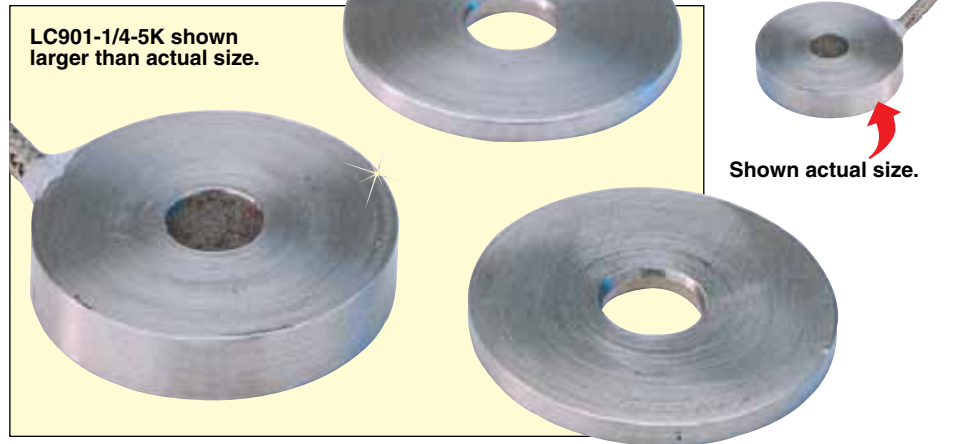
1 lb = 454 g

1 t = 1000 kgf = 2204 lb

### LC900/LCM900 Series



Standard



OMEGA's LC900/LCM900 Series bolt force sensors are compression load cells designed to measure the clamping force of a bolt. With excellent long-term stability and all stainless steel construction, the LC900/LCM900 Series delivers high reliability in severe industrial environments. These units are designed to operate by mounting on a flat surface between 2 mounting washers (included).

### SPECIFICATIONS

**Excitation:** 5 Vdc (10V max)

**Output:** 2 mV/V nominal

**Accuracy:** ±3.5% FSO linearity, hysteresis and repeatability combined

**Zero Balance:** ±4% FSO

**Operating Temp Range:** -54 to 93°C (-65 to 200°F)

**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

#### Thermal Effects:

**Zero:** ±0.018% FSO/°C

**Span:** ±0.036% rdg/°C

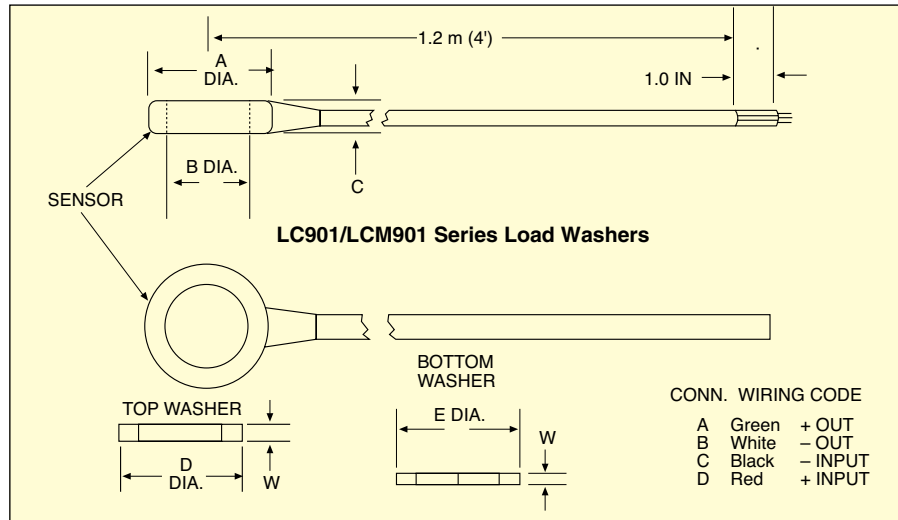
**Safe Overload:** 130% of capacity

**Ultimate Overload:** 150% of capacity

**Bridge Resistance:** 120 Ω nominal

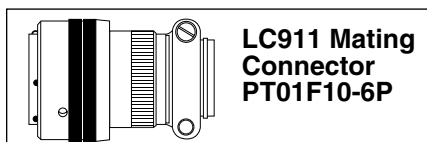
**Construction:** Stainless steel

**Electrical Connection:** 1.2 m (4') insulated shielded cable



### Dimensions: mm (inch)

| SIZE                   | CAPACITY   | BOLT SENSOR  |              |              | WASHERS      |              |              |
|------------------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                        |            | A            | B            | C            | D            | E            | W            |
| <b>STANDARD MODELS</b> |            |              |              |              |              |              |              |
| 1/4"                   | 2000 lb    | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 1/4"                   | 5000 lb    | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 3/8"                   | 10,000 lb  | 19.1 (0.750) | 10.1 (0.396) | 4.75 (0.187) | 16.7 (0.656) | 19.1 (0.750) | 1.57 (0.062) |
| 1/2"                   | 30,000 lb  | 25.4 (1.000) | 13.1 (0.517) | 6.35 (0.250) | 21.4 (0.844) | 25.4 (1.000) | 1.98 (0.078) |
| 5/8"                   | 50,000 lb  | 28.6 (1.125) | 16.4 (0.644) | 6.35 (0.250) | 24.6 (0.968) | 28.6 (1.125) | 1.98 (0.078) |
| 3/4"                   | 65,000 lb  | 38.1 (1.500) | 19.6 (0.770) | 9.53 (0.375) | 30.9 (1.218) | 38.1 (1.500) | 2.36 (0.093) |
| 1 1/2"                 | 100,000 lb | 66.7 (2.625) | 38.9 (1.533) | 22.2 (0.875) | 63.5 (2.500) | 66.7 (2.625) | 3.18 (0.125) |
| <b>METRIC MODELS</b>   |            |              |              |              |              |              |              |
| 6 mm                   | 10,000 N   | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 6 mm                   | 20,000 N   | 25.4 (1.000) | 6.76 (0.266) | 4.75 (0.187) | 19.1 (0.750) | 25.4 (1.000) | 1.57 (0.062) |
| 10 mm                  | 50,000 N   | 19.1 (0.75)  | 10.1 (0.396) | 4.75 (0.187) | 16.7 (0.656) | 19.1 (0.750) | 1.57 (0.062) |
| 13 mm                  | 130,000 N  | 25.4 (1.000) | 13.1 (0.517) | 6.35 (0.250) | 21.4 (0.844) | 25.4 (1.000) | 1.98 (0.078) |
| 16 mm                  | 200,000 N  | 28.6 (1.125) | 16.4 (0.644) | 6.35 (0.250) | 24.6 (0.968) | 28.6 (1.125) | 1.98 (0.078) |
| 19 mm                  | 300,000 N  | 38.1 (1.500) | 19.6 (0.770) | 9.53 (0.375) | 30.9 (1.218) | 38.1 (1.500) | 2.36 (0.093) |
| 38 mm                  | 500,000 N  | 66.7 (2.625) | 38.9 (1.533) | 22.2 (0.875) | 63.5 (2.500) | 66.7 (2.625) | 3.18 (0.125) |



# BOLT SENSORS WITH MOUNTING WASHERS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## To Order

| BOLT SIZE              | CAPACITY |         | MODEL NO. STRIPPED ENDS | MODEL NO. CONNECTOR END | COMPATIBLE METERS**    |
|------------------------|----------|---------|-------------------------|-------------------------|------------------------|
|                        | lb       | N       |                         |                         |                        |
| <b>STANDARD MODELS</b> |          |         |                         |                         |                        |
| 1/4"                   | 2000     | 8897    | LC901-1/4-2K            | -                       | DP41-S, DP25B-S, DPiS  |
| 1/4"                   | 5000     | 22,242  | LC901-1/4-5K            | -                       | DP41-S, DP25B-S, DPiS  |
| 3/8"                   | 10,000   | 44,484  | LC901-3/8-10K           | -                       | DP41-S, DP25B-S, DPiS* |
| 1/2"                   | 30,000   | 133,452 | LC901-1/2-30K           | LC911-1/2-30K           | DP41-S, DP25B-S, DPiS* |
| 5/8"                   | 50,000   | 222,420 | LC901-5/8-50K           | LC911-5/8-50K           | DP41-S, DP25B-S, DPiS* |
| 3/4"                   | 65,000   | 289,146 | LC901-3/4-65K           | LC911-3/4-65K           | DP41-S, DP25B-S, DPiS* |
| 1 1/2"                 | 100,000  | 444,840 | LC901-1.5-100K          | -                       | DP41-S, DP25B-S, DPiS* |
| <b>METRIC MODELS</b>   |          |         |                         |                         |                        |
| 6 mm                   | 2248     | 10,000  | LCM901-6-10KN           | -                       | DPiS, DP41-S, DP25B-S  |
| 6 mm                   | 4496     | 20,000  | LCM901-6-20KN           | -                       | DPiS, DP41-S, DP25B-S  |
| 10 mm                  | 11,240   | 50,000  | LCM901-10-50KN          | -                       | DPiS, DP41-S, DP25B-S  |
| 13 mm                  | 29,225   | 130,000 | LCM901-13-130KN         | LCM911-13-130KN         | DPiS, DP41-S, DP25B-S  |
| 16 mm                  | 44,962   | 200,000 | LCM901-16-200KN         | LCM911-16-200KN         | DPiS, DP41-S, DP25B-S  |
| 19 mm                  | 67,443   | 300,000 | LCM901-19-300KN         | LCM911-19-300KN         | DPiS, DP41-S, DP25B-S* |
| 38 mm                  | 112,405  | 500,000 | LCM901-38-500KN         | -                       | DPiS, DP41-S, DP25B-S* |

## ACCESSORY

| MODEL NO.  | DESCRIPTION   |
|------------|---|
| PT01F10-6P | Mating connector for LC911/LCM911 series load cells |

Comes complete with 2-point NIST-traceable calibration and 59 kΩ shunt data. \* 4-digit meter. \*\* Visit us online for compatible meters.

**Ordering Examples:** LC901-3/8-10K, 10,000 lb capacity bolt sensor for a 3/8" diameter bolt, with stripped ends on the leads.

LCM901-10-50KN, 50 kN capacity bolt sensor for 10 mm bolt, with stripped ends on the leads.

LC911-1/2-30K, 30,000 lb capacity bolt sensor for a 1/2" diameter bolt with a connector installed on the cable. PT01F10-6P, mating connector (sold separately).

LCM911-13-130KN, 130 kN capacity bolt sensor for 13 mm bolt with a connector installed on the cable. PT01F10-6P, mating connector (sold separately).

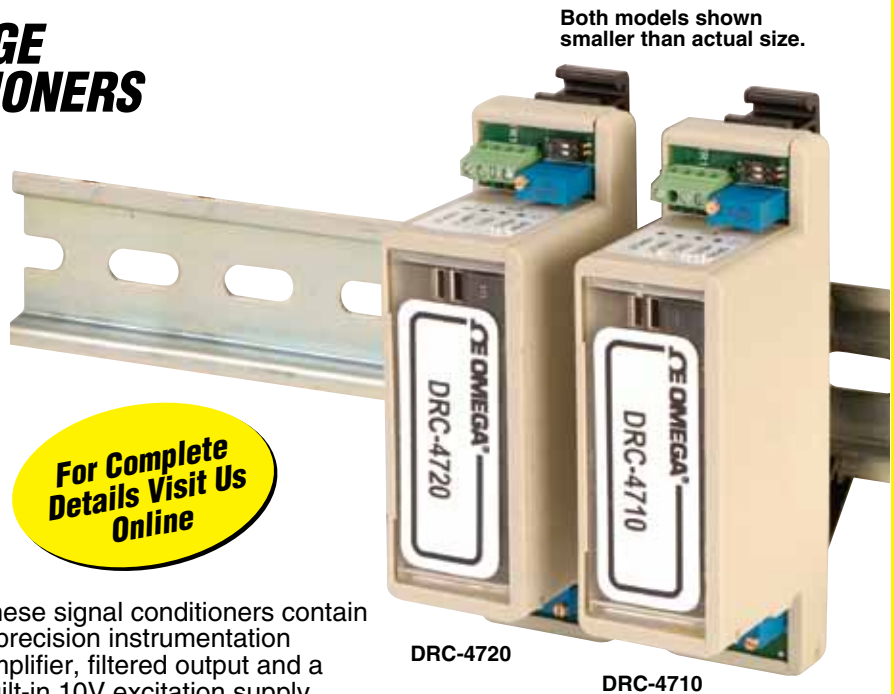
## DIN RAIL MOUNT BRIDGE INPUT SIGNAL CONDITIONERS

### DRC-4710/4720



- ✓ DIN Rail Mount
- ✓ Bridge Input (Load Cell, Strain Gage) or Voltage Input
- ✓ 0 to 10 Vdc (DRC-4710) or 4 to 20 mA (DRC-4720) Output
- ✓ Economical

The DRC-4710 and DRC-4720 DIN rail mount signal conditioners are self-contained DC powered modules designed for bridge input (load cell, strain gage) or voltage input (not connected to a bridge, excitation supply not used).



These signal conditioners contain a precision instrumentation amplifier, filtered output and a built-in 10V excitation supply capable of driving a 350 Ω bridge.

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| DRC-4710  | Bridge input signal conditioner with 0 to 10 Vdc output |
| DRC-4720  | Bridge input signal conditioner with 4 to 20 mA output  |

LOAD CELLS

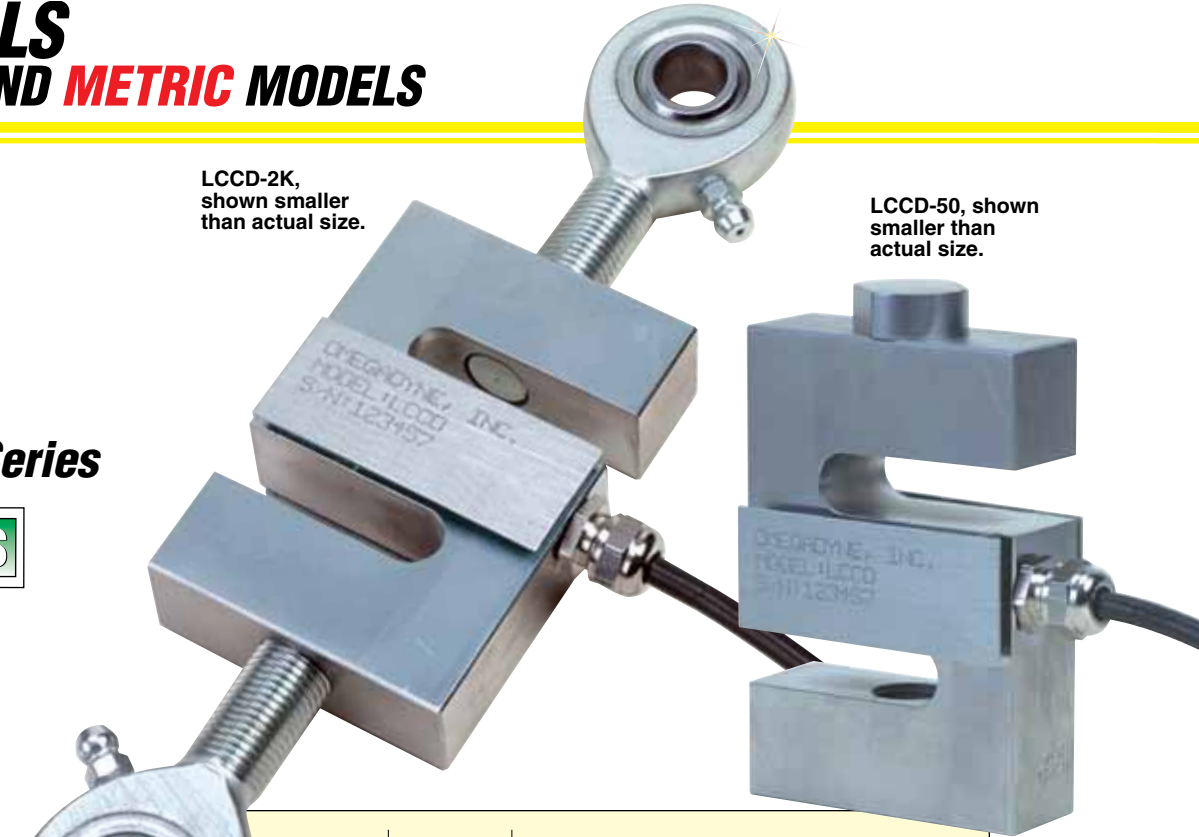
# ENVIRONMENTALY PROTECTED LOAD CELLS STANDARD AND METRIC MODELS

**Tension/Compression**  
0-25 lb to 0-20,000 lb  
0-10 kgf to 0-5000 kgf

LCCD-2K,  
shown smaller  
than actual size.

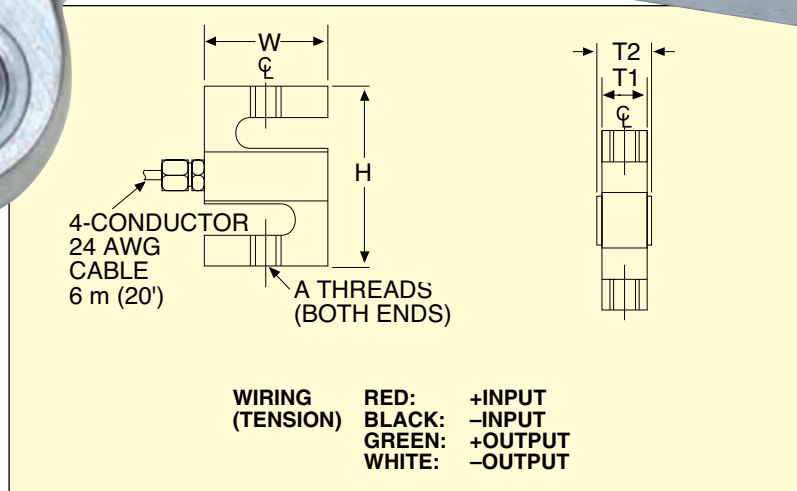
LCCD-50, shown  
smaller than  
actual size.

## LCCD/LCMCD Series



REC-012M rod ends sold  
separately, each.

- ✓ Environmentally Protected to IP67
- ✓ Stainless Steel
- ✓ Calibration Certificate Supplied
- ✓ 0.25% Interchangeability



### SPECIFICATIONS

**Excitation:** 10 Vdc (15 Vdc maximum)  
**Output:** 3.0 mV/V  $\pm 0.25\%$   
**Linearity:** 0.03% FS  
**Hysteresis:** 0.02% FS  
**Repeatability:** 0.01% FS  
**Zero Balance:** 1% FS  
**Creep in 20 min:** 0.03% FS  
**Operating Temperature:**  
 -18 to 66°C (0 to 150°F)  
**Compensated Temperature:**  
 -18 to 66°C (0 to 150°F)  
**Thermal Effects:**  
**Zero:** 0.0027% FS/°C  
**Span:** 0.0015% rdg/°C  
**Maximum Load:** Safe, 150%;  
 ultimate, 300%  
**Bridge Resistance:** 350  $\Omega$  nominal  
**Construction:** 17-4 PH stainless steel  
**Cable:** 6 m (20') 4-conductor shielded  
 22-gauge wire PVC cable

| CAPACITY       | THREADS         | Dimensions: mm (inch) |           |             |             |
|----------------|-----------------|-----------------------|-----------|-------------|-------------|
|                |                 | H                     | W         | T1          | T2          |
| <b>lb</b>      |                 |                       |           |             |             |
| 25 to 200      | 1/4-28 UNF-2B   | 63.5 (2.5)            | 50.8 (2)  | 10.2 (0.4)  | 19.1 (0.75) |
| 250            | 3/8-24 UNF-2B   | 76.2 (3)              | 50.8 (2)  | 12.7 (0.5)  | 21.6 (0.85) |
| 500 to 2000    | 1/2-20 UNF-2B   | 76.2 (3)              | 50.8 (2)  | 17.8 (0.7)  | 25.4 (1)    |
| 3000           | 1/2-20 UNF-2B   | 76.2 (3)              | 50.8 (2)  | 24.1 (0.95) | 33 (1.3)    |
| 5000 to 10,000 | 3/4-16 UNF-2B   | 108 (4.25)            | 76.2 (3)  | 24.1 (0.95) | 33 (1.3)    |
| 15,000         | 1-14 UNF-2B     | 139.7 (5.5)           | 101.6 (4) | 31.8 (1.25) | 40.6 (1.6)  |
| 20,000         | 1-1/4-12 UNF-2B | 177.8 (7)             | 127 (5)   | 50.8 (2)    | 58.4 (2.3)  |
| <b>kgf</b>     |                 |                       |           |             |             |
| 10 to 250      | M8 x 1,25-6H    | 64 (2.5)              | 51 (2)    | 11 (0.4)    | 20 (0.8)    |
| 500 to 1000    | M12 x 1,75-6H   | 76 (3)                | 51 (2)    | 19 (0.7)    | 25 (1)      |
| 2000           | M20 x 1,5-6H    | 108 (4.3)             | 76 (3)    | 25 (1)      | 34 (1.3)    |
| 5000           | M20 x 1,5-6H    | 121 (4.8)             | 89 (3.5)  | 25 (1)      | 34 (1.3)    |

| CAPACITY               |      | MODEL NO. | DEFL. (inch) | WT      | COMPATIBLE METERS*    | LOAD BUTTON | ROD END   |
|------------------------|------|-----------|--------------|---------|-----------------------|-------------|-----------|
| lb                     | kgf  |           |              |         |                       | MODEL       | MODEL     |
| <b>STANDARD MODELS</b> |      |           |              |         |                       |             |           |
| 25                     | 11   | LCCD-25   | 0.011        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 50                     | 23   | LCCD-50   | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 100                    | 45   | LCCD-100  | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 150                    | 68   | LCCD-150  | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 200                    | 91   | LCCD-200  | 0.010        | 0.4 lb  | DP25B-S, DP41-S, DPiS | LBC-014     | REC-014M  |
| 250                    | 114  | LCCD-250  | 0.010        | 0.6 lb  | DP25B-S, DP41-S, DPiS | LBC-038     | REC-038M  |
| 500                    | 227  | LCCD-500  | 0.010        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 750                    | 340  | LCCD-750  | 0.006        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 1000                   | 454  | LCCD-1K   | 0.007        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 2000                   | 907  | LCCD-2K   | 0.011        | 1 lb    | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 3000                   | 1361 | LCCD-3K   | 0.006        | 1.3 lb  | DP25B-S, DP41-S, DPiS | LBC-012     | REC-012M  |
| 5000                   | 2269 | LCCD-5K   | 0.011        | 2.3 lb  | DP25B-S, DP41-S, DPiS | LBC-034     | REC-034M  |
| 10,000                 | 4537 | LCCD-10K  | 0.014        | 2.6 lb  | DP25B-S, DP41-S, DPiS | LBC-034     | REC-034M  |
| 15,000                 | 6806 | LCCD-15K  | 0.018        | 6 lb    | DP25B-S, DP41-S, DPiS | LBC-100     | REC-100M  |
| 20,000                 | 9074 | LCCD-20K  | 0.028        | 14 lb   | DP25B-S, DP41-S, DPiS | —           | REC-114M  |
| <b>METRIC MODELS</b>   |      |           |              |         |                       |             |           |
|                        |      |           | (mm)         |         |                       |             |           |
| 22                     | 10   | LCMCD-10  | 0.27         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 55                     | 25   | LCMCD-25  | 0.24         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 110                    | 50   | LCMCD-50  | 0.24         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 220                    | 100  | LCMCD-100 | 0.25         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M8     | MREC-M8M  |
| 551                    | 250  | LCMCD-250 | 0.24         | 0.18 kg | DP25B-S, DP41-S, DPiS | MLBC-M12    | MREC-M12M |
| 1102                   | 500  | LCMCD-500 | 0.18         | 0.37 kg | DP25B-S, DP41-S, DPiS | MLBC-M12    | MREC-M12M |
| 2204                   | 1000 | LCMCD-1K  | 0.29         | 0.37 kg | DP25B-S, DP41-S, DPiS | MLBC-M12    | MREC-M12M |
| 4408                   | 2000 | LCMCD-2K  | 0.28         | 1.0 kg  | DP25B-S, DP41-S, DPiS | MLBC-M20    | MREC-M20M |
| 11,020                 | 5000 | LCMCD-5K  | 0.36         | 1.2 kg  | DP25B-S, DP41-S, DPiS | MLBC-M20    | MREC-M20M |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

Ordering Example: LCCD-1K, 1000 lb capacity load cell.

LCMCD-100, 100 kgf capacity load cell.

### COMPATIBLE METERS/CONTROLLERS FOR PX309 SERIES PRESSURE TRANSDUCERS

The iSeries is available in 1/32, 1/16, and 1/8 DIN programmable process controllers with serial and embedded Internet/Ethernet communications (Order EI Option CNI16D). The iSeries features programmable color displays, free software and ActiveX Controls, selectable full autotune PID control, and NEMA 4 (IP65) rated front bezel. Ordering Examples: DPiS8, strain/process (monitor only), 1/8 DIN, CNI8, strain/process controller with 2 control outputs.



LOAD CELLS **F**

# HIGH ACCURACY LOAD CELLS

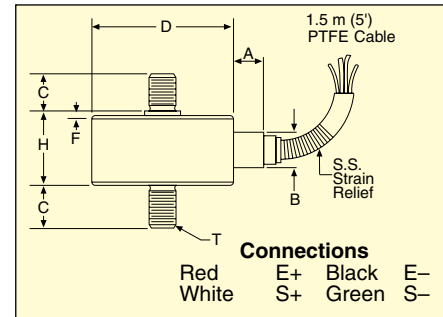
## STANDARD AND METRIC MODELS

**Tension/Compression**  
**2.2 lb to 1000 lb**  
**10 to 5000 N**

### LCFD/LCMFD Series



LCFD-100, shown actual size.



Small and capable of highly accurate readings, the LCFD/LCMFD subminiature load cells are designed for precision industrial applications. They are all stainless steel, measure both tension and compression loads, and have male thread studs for load attachment. The exclusive internal design provides superior long-term stability and minimizes the effects of small off-axis loads.

### SPECIFICATIONS

**Excitation:**

- ≤10 lb/50 N: 5 Vdc
- ≥25 lb/100 N: 10 Vdc

**Output:**

- 2.2 lb/10 N: 1.5 mV/V (nom)
- ≥5 lb/20 N: 2 mV/V (nom)

**Accuracy (Linearity and Hysteresis Combined):**

- ≤100 lb/500 N: ±0.15% FSO
- ≥250 lb/1000 N: ±0.20% FSO

**Repeatability:**

- ≤2.2 lb: ± 0.15% FSO
- ≥5 lb/10 N: 0.20% FSO

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

- Span: ±0.009% FSO/°C
- Zero: ±0.009% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Construction:** Stainless steel

**Electrical Connection:** 1.5 m (5')

4-conductor, shielded cable

- ≤10 lb/50 N: SS overbraided PTFE with temperature compensation board

**Protection Class:** IP65

**Dimensions: mm (inch)**

| CAPACITY       | T, THREAD    | F           | D DIA.      | H           | A           | B DIA.      | C           | WEIGHT g (oz) |
|----------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| 1 kg to 10 lb  | #6 - 32 UNC  | 1.3 (0.05)  | 19 (0.75)   | 12.7 (0.50) | 7.9 (0.31)  | 4.8 (0.19)  | 6.35 (0.25) | 42 (1.48)     |
| 10 to 50 N     | M5 x 0.8     |             |             |             |             |             |             |               |
| 25 to 100 lb   | #10 - 32 UNF | 3 (0.12)    | 25.4 (1.00) | 16.3 (0.64) | 12.7 (0.50) | 6.35 (0.25) | 6.35 (0.25) | 56 (1.98)     |
| 100 to 500 N   | M6 x 1.0     |             |             |             |             |             |             |               |
| 250 to 1000 lb | ¼-28 UNF     | 0.76 (0.03) | 25.4 (1.00) | 14.0 (0.55) | 12.7 (0.50) | 6.35 (0.25) | 9.7 (0.38)  | 68 (2.40)     |
| 1 to 5 KN      | M6 x 1.00    |             |             |             |             |             |             |               |

### To Order

| CAPACITY               |      | MODEL NO.  | COMPATIBLE METERS*    | ACCESSORY ROD ENDS |
|------------------------|------|------------|-----------------------|--------------------|
| lb                     | N    |            |                       |                    |
| <b>STANDARD MODELS</b> |      |            |                       |                    |
| 2.2                    | 9.8  | LCFD-1KG   | DP41-S, DP25B-S       | REC-006F           |
| 5                      | 22.2 | LCFD-5     | DP41-S, DP25B-S       | REC-006F           |
| 10                     | 44.5 | LCFD-10    | DP41-S, DP25B-S       | REC-006F           |
| 25                     | 111  | LCFD-25    | DPiS, DP41-S, DP25B-S | REC-010F           |
| 50                     | 222  | LCFD-50    | DPiS, DP41-S, DP25B-S | REC-010F           |
| 100                    | 445  | LCFD-100   | DPiS, DP41-S, DP25B-S | REC-010F           |
| 250                    | 1112 | LCFD-250   | DPiS, DP41-S, DP25B-S | REC-014F           |
| 500                    | 2224 | LCFD-500   | DPiS, DP41-S, DP25B-S | REC-014F           |
| 1000                   | 4448 | LCFD-1K    | DPiS, DP41-S, DP25B-S | REC-014F           |
| CAPACITY               |      | MODEL NO.  | COMPATIBLE METERS*    | ACCESSORY ROD ENDS |
| N                      | lb   |            |                       |                    |
| <b>METRIC MODELS</b>   |      |            |                       |                    |
| 10                     | 2.2  | LCMFD-10N  | DP41-S, DP25B-S       | MREC-M5F           |
| 20                     | 4.5  | LCMFD-20N  | DP41-S, DP25B-S       | MREC-M5F           |
| 50                     | 11   | LCMFD-50N  | DP41-S, DP25B-S       | MREC-M5F           |
| 100                    | 22   | LCMFD-100N | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 200                    | 45   | LCMFD-200N | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 500                    | 112  | LCMFD-500N | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 1000                   | 225  | LCMFD-1KN  | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 2000                   | 450  | LCMFD-2KN  | DPiS, DP41-S, DP25B-S | MREC-M6F           |
| 5000                   | 1124 | LCMFD-5KN  | DPiS, DP41-S, DP25B-S | MREC-M6F           |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Visit us online for compatible meters. DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCFD-1KG, 1000 gram load cell, matching rod end, REC-006F, LCFD-500, 500 lb capacity load cell, matching rod end, REC-014F.

LCMFD-20N, 20 N capacity load cell, matching rod end, MREC-M5F.

# ECONOMICAL MINIATURE TENSION OR COMPRESSION LOAD CELLS 19 TO 25 mm DIAMETER

**Tension/Compression  
Calibrated in Tension  
0-10 to 0-500 N**

## LCMFL Series



Small and capable of highly accurate readings, the LCMFL subminiature load cells are suitable for precision industrial applications. They are all stainless steel, measure either tension or compression loads, and have male thread studs for load attachment. The exclusive internal design provides superior long-term stability and minimizes the effects of small off-axis loads.

### SPECIFICATIONS

**Excitation:**

10 to 50 N: 5 Vdc  
 ≥100 N: 10 Vdc

**Output:**

10 N: 1.0 mV/V (nom.)  
 20 to 500 N: 2 mV/V (nom.)

**Accuracy (Linearity and Hysteresis Combined):** ±0.50% FSO

**Repeatability:** ±0.20% FSO

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-53 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Span:** ≥1 kg: ±0.009% rdg/°C

**Zero:** ≥1 kg: 0.009% FSO/°C

**Deflection FS:** 0.03 to 0.08 mm (0.001 to 0.003")

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

**Construction:** Stainless steel

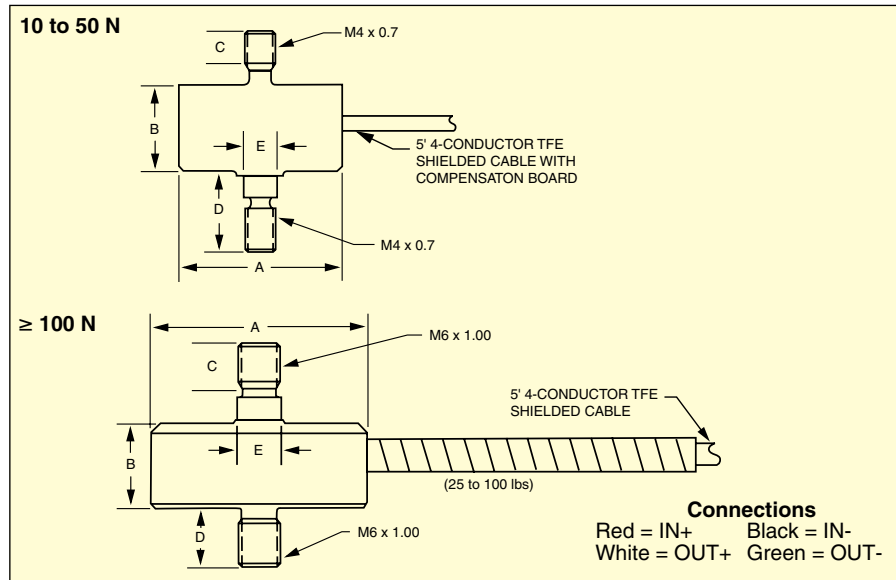
**Electrical Connection:** 1.5 m (5') 4-conductor, shielded TFE cable

**Protection Rating:** IP54

LCMFL-50N,  
shown larger than  
actual size.



LCMFL-500N,  
shown larger than  
actual size.



**Dimensions: mm (inch)**

| CAPACITY   | A           | B           | C          | D          | E          |
|------------|-------------|-------------|------------|------------|------------|
| 10 to 50 N | 19.1 (0.75) | 10.1 (0.40) | 6.4 (0.25) | 9.7 (0.38) | 3.8 (0.15) |
| ≥100 N     | 25.4 (1.00) | 9.9 (0.39)  | 9.7 (0.38) | 7.0 (0.26) | 5.0 (0.20) |

### To Order

| CAPACITY |     | MODEL NO.  | COMPATIBLE METERS*    |
|----------|-----|------------|-----------------------|
| N        | lb  |            |                       |
| 10       | 2.2 | LCMFL-10N  | DP25B-S, DP41-S, DPiS |
| 20       | 4.5 | LCMFL-20N  | DP25B-S, DP41-S, DPiS |
| 50       | 11  | LCMFL-50N  | DP25B-S, DP41-S, DPiS |
| 100      | 22  | LCMFL-100N | DP25B-S, DP41-S, DPiS |
| 200      | 45  | LCMFL-200N | DP25B-S, DP41-S, DPiS |
| 500      | 112 | LCMFL-500N | DP25B-S, DP41-S, DPiS |

Comes with 5-point NIST-traceable calibration.

\* DPiS meter suitable for one direction measurement only.

**Ordering Examples:** LCMFL-10N, 10 N load cell, MREC-M4F, matching rod end.  
 LCMFL-200N, 200 N load cell, MREC-M6F, matching rod end.

### ACCESSORIES

| MODEL NO. | DESCRIPTION                     |
|-----------|---------------------------------|
| MREC-M4F  | M4 x 0.7 female-thread rod end  |
| MREC-M6F  | M6 x 1.00 female-thread rod end |



# COMPRESSION LOAD CELL

## STANDARD AND METRIC MODELS

### Compression

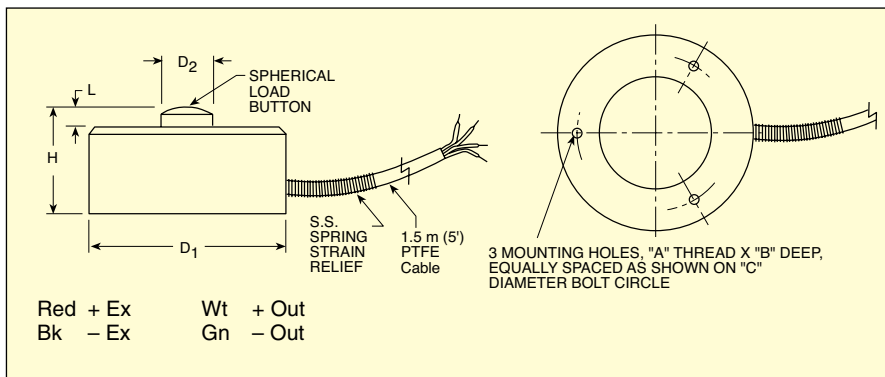
0-25 lb to 0-50,000 lb  
 0-100 N to 0-200,000 N

### LCGD/LCMGD Series



Shown actual size.

- 5-Point NIST Traceable Calibration
- Stainless Steel
- High Accuracy
- Low Profile
- Miniature Size



The LCGD/LCMGD Series miniature low-profile load cells are compression load cells with excellent long-term stability. An all stainless steel construction ensures reliability in severe industrial environments. These cells are designed to be mounted on a flat surface, and a load button is integral to their basic design.

### SPECIFICATIONS

- Excitation:** 10 Vdc
- Output:** 2 mV/V nominal
- 5-Point Calibration:** 0%, 50% 100%, 50%, 0%
- Linearity:** ±0.25% FSO
- Hysteresis:** ±0.20% FSO
- Repeatability:** ±0.10% FSO
- Zero Balance:** ±2% FSO
- Operating Temp Range:** -54 to 121°C (-65 to 250°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Span:** ±0.018% rdg/°C
  - Zero:** ±0.009% FSO/°C

- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Bridge Resistance:** 350 Ω minimum
- Deflection:** 0.076 mm (0.003")

- Construction:** Stainless steel
- Electrical Connection:** 1.5 m (5') shielded cable
- Protection Class:** IP65

### STANDARD Dimensions: mm (inch)

| CAPACITY            | D1           | D2            | H            | L             | A         | B             | C              |
|---------------------|--------------|---------------|--------------|---------------|-----------|---------------|----------------|
| 25 to 100 lb        | 25<br>(1.00) | 5.3<br>(0.21) | 16<br>(0.62) | 1.3<br>(0.05) | #4-40 UNC | 4.8<br>(0.19) | 19<br>(0.75)   |
| 250 to 2000 lb      | 32<br>(1.25) | 8.1<br>(0.32) | 10<br>(0.39) | 1.8<br>(0.07) | #6-32 UNC | 6.4<br>(0.25) | 25.4<br>(1.00) |
| 5000 to 10,000 lb   | 38<br>(1.50) | 11<br>(0.43)  | 16<br>(0.63) | 2.0<br>(0.08) | #6-32 UNC | 6.4<br>(0.25) | 31.8<br>(1.25) |
| 15,000 to 30,000 lb | 51<br>(2.00) | 15<br>(0.60)  | 25<br>(1.00) | 3.0<br>(0.12) | #6-32 UNC | 6.4<br>(0.25) | 41.3<br>(1.63) |
| 50,000 lb           | 76<br>(3.00) | 20<br>(0.78)  | 38<br>(1.50) | 4.6<br>(0.18) | #6-32 UNC | 6.4<br>(0.25) | 60.3<br>(2.38) |

### METRIC Dimensions: mm (inch)

| CAPACITY (N)      | D1           | D2            | H            | L             | A        | B              | C              |
|-------------------|--------------|---------------|--------------|---------------|----------|----------------|----------------|
| 100 to 500        | 25<br>(1.00) | 5.3<br>(0.21) | 16<br>(0.62) | 1.3<br>(0.05) | M4 x 0.7 | 4.8<br>(0.19)  | 19.1<br>(0.75) |
| 1000 to 10,000    | 32<br>(1.25) | 8.1<br>(0.32) | 10<br>(0.39) | 1.8<br>(0.07) | M4 x 0.7 | 6.4<br>(0.25)  | 25.4<br>(1.00) |
| 20,000 to 50,000  | 38<br>(1.50) | 11<br>(0.43)  | 16<br>(0.63) | 2.0<br>(0.08) | M4 x 0.7 | 6.4<br>(0.25)  | 31.8<br>(1.25) |
| 60,000 to 120,000 | 51<br>(2.00) | 15<br>(0.60)  | 25<br>(1.00) | 3.0<br>(0.12) | M4 x 0.7 | 6.4<br>(0.25)  | 41.3<br>(1.63) |
| 200,000           | 76<br>(3.00) | 20<br>(0.78)  | 38<br>(1.50) | 4.6<br>(0.18) | M4 x 0.7 | 6.35<br>(0.25) | 60.3<br>(2.38) |

**STANDARD MODELS**



| CAPACITY |         | MODEL NO. | COMPATIBLE METERS*        |
|----------|---------|-----------|---------------------------|
| lb       | N       |           |                           |
| 25       | 111     | LCGD-25   | DPiS, DP41-S, DP25B-S     |
| 50       | 222     | LCGD-50   | DPiS, DP41-S, DP25B-S     |
| 100      | 445     | LCGD-100  | DPiS, DP41-S, DP25B-S     |
| 250      | 1112    | LCGD-250  | DPiS, DP41-S, DP25B-S     |
| 500      | 2224    | LCGD-500  | DPiS, DP41-S, DP25B-S     |
| 1000     | 4448    | LCGD-1K   | DPiS, DP41-S, DP25B-S     |
| 2000     | 8897    | LCGD-2K   | DPiS, DP41-S, DP25B-S     |
| 5000     | 22,242  | LCGD-5K   | DPiS, DP41-S, DP25B-S     |
| 10,000   | 44,484  | LCGD-10K  | DPiS, DP41-S, DP25B-S     |
| 15,000   | 66,726  | LCGD-15K  | DPiS**, DP41-S, DP25B-S** |
| 20,000   | 88,968  | LCGD-20K  | DPiS**, DP41-S, DP25B-S** |
| 30,000   | 133,452 | LCGD-30K  | DPiS**, DP41-S, DP25B-S** |
| 50,000   | 222,420 | LCGD-50K  | DPiS**, DP41-S, DP25B-S** |

**METRIC MODELS**

| CAPACITY |        | MODEL NO.   | COMPATIBLE METERS*        |
|----------|--------|-------------|---------------------------|
| N        | lb     |             |                           |
| 100      | 22.5   | LCMGD-100N  | DPiS, DP41-S, DP25B-S     |
| 200      | 45     | LCMGD-200N  | DPiS, DP41-S, DP25B-S     |
| 500      | 112    | LCMGD-500N  | DPiS, DP41-S, DP25B-S     |
| 1000     | 225    | LCMGD-1KN   | DPiS, DP41-S, DP25B-S     |
| 2000     | 450    | LCMGD-2KN   | DPiS, DP41-S, DP25B-S     |
| 5000     | 1124   | LCMGD-5KN   | DPiS, DP41-S, DP25B-S     |
| 10,000   | 2248   | LCMGD-10KN  | DPiS**, DP41-S, DP25B-S** |
| 20,000   | 4496   | LCMGD-20KN  | DPiS**, DP41-S, DP25B-S** |
| 50,000   | 11,240 | LCMGD-50KN  | DPiS**, DP41-S, DP25B-S** |
| 60,000   | 13,488 | LCMGD-60KN  | DPiS**, DP41-S, DP25B-S** |
| 80,000   | 17,984 | LCMGD-80KN  | DPiS**, DP41-S, DP25B-S** |
| 120,000  | 26,976 | LCMGD-120KN | DPiS**, DP41-S, DP25B-S** |
| 200,000  | 44,960 | LCMGD-200KN | DPiS**, DP41-S, DP25B-S** |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* Compatible meters available online.

\*\* 4-digit meter.

Ordering Examples: LCGD-5K, 5000 lb capacity load cell.

LCGD-25, 25 lb capacity load cell.

LCMGD-10KN, 10,000 Newton capacity load cell.

LCMGD-500N, 500 Newton capacity load cell.

**COMPATIBLE METERS**

**DP25B/DP41-B**



- ✓ mV, V, mA, Strain Gage Thermocouple, RTD Inputs
- ✓ Full Process Unit Scaling
- ✓ Built-In Transducer Power



DP41-B, shown smaller than actual size, see [omega.com/dp41b](http://omega.com/dp41b)

**MONOGRAM SERIES**

**PATENTED**



DP25B-E, shown smaller than actual size, see [omega.com/dp25b](http://omega.com/dp25b)

**To Order**

| MODEL NO. | DESCRIPTION   |
|-----------|---|
| DP25B-E   | 4-digit voltage/current input meter with excitation   |
| DP25B-S   | 4-digit mV input meter with excitation                |
| DP41-B    | 6-digit 1/8 DIN universal input meter with excitation |

Comes complete with operator's manual.

Ordering Examples: DP25B-E, voltage/current input meter for use with 0 to 5 V, 0 to 10 V, 4 to 20 mA output transducers.

DP25B-S, mV input meter for use with mV/V output transducers, DP41-B, universal input meter for use with all standard transducer outputs.

# STYLE LOAD CELLS **STANDARD** AND **METRIC** MODELS

**Tension/Compression  
Calibrated in Tension  
5 to 500,000 lb Capacities  
2.5 kgf to 10,000 kgf Capacities**

## LCHD/LCMHD Series



LCHD-5K, shown actual size. See next page for dimensions.

LCHD-25



## TEDS Option Now Available

- ✓ 0.25% Interchangeability for Scale Applications
- ✓ All Stainless Steel Construction
- ✓ Heavy-Duty Design
- ✓ High Accuracy
- ✓ Low Profile for Easy Installation
- ✓ 5-Point Calibration
- ✓ Mating Connector Included

LCHD-100

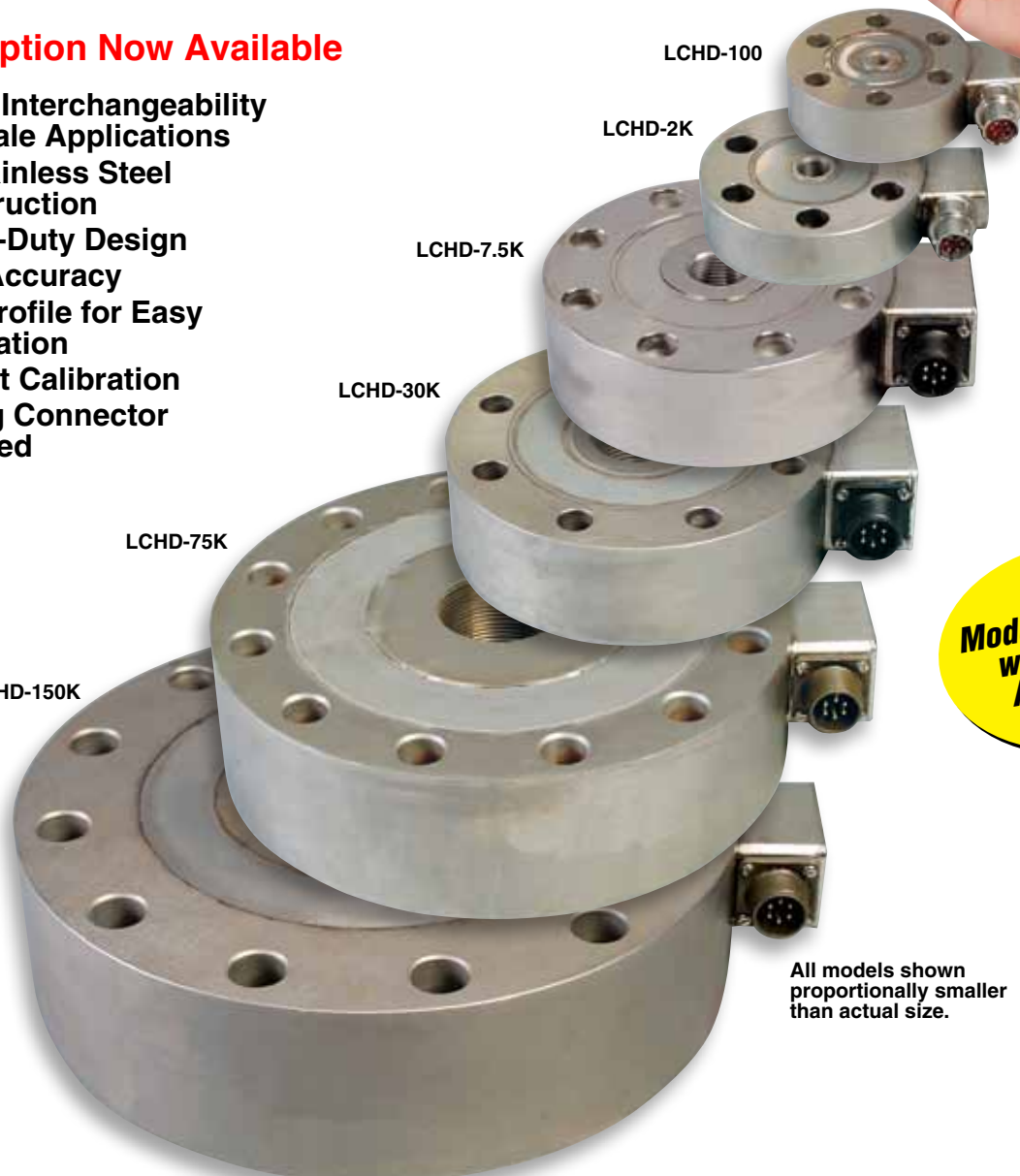
LCHD-2K

LCHD-7.5K

LCHD-30K

LCHD-75K

LCHD-150K



**Models Available with Built-In Amplifiers!**

All models shown proportionally smaller than actual size.

## SPECIFICATIONS

**Excitation:** 10 Vdc (15 V max)

**Output (FSO):**

≤25 lb/10 kgf: 2 mV/V ±0.25%

≥50 lb/20 kgf: 3 mV/V ±0.25%

**5-Point Calibration (in Tension):**

0%, 50%, 100%, 50%, 0%

**Linearity:**

≤25 lb/10 kgf: ±0.20% FSO

≥50 lb/20 kgf: ±0.10% FSO

**Hysteresis:**

≤25 lb/10 kgf: ±0.10% FSO

≥50 lb/20 kgf: ±0.08% FSO

**Repeatability:**

≤25 lb/10 kgf: ±0.1% FSO

≥50 lb/20 kgf: ±0.03% FSO

**Zero Balance:** ±1% of FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

Zero: 0.0036% FSO/°C

Span: 0.0036% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Input Resistance:** 350 ±10 Ω

**Output Resistance:** 350 ±10 Ω

**FS Deflection:**

0.025 to 0.076 mm

(0.001 to 0.003") typical

**Construction:** 17-4 PH stainless steel

**Electrical:**

≤5000 lb/2000 kgf: DT02H-10-6P

>5000 lb/2500 kgf: MS3102E-14S-6P

(or equiv.)

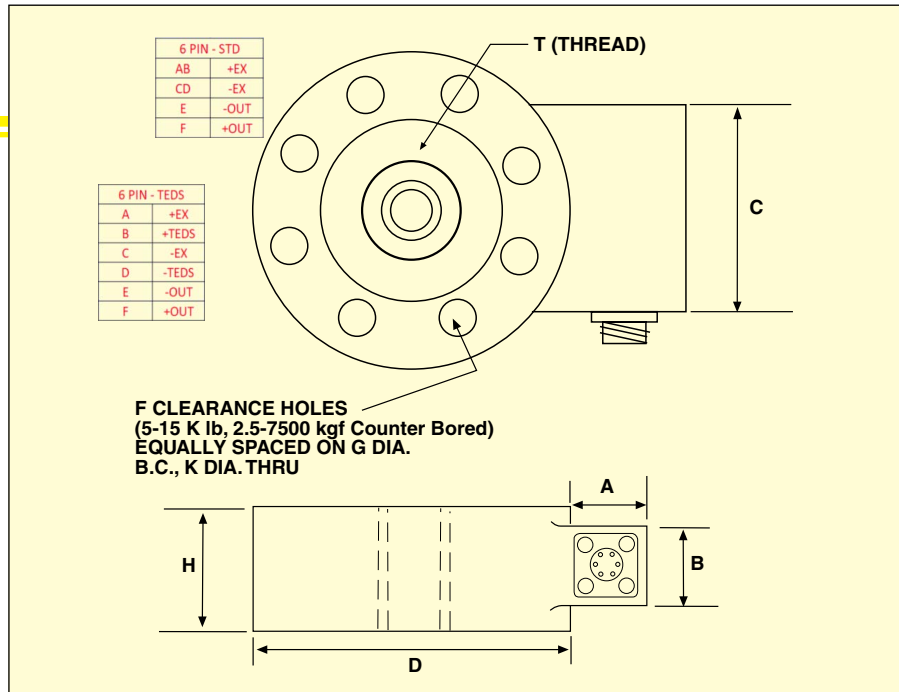
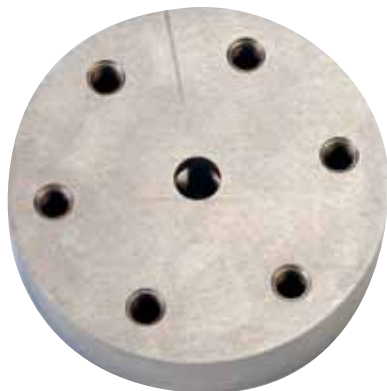
**Mating Connector (Included):**

≤5000 lb/2000 kgf: PT06F-10-6S

>5000 lb/2500 kgf: MS3102E-14S-6S

(or equiv.)

LCHD-TP263, optional tension plate for 2k to 5k LCHD load cells, shown smaller than actual size.



Dimensions: mm (inch)

| CAPACITY               | D            | H             | F  | G              | K             | T          | A            | B            | C            |
|------------------------|--------------|---------------|----|----------------|---------------|------------|--------------|--------------|--------------|
| <b>STANDARD MODELS</b> |              |               |    |                |               |            |              |              |              |
| 5 to 25 lb             | 64<br>(2.5)  | 20<br>(0.80)  | 6  | 51<br>(2.0)    | 4.6<br>(0.18) | ¼-28 UNF   | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 50 to 1K lb            | 76<br>(3.0)  | 25<br>(1.0)   | 6  | 57<br>(2.25)   | 7.1<br>(0.28) | ¾-24 UNF   | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 2K to 5K lb            | 89<br>(3.5)  | 25<br>(1.0)   | 6  | 67<br>(2.63)   | 8.6<br>(0.34) | ½-20 UNF   | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 7.5K to 15K lb         | 140<br>(5.5) | 46<br>(1.8)   | 8  | 114<br>(4.5)   | 10<br>(0.40)  | 1-14 UNS   | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 20K to 50K lb          | 152<br>(6.0) | 46<br>(1.8)   | 8  | 124<br>(4.88)  | 13<br>(0.53)  | 1½-12 UNF  | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 75K to 100K lb         | 229<br>(9.0) | 64<br>(2.5)   | 12 | 197<br>(7.75)  | 17<br>(0.66)  | 2-12 UN    | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 150K to 200K lb        | 279<br>(11)  | 76<br>(3.0)   | 12 | 241<br>(9.5)   | 20<br>(0.78)  | 2½-12 UN   | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 300K to 500K lb        | 356<br>(14)  | 108<br>(4.25) | 12 | 298<br>(11.75) | 25<br>(1.0)   | 3½-8 UN    | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| <b>METRIC MODELS</b>   |              |               |    |                |               |            |              |              |              |
| 2.5 to 10 kgf          | 64<br>(2.5)  | 20<br>(0.80)  | 6  | 51<br>(2.0)    | 4.6<br>(0.18) | M6 x 1.00  | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 25 to 500 kgf          | 76<br>(3.0)  | 25<br>(1.0)   | 6  | 57<br>(2.25)   | 7.1<br>(0.28) | M10 x 1.5  | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 1000 to 2500 kgf       | 89<br>(3.5)  | 25<br>(1.0)   | 6  | 67<br>(2.63)   | 8.6<br>(0.34) | M12 x 1.75 | 24<br>(0.94) | 19<br>(0.75) | 32<br>(1.25) |
| 5000 to 7500 kgf       | 140<br>(5.5) | 46<br>(1.8)   | 8  | 114<br>(4.5)   | 10<br>(0.40)  | M24 x 2.0  | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |
| 10000 kgf              | 152<br>(6.0) | 46<br>(1.8)   | 8  | 124<br>(4.88)  | 13<br>(0.53)  | M36 x 2.0  | 32<br>(1.25) | 38<br>(1.5)  | 51<br>(2.0)  |

## To Order

### TENSION PLATES

| MODEL NO.  | DESCRIPTION                                |
|------------|--|
| LCHD-TP200 | Tension plate, 5 to 25 lb ranges           |
| LCHD-TP225 | Tension plate, 50 to 1000 lb ranges        |
| LCHD-TP263 | Tension plate, 2000 to 5000 lb ranges      |
| LCHD-TP450 | Tension plate, 7500 to 15,000 lb ranges    |
| LCHD-TP488 | Tension plate, 20,000 to 50,000 lb ranges  |
| LCHD-TP775 | Tension plate, 75,000 to 100,000 lb ranges |

# LOW-PROFILE PANCAKE STYLE LOAD CELLS

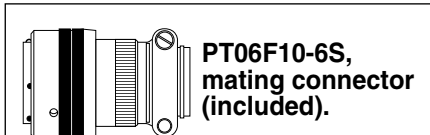


## To Order

| CAPACITY               |             | MODEL NO.         | COMPATIBLE METERS      |
|------------------------|-------------|-------------------|------------------------|
| <b>STANDARD MODELS</b> |             |                   |                        |
| 5 lb                   | 2.3 kgf     | <b>LCHD-5</b>     | DPiS, DP41-S, DP25B-S  |
| 10 lb                  | 4.5 kgf     | <b>LCHD-10</b>    | DPiS, DP41-S, DP25B-S  |
| 25 lb                  | 11 kgf      | <b>LCHD-25</b>    | DPiS, DP41-S, DP25B-S  |
| 50 lb                  | 23 kgf      | <b>LCHD-50</b>    | DPiS, DP41-S, DP25B-S  |
| 100 lb                 | 45 kgf      | <b>LCHD-100</b>   | DPiS, DP41-S, DP25B-S  |
| 250 lb                 | 114 kgf     | <b>LCHD-250</b>   | DPiS, DP41-S, DP25B-S  |
| 500 lb                 | 227 kgf     | <b>LCHD-500</b>   | DPiS, DP41-S, DP25B-S  |
| 1K lb                  | 455 kgf     | <b>LCHD-1K</b>    | DPiS, DP41-S, DP25B-S  |
| 2K lb                  | 909 kgf     | <b>LCHD-2K</b>    | DPiS, DP41-S, DP25B-S  |
| 3K lb                  | 1361 kgf    | <b>LCHD-3K</b>    | DPiS, DP41-S, DP25B-S  |
| 4K lb                  | 1815 kgf    | <b>LCHD-4K</b>    | DPiS, DP41-S, DP25B-S  |
| 5K lb                  | 2269 kgf    | <b>LCHD-5K</b>    | DPiS, DP41-S, DP25B-S  |
| 7.5K lb                | 3403 kgf    | <b>LCHD-7.5K</b>  | DPiS, DP41-S, DP25B-S  |
| 10K lb                 | 4537 kgf    | <b>LCHD-10K</b>   | DPiS, DP41-S, DP25B-S  |
| 15K lb                 | 6806 kgf    | <b>LCHD-15K</b>   | DPiS, DP41-S, DP25B-S* |
| 20K lb                 | 9074 kgf    | <b>LCHD-20K</b>   | DPiS, DP41-S, DP25B-S* |
| 30K lb                 | 13,612 kgf  | <b>LCHD-30K</b>   | DPiS, DP41-S, DP25B-S* |
| 50K lb                 | 22,686 kgf  | <b>LCHD-50K</b>   | DPiS, DP41-S, DP25B-S* |
| 75K lb                 | 34,029 kgf  | <b>LCHD-75K</b>   | DPiS, DP41-S, DP25B-S* |
| 100K lb                | 45,372 kgf  | <b>LCHD-100K</b>  | DPiS, DP41-S, DP25B-S* |
| 150K lb                | 68,058 kgf  | <b>LCHD-150K</b>  | DPiS, DP41-S, DP25B-S* |
| 200K lb                | 90,744 kgf  | <b>LCHD-200K</b>  | DPiS, DP41-S, DP25B-S* |
| 300K lb                | 136,116 kgf | <b>LCHD-300K</b>  | DPiS, DP41-S, DP25B-S* |
| 400K lb                | 181,488 kgf | <b>LCHD-400K</b>  | DPiS, DP41-S, DP25B-S* |
| 500K lb                | 226,860 kgf | <b>LCHD-500K</b>  | DPiS, DP41-S, DP25B-S* |
| <b>METRIC MODELS</b>   |             |                   |                        |
| 5.5 lb                 | 2.5 kgf     | <b>LCMHD-2.5</b>  | DPiS, DP41-S, DP25B-S  |
| 11 lb                  | 5 kgf       | <b>LCMHD-5</b>    | DPiS, DP41-S, DP25B-S  |
| 22 lb                  | 10 kgf      | <b>LCMHD-10</b>   | DPiS, DP41-S, DP25B-S  |
| 55 lb                  | 25 kgf      | <b>LCMHD-25</b>   | DPiS, DP41-S, DP25B-S  |
| 110 lb                 | 50 kgf      | <b>LCMHD-50</b>   | DPiS, DP41-S, DP25B-S  |
| 220 lb                 | 100 kgf     | <b>LCMHD-100</b>  | DPiS, DP41-S, DP25B-S  |
| 551 lb                 | 250 kgf     | <b>LCMHD-250</b>  | DPiS, DP41-S, DP25B-S  |
| 1102 lb                | 500 kgf     | <b>LCMHD-500</b>  | DPiS, DP41-S, DP25B-S  |
| 2205 lb                | 1000 kgf    | <b>LCMHD-1K</b>   | DPiS, DP41-S, DP25B-S  |
| 3307 lb                | 1500 kgf    | <b>LCMHD-1.5K</b> | DPiS, DP41-S, DP25B-S  |
| 4409 lb                | 2000 kgf    | <b>LCMHD-2K</b>   | DPiS, DP41-S, DP25B-S  |
| 5512 lb                | 2500 kgf    | <b>LCMHD-2.5K</b> | DPiS, DP41-S, DP25B-S  |
| 11,023 lb              | 5000 kgf    | <b>LCMHD-5K</b>   | DPiS, DP41-S, DP25B-S  |
| 16,535 lb              | 7500 kgf    | <b>LCMHD-7.5K</b> | DPiS, DP41-S, DP25B-S  |
| 22,046 lb              | 10,000 kgf  | <b>LCMHD-10K</b>  | DPiS, DP41-S, DP25B-S  |

## POPULAR OPTIONS

| DESCRIPTION   | SUFFIX             |
|---|--------------------|
| <b>5V Output</b><br>Calibrated 0 to 5 Vdc in tension. (Output is bi-directional $\pm 5$ Vdc)  | “-5T”              |
| <b>Overload Stops</b>   | “-OL”              |
| <b>Dual Bridge</b><br>$\leq 5000$ lb/2500 kgf<br>$> 5000$ lb/2500 kgf                         | “-DUAL”<br>“-DUAL” |
| <b>Extended Temperature Range</b><br>between: -45 to 93°C (-50 to 200°F) and to 163°C (325°F) | “-TC1”<br>“-TC2”   |
| <b>TEDS</b><br><b>IEEE 1451.4 module</b><br>(Other Custom Pinout Avail)                       | “-TEDS”            |



PT06F10-6S,  
mating connector  
(included).

Comes complete with 5-point NIST-traceable calibration, mating connector, and 59 k $\Omega$  shunt data.

\* 4-digit meter.

\*\* DPiS meter suitable for one direction measurement only.

**Note:** Models  $> 300,000$  lb are calibrated at 300,000 lb—see Specifications.

**Ordering Examples:** LCHD-500, 500 lb capacity load cell.

LCMHD-500, 500 kgf capacity load cell.

PT06F10-6S, mating connector (included). LCMHD-10K, 10,000 kgf capacity load cell.

MS3106E-14S-6S, mating connector (included).

## ACCESSORIES

| MODEL NO.      | DESCRIPTION   |
|----------------|---|
| MS3106E-14S-6S | Spare mating connector for units above 5000 lb capacity |
| PT06F10-6S     | Spare mating connector for units below 7500 lb capacity |

# Compression Load Cell

## Standard and Metric Models

**Compression**  
 0-2.2 lb to 0-1000 lb  
 0-10 to 0-5000 N

1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

### LCKD/LCMKD Series



Standard

Small in size but not in performance, OMEGA's LCKD/LCMKD Series compression load cells are designed to measure load ranges from 1 kg to 1000 lb. Rugged all stainless steel construction and high-performance strain gages ensure superior linearity and stability. Temperature compensation is achieved through a miniature circuit board in the cable. These cells are designed to be mounted on a smooth, flat surface.

### SPECIFICATIONS

**Excitation:** 5 Vdc, 7 Vdc maximum

**Output:** 2 mV/V nominal

**5-Point Calibration:**

0%, 50%, 100%, 50%, 0%

**Linearity:** ±0.25% FSO

**Hysteresis:** ±0.25% FSO

**Repeatability:** ±0.10% FSO

**Zero Balance:** ±2% FSO

**Operating Temp Range:**

-54 to 121°C (-65 to 250°F)

**Compensated Temp Range:**

16 to 71°C (60 to 160°F)

**Thermal Effects:**

**Span:** ±0.018% FSO/°C

**Zero:** ±0.009% FSO/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350 Ω minimum

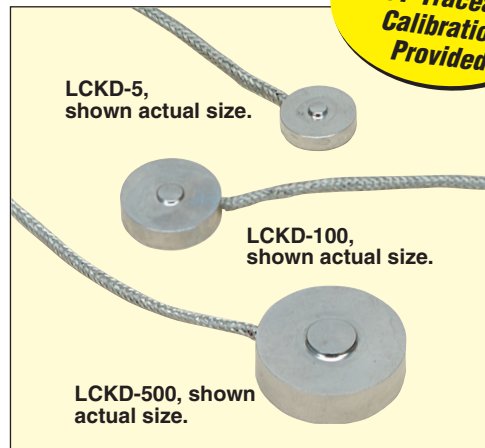
**Full Scale Deflection:** 0.001 to 0.003"

**Electrical Connection:** 1.5 m (5')

4-conductor insulated cable with temperature compensation board

**Weight:** <14 g (<0.5 oz)

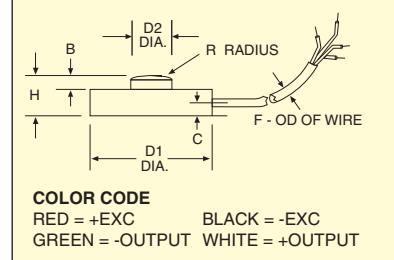
**Protection Class:** IP54



**5-Point  
NIST-Traceable  
Calibration  
Provided**



LCKD-100, shown larger than actual size.



Dimensions: mm (inch)

| CAPACITY                         | D1            | D2            | H             | B              | C             | F             | R             |
|----------------------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|
| 10 to 200 N<br>1 kg to 50 lb     | 9.6<br>(0.38) | 2.2<br>(0.09) | 3.0<br>(0.12) | 0.76<br>(0.03) | 1.0<br>(0.04) | 1.3<br>(0.05) | 6.3<br>(0.25) |
| 500 to 1000 N<br>100 to 250 lb   | 13<br>(0.50)  | 3.0<br>(0.12) | 3.8<br>(0.15) | 0.51<br>(0.02) | 1.5<br>(0.06) | 1.3<br>(0.05) | 13<br>(0.5)   |
| 2000 to 5000 N<br>500 to 1000 lb | 19<br>(0.75)  | 6.1<br>(0.24) | 6.4<br>(0.25) | 0.76<br>(0.03) | 2.5<br>(0.10) | 1.3<br>(0.05) | 101<br>(4)    |

### STANDARD MODELS

| CAPACITY |      | MODEL NO. | COMPATIBLE METERS     |
|----------|------|-----------|-----------------------|
| lb       | N    |           |                       |
| 2.2      | 9.8  | LCKD-1KG  | DPiS, DP41-S, DP25B-S |
| 5        | 22.2 | LCKD-5    | DPiS, DP41-S, DP25B-S |
| 10       | 46   | LCKD-10   | DPiS, DP41-S, DP25B-S |
| 25       | 111  | LCKD-25   | DPiS, DP41-S, DP25B-S |
| 50       | 222  | LCKD-50   | DPiS, DP41-S, DP25B-S |
| 100      | 445  | LCKD-100  | DPiS, DP41-S, DP25B-S |
| 250      | 1112 | LCKD-250  | DPiS, DP41-S, DP25B-S |
| 500      | 2224 | LCKD-500  | DPiS, DP41-S, DP25B-S |
| 1000     | 4448 | LCKD-1000 | DPiS, DP41-S, DP25B-S |

### METRIC MODELS

| CAPACITY |      | MODEL NO.  | COMPATIBLE METERS        |
|----------|------|------------|--------------------------|
| N        | lb   |            |                          |
| 10       | 2.25 | LCMKD-10N  | DP41-S, DP25B-S, iSeries |
| 20       | 4.5  | LCMKD-20N  | DP41-S, DP25B-S, iSeries |
| 50       | 11.2 | LCMKD-50N  | DP41-S, DP25B-S, iSeries |
| 100      | 22.5 | LCMKD-100N | DP41-S, DP25B-S, iSeries |
| 200      | 45   | LCMKD-200N | DP41-S, DP25B-S, iSeries |
| 500      | 112  | LCMKD-500N | DP41-S, DP25B-S, iSeries |
| 1000     | 225  | LCMKD-1KN  | DP41-S, DP25B-S, iSeries |
| 2000     | 450  | LCMKD-2KN  | DP41-S, DP25B-S, iSeries |
| 5000     | 1124 | LCMKD-5KN  | DP41-S, DP25B-S, iSeries |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

**Ordering Examples:** LCKD-1KG, 1 kg capacity load cell.

LCKD-25, 25 lb capacity load cell.

LCMKD-10N, 10 Newton capacity load cell.

LCMKD-2KN, 2000 Newton capacity load cell.

# LOAD WASHERS

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## FOR MEASURING BOLT COMPRESSIONAL FORCES STANDARD AND METRIC MODELS

### Compression

0-200 lb to 0-200,000 lb  
0-1000 to 0-200 kN

1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kgf = 2204 lb

### LCWD/LCMWD Series



- ✓ 200 kN/200,000 lb Capacity
- ✓ Compact Design
- ✓ Spherical Washers Included
- ✓ Load Buttons Included
- ✓ Spherical Washers Recommended When Used with Bolts
- ✓ Load Button Recommended When Used as Compression Load Cell

### SPECIFICATIONS

Excitation: 10 Vdc (15V maximum)

Output:

<500 lb/2kN: 1 mV/V nominal  
>500 lb/2kN: 2 mV/V nominal

Accuracy (Linearity, Hysteresis and Repeatability Combined):

≤10K lb/50 kN: ±0.5% BFSL  
>10K lb/50 kN: ±0.75% BFSL

Zero Balance: ±4.0% FSO

Operating Temp Range:  
-40 to 127°C (-40 to 260°F)

Compensated Temp Range:  
16 to 71°C (60 to 160°F)

Thermal Effects:

Zero: ±0.018% FSO/°C  
Span: ±0.018% FSO/°C

Safe Overload: 120% of capacity

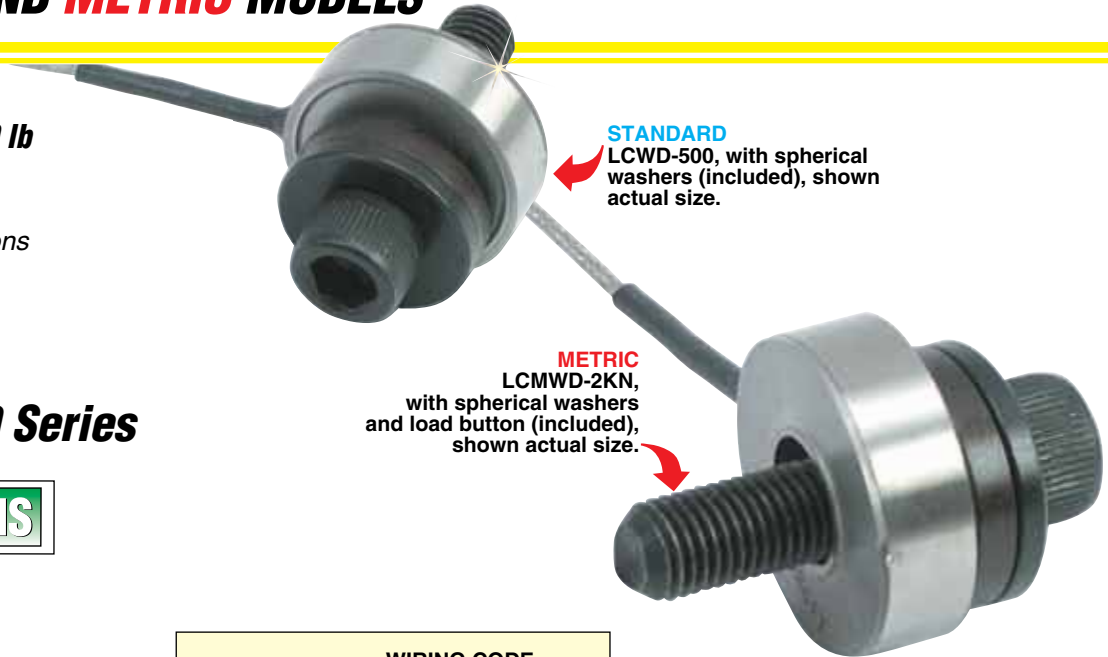
Ultimate Overload: 200% of capacity

Bridge Resistance:

<50K lb/200 kN: 350 Ω min  
≥50K lb/200 kN: 700 Ω

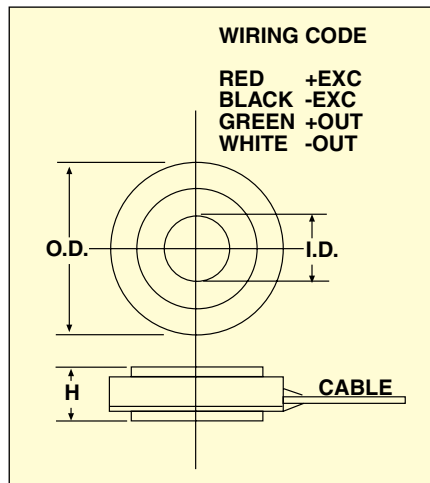
Full Scale Deflection: 0.001" typical

Construction: Stainless steel



**STANDARD**  
LCWD-500, with spherical washers (included), shown actual size.

**METRIC**  
LCMWD-2KN, with spherical washers and load button (included), shown actual size.



Dimensions: mm (inch)

| CAPACITY        | ID          | OD        | H          |
|-----------------|-------------|-----------|------------|
| ≤10K lb (50 kN) | 10.2 (0.40) | 25 (1.0)  | 9.0 (0.35) |
| 20K lb (100 kN) | 12.7 (0.50) | 30 (1.2)  | 10 (0.40)  |
| 50K lb (200 kN) | 19.3 (0.76) | 44 (1.75) | 13 (0.50)  |
| 100K lb         | 25.7 (1.01) | 57 (2.25) | 18 (0.70)  |
| 200K lb         | 38.4 (1.51) | 77 (3.00) | 32 (1.25)  |

### Caution

This unit is not field serviceable. Modifying and/or tampering will forfeit the warranty and may be dangerous. Use appropriate protective equipment and/or garments when testing or installing, including safety glasses.

### STANDARD MODELS

#### To Order

| CAPACITY |         | MODEL NO. | COMPATIBLE METERS**     | SPHERICAL WASHERS† |              |
|----------|---------|-----------|-------------------------|--------------------|--------------|
| lb       | N       |           |                         | MODEL              | ID mm (inch) |
| 200      | 890     | LCWD-200  | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 500      | 2224    | LCWD-500  | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 1000     | 4448    | LCWD-1K   | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 2000     | 8897    | LCWD-2K   | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 5000     | 22,242  | LCWD-5K   | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 10,000   | 44,484  | LCWD-10K  | DP41-S, DP25B-S*, DPiS* | SPW-2              | 8.7 (0.34)   |
| 20,000   | 88,968  | LCWD-20K  | DP41-S, DP25B-S*, DPiS* | SPW-3              | 10 (0.41)    |
| 50,000   | 222,420 | LCWD-50K  | DP41-S, DP25B-S*, DPiS* | SPW-5              | 17 (0.66)    |
| 100,000  | 444,840 | LCWD-100K | DP41-S, DP25B-S*, DPiS* | SPW-7              | 24 (0.94)    |
| 200,000  | 889,680 | LCWD-200K | DP41-S, DP25B-S*, DPiS* | SPW-10             | 33 (1.31)    |

Comes complete with 4-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

† One set of spherical washers and one set of load buttons supplied with each load cell.

Ordering Examples: LCWD-500, 500 lb capacity load washer supplied with 2 load buttons and a set of spherical washers.

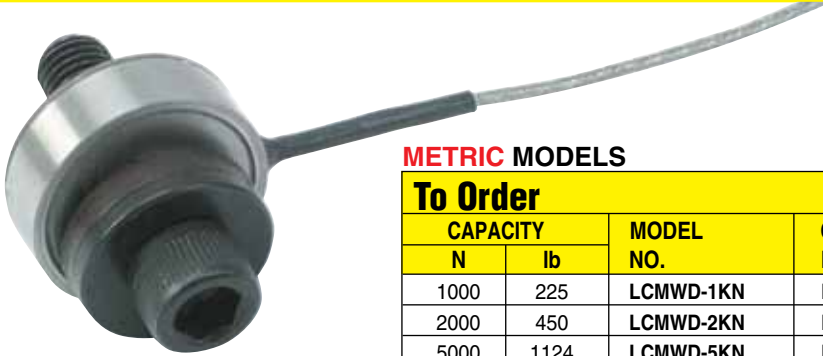
LCWD-100K, 100,000 lb capacity load washer supplied with 2 load buttons and set of spherical washers.

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1.5 m (5') insulated shielded cable

1-00

**FOR MEASURING BOLT COMPRESSIONAL FORCES**  
**STANDARD AND METRIC MODELS**



**METRIC**  
 LCMWD-1KN, with spherical washers (included), shown actual size.

**METRIC MODELS**

| <b>To Order</b> |        |             |                         |                    |            |
|-----------------|--------|-------------|-------------------------|--------------------|------------|
| CAPACITY        |        | MODEL NO.   | COMPATIBLE METERS       | SPHERICAL WASHERS† |            |
| N               | lb     |             |                         | MODEL              | ID         |
| 1000            | 225    | LCMWD-1KN   | DPiS, DP41-S, DP25B-S   | SPW-2              | 8.7 (0.34) |
| 2000            | 450    | LCMWD-2KN   | DPiS, DP41-S, DP25B-S   | SPW-2              | 8.7 (0.34) |
| 5000            | 1124   | LCMWD-5KN   | DPiS, DP41-S, DP25B-S   | SPW-2              | 8.7 (0.34) |
| 10,000          | 2248   | LCMWD-10KN  | DPiS*, DP41-S, DP25B-S* | SPW-2              | 8.7 (0.34) |
| 20,000          | 4496   | LCMWD-20KN  | DPiS*, DP41-S, DP25B-S* | SPW-2              | 8.7 (0.34) |
| 50,000          | 11,240 | LCMWD-50KN  | DPiS*, DP41-S, DP25B-S* | SPW-2              | 8.7 (0.34) |
| 100,000         | 22,481 | LCMWD-100KN | DPiS*, DP41-S, DP25B-S* | SPW-3              | 10 (0.41)  |
| 200,000         | 44,962 | LCMWD-200KN | DPiS*, DP41-S, DP25B-S* | SPW-5              | 17 (0.66)  |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

† One set of spherical washers and one set of load buttons supplied with each load cell.

**Ordering Examples:** LCMWD-10KN, 10 kN capacity load washer supplied with 2 load buttons and a set of spherical washers.

LCMWD-200KN, 200 kN capacity load washer supplied with 2 load buttons and a set of spherical washers.

**STRAIN GAGE/BRIDGE  
 TRANSDUCER-SIGNAL  
 CONDITIONERS**

**iDRX-ST**



The iDRN-ST and iDRX-ST signal conditioners provide highly accurate, stable, isolated measurement for strain gage transducers such as load cells, torque transducers, non-amplified pressure transducers, and other bridge based transducers. Both models can accept signals from 30 to 100 mV full scale and provide 10 Vdc reference voltage which may be used for transducer excitation.



Shown smaller than actual size.

- ✓ Unipolar/Bipolar 30 mV to 100 mV
- ✓ 13-Bit Resolution
- ✓ 10 Vdc Excitation
- ✓ 0.2% FS Accuracy
- ✓ 1800 Vdc Isolation
- ✓ 250 Vac/1 Min Input Overvoltage Protection
- ✓ Free Setup and Configuration Software

| <b>To Order</b> |  |
|-----------------|--|
| MODEL NO.       | DESCRIPTION  |
| iDRX-ST         | Digital signal conditioner for strain gages and bridge transducers with RS485 output |
| iDRN-ST         | Signal conditioner for strain gages and bridge transducers with analog output        |
| -FS             | Factory setup and scaling  |

Comes complete with operator's manual.

**Ordering Example:** iDRX-ST, digital signal conditioner for strain gages and bridge transducers with RS485 output, CAT-285, bi-directional RS232-RS485 converter for iDRX series.

For iDRN/iDRX accessories and power supplies, please visit us online.



# Load Pin Load Cell

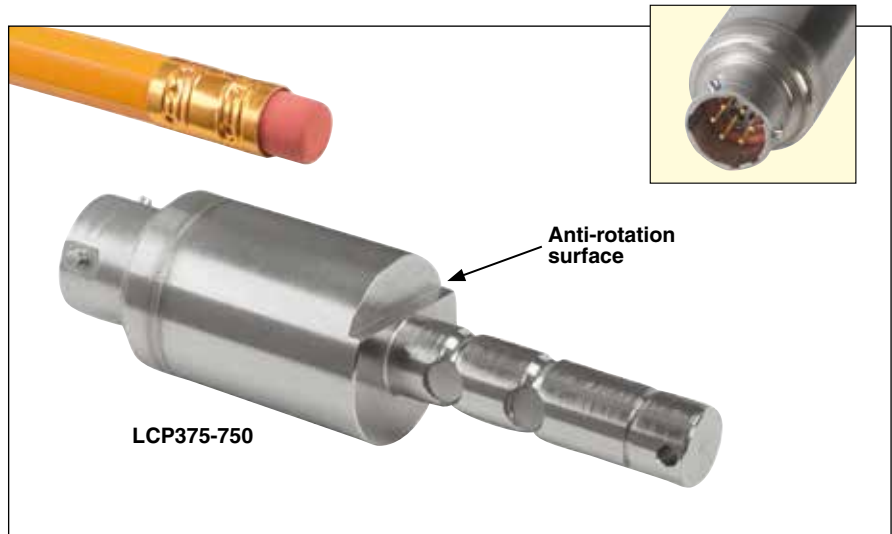


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## Force Sensing Load Pin

600 to 50,000 lb / 272 to 22,500 kgf

### LCP Series



- ✓ Dual Shear Beam Technology
- ✓ High 0.50% Accuracy Class
- ✓ All Stainless Steel Construction
- ✓ Standard PTIH-10-6P Connector



LCP Series are compact load pins designed for tension and compression measurements. They can be applied on clevis pin shackles, loading cranes, lifting fittings, sprockets and pulley axles by replacing existing shear pins, clevis bolts, clevis pins, shear axles and many other types of pinned joints to control or monitor reaction load on the pins. Applications include measuring of cable tension, structural testing, aerospace and construction, force calibration, lifting systems, mooring systems, hydraulic presses and crane load systems. LCP Series are temperature-compensated.

### Specifications

**Output:** 1 mV/V nominal  
**Excitation:** 10 Vdc (15 Vdc max)  
**Linearity:**  $\pm 0.50\%$  FSO  
**Hysteresis:**  $\pm 0.50\%$  FSO  
**Repeatability:**  $\pm 0.15\%$  FSO  
**Zero Balance:**  $\pm 1.0\%$  FSO  
**Operating Temp Range:** -53 to 121°C (-65 to 250°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

### Thermal Effects:

**Zero:**  $\pm 0.009\%$  FSO/°C  
( $\pm 0.005\%$  FSO/°F)

**Span:**  $0.009\%$  FSO/°C  
( $\pm 0.005\%$  FSO/°F)

**Safe Overload:** 150% of capacity

**Ultimate Overload:**  $\geq 300\%$  of Capacity

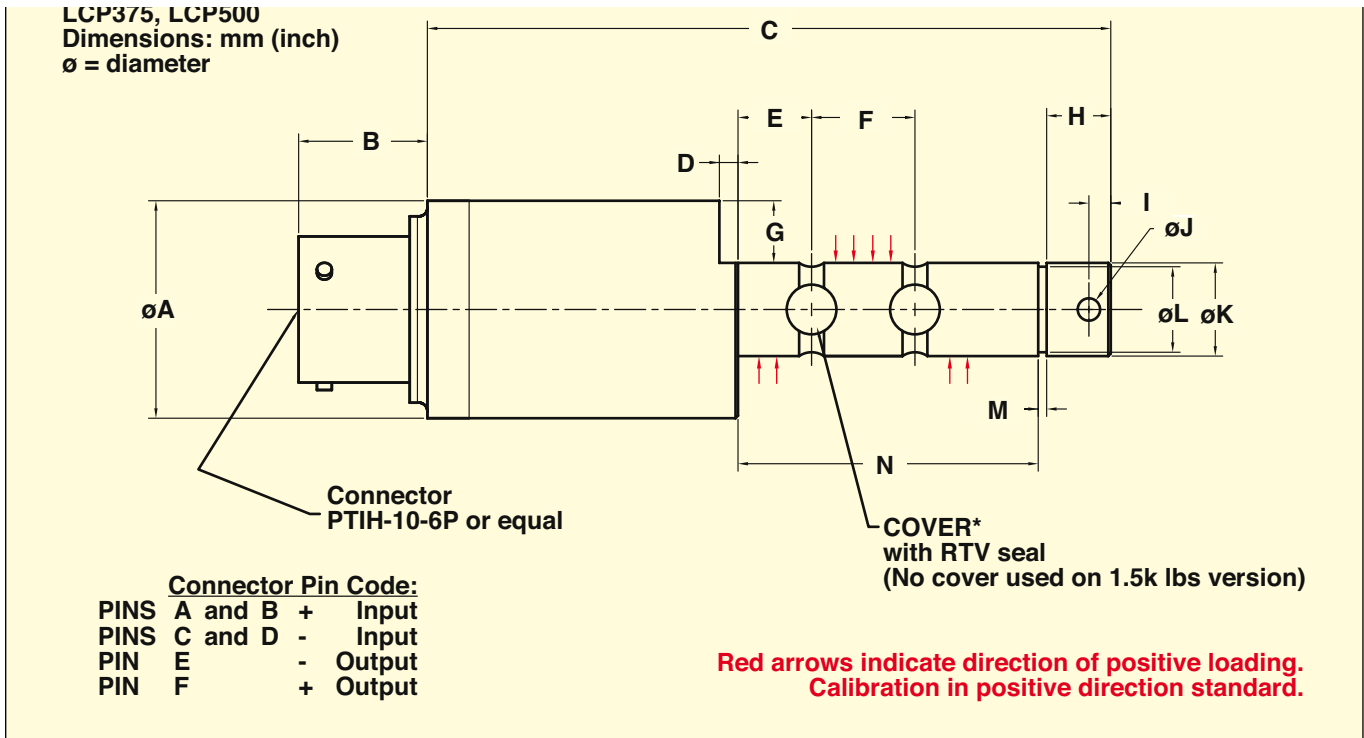
**Bridge Resistance:** 350  $\Omega$  nominal

**Construction:** Stainless Steel

**Electrical Connector:** PTIH-10-6P  
(or equivalent)

**Protection Class:** IP67

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| Model No.          | Capacity<br>kgf (lb) | $\phi$ A       | B              | C              | D             | E              | F              | G             | H             | I             | $\phi$ J      | $\phi$ K                     | $\phi$ L       | M             | N              |
|--------------------|----------------------|----------------|----------------|----------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|------------------------------|----------------|---------------|----------------|
| <b>LCP375-600</b>  | 272<br>(600)         | 22.2<br>(0.88) | 12.4<br>(0.49) | 69.9<br>(2.75) | 1.9<br>(0.08) | 7.5<br>(0.30)  | 10.6<br>(0.42) | 6.4<br>(0.25) | 6.6<br>(0.26) | 2.3<br>(0.09) | 2.3<br>(0.09) | 9.47 (0.373)<br>9.53 (0.375) | 8.7<br>(0.34)  | 0.9<br>(0.03) | 30.7<br>(1.21) |
| <b>LCP375-750</b>  | 340<br>(750)         | 22.2<br>(0.88) | 12.4<br>(0.49) | 69.9<br>(2.75) | 1.9<br>(0.08) | 7.5<br>(0.30)  | 10.6<br>(0.42) | 6.4<br>(0.25) | 6.6<br>(0.26) | 2.3<br>(0.09) | 2.3<br>(0.09) | 9.47 (0.373)<br>9.53 (0.375) | 8.7<br>(0.34)  | 0.9<br>(0.03) | 30.7<br>(1.21) |
| <b>LCP375-1.5K</b> | 680<br>(1500)        | 22.2<br>(0.88) | 12.4<br>(0.49) | 69.9<br>(2.75) | 1.9<br>(0.08) | 7.5<br>(0.30)  | 10.6<br>(0.42) | 6.4<br>(0.25) | 6.6<br>(0.26) | 2.3<br>(0.09) | 2.3<br>(0.09) | 9.47 (0.373)<br>9.53 (0.375) | 8.7<br>(0.34)  | 0.9<br>(0.03) | 30.7<br>(1.21) |
| <b>LCP500-2K</b>   | 907<br>(2000)        | 38.1<br>(1.50) | 12.4<br>(0.49) | 88.9<br>(3.50) | 5.1<br>(0.20) | 12.7<br>(0.50) | 19.1<br>(0.75) | 6.4<br>(0.25) | 6.6<br>(0.26) | 2.3<br>(0.09) | 2.3<br>(0.09) | 12.6 (0.498)<br>12.7 (0.500) | 11.7<br>(0.46) | 1.0<br>(0.04) | 44.5<br>(1.75) |
| <b>LCP500-3K</b>   | 1360<br>(3000)       | 38.1<br>(1.50) | 12.4<br>(0.49) | 88.9<br>(3.50) | 5.1<br>(0.20) | 12.7<br>(0.50) | 19.1<br>(0.75) | 6.4<br>(0.25) | 6.6<br>(0.26) | 2.3<br>(0.09) | 2.3<br>(0.09) | 12.6 (0.498)<br>12.7 (0.500) | 11.7<br>(0.46) | 1.0<br>(0.04) | 44.5<br>(1.75) |

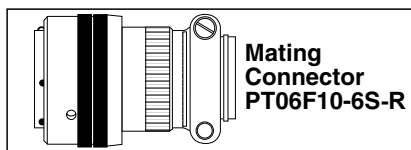
**Models with Integral Connector (PTIH-10-6P or Equal)**

| <b>To Order</b> |      |                    |                       |
|-----------------|------|--------------------|-----------------------|
| Capacity        |      | Model No.          | Compatible Meters     |
| lb              | kgf  |                    |                       |
| 600             | 272  | <b>LCP375-600</b>  | DPiS, DP41-S, DP25B-S |
| 750             | 340  | <b>LCP375-750</b>  | DPiS, DP41-S, DP25B-S |
| 1500            | 680  | <b>LCP375-1.5K</b> | DPiS, DP41-S, DP25B-S |
| 2000            | 907  | <b>LCP500-2K</b>   | DPiS, DP41-S, DP25B-S |
| 3000            | 1360 | <b>LCP500-3K</b>   | DPiS, DP41-S, DP25B-S |

Comes complete with NIST traceable calibration certificate.

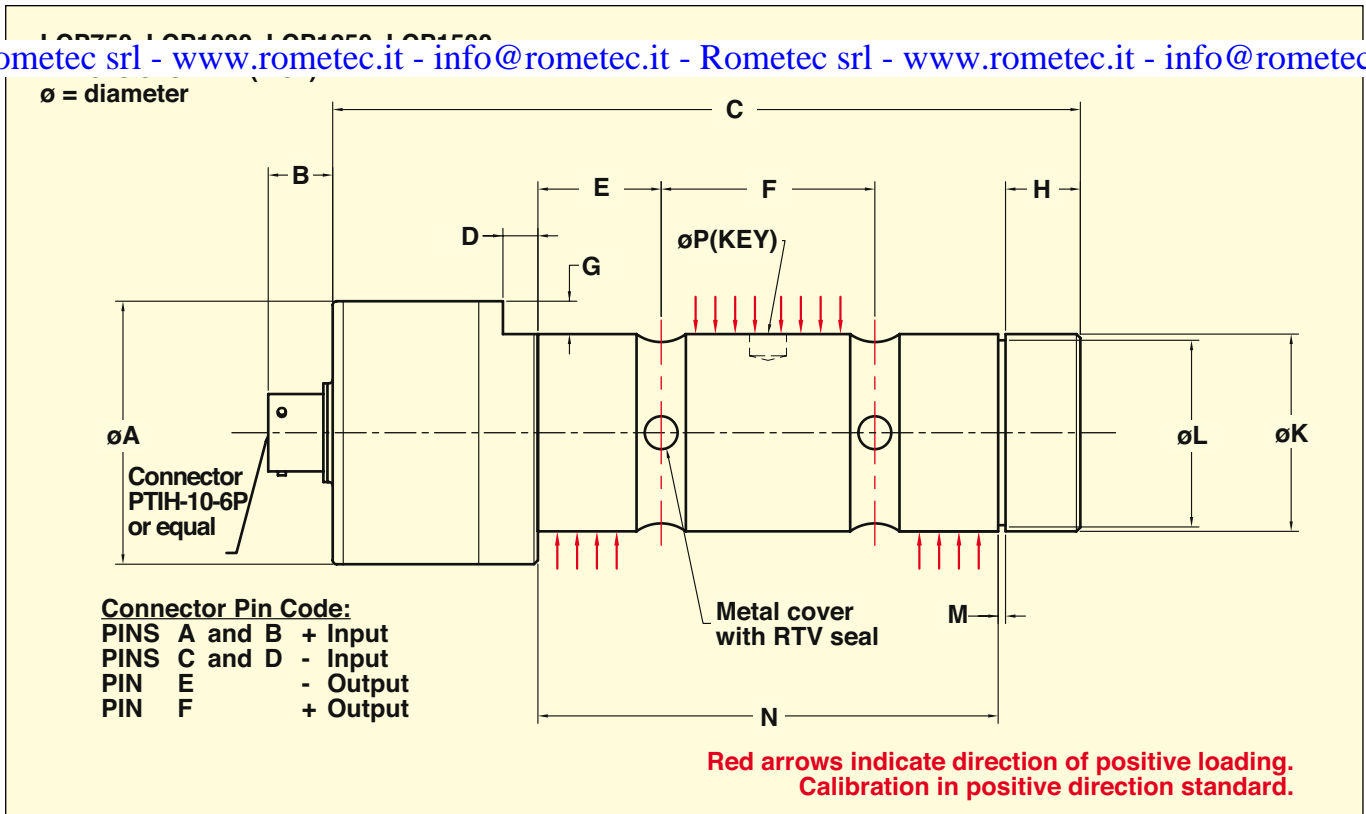
**Ordering Example:** LCP375-600, 272 kgf (600 lb) capacity load pin with integral twist-lock connector.

Custom capacities and sizes not shown on this page are available, please contact OMEGA for details.



**Accessory**

| Model No.           | Description  |
|---------------------|--|
| <b>PT06F10-6S-R</b> | Mating connector for LCP series load pins, sold separately |



| Model No.     | Capacity<br>kgf (lb) | øA             | B              | C               | D             | E              | F              | G             | H              | øK                          | øL             | M             | N              | øP            |
|---------------|----------------------|----------------|----------------|-----------------|---------------|----------------|----------------|---------------|----------------|-----------------------------|----------------|---------------|----------------|---------------|
| LCP750-5K     | 2268<br>(5000)       | 38.1<br>(1.50) | 12.4<br>(0.49) | 101.3<br>(3.99) | 5.1<br>(0.20) | 15.0<br>(0.59) | 25.4<br>(1.00) | 6.4<br>(0.25) | 7.9<br>(0.31)  | 19.0 (0.748)<br>19.1 (0.75) | 17.9<br>(0.70) | 1.2<br>(0.05) | 55.4<br>(2.18) | 4.0<br>(0.16) |
| LCP750-6K     | 2722<br>(6000)       | 38.1<br>(1.50) | 12.4<br>(0.49) | 101.3<br>(3.99) | 5.1<br>(0.20) | 15.0<br>(0.59) | 25.4<br>(1.00) | 6.4<br>(0.25) | 7.9<br>(0.31)  | 19.0 (0.748)<br>19.1 (0.75) | 17.9<br>(0.70) | 1.2<br>(0.05) | 55.4<br>(2.18) | 4.0<br>(0.16) |
| LCP1000-10K   | 4536<br>(10,000)     | 38.1<br>(1.50) | 12.4<br>(0.49) | 108.2<br>(4.26) | 5.1<br>(0.20) | 16.0<br>(0.63) | 25.4<br>(1.00) | 6.4<br>(0.25) | 12.7<br>(0.50) | 25.3 (0.998)<br>25.4 (1.00) | 23.9<br>(0.94) | 1.2<br>(0.05) | 57.4<br>(2.26) | 5.6<br>(0.22) |
| LCP1000-12.5K | 5670<br>(12,500)     | 38.1<br>(1.50) | 12.4<br>(0.49) | 108.2<br>(4.26) | 5.1<br>(0.20) | 16.0<br>(0.63) | 25.4<br>(1.00) | 6.4<br>(0.25) | 12.7<br>(0.50) | 25.3 (0.998)<br>25.4 (1.00) | 23.9<br>(0.94) | 1.2<br>(0.05) | 57.4<br>(2.26) | 5.6<br>(0.22) |
| LCP1250-18K   | 8165<br>(18,000)     | 50.1<br>(2.00) | 12.4<br>(0.49) | 133.4<br>(5.25) | 6.9<br>(0.27) | 20.6<br>(0.81) | 35.1<br>(1.38) | 6.4<br>(0.25) | 16.0<br>(0.63) | 31.7 (1.248)<br>31.8 (1.25) | 30.0<br>(1.20) | 1.4<br>(0.06) | 76.2<br>(3.00) | 5.6<br>(0.22) |
| LCP1250-20K   | 9072<br>(20,000)     | 50.1<br>(2.00) | 12.4<br>(0.49) | 133.4<br>(5.25) | 6.9<br>(0.27) | 20.6<br>(0.81) | 35.1<br>(1.38) | 6.4<br>(0.25) | 16.0<br>(0.63) | 31.7 (1.248)<br>31.8 (1.25) | 30.0<br>(1.20) | 1.4<br>(0.06) | 76.2<br>(3.00) | 5.6<br>(0.22) |
| LCP1500-30K   | 13,608<br>(30,000)   | 50.1<br>(2.00) | 12.4<br>(0.49) | 157.5<br>(6.20) | 6.9<br>(0.27) | 23.9<br>(0.94) | 41.1<br>(1.62) | 6.4<br>(0.25) | 14.5<br>(0.57) | 38.0 (1.498)<br>38.1 (1.50) | 35.7<br>(1.41) | 1.4<br>(0.06) | 88.9<br>(3.50) | 7.1<br>(0.28) |

**Models with Integral Connector (PTIH-10-6P or Equal)**

| Capacity |        | Model No.     | Compatible Meters     |
|----------|--------|---------------|-----------------------|
| lb       | kgf    |               |                       |
| 5000     | 2268   | LCP750-5K     | DPiS, DP41-S, DP25B-S |
| 6000     | 2722   | LCP750-6K     | DPiS, DP41-S, DP25B-S |
| 10,000   | 4536   | LCP1000-10K   | DPiS, DP41-S, DP25B-S |
| 12,500   | 5670   | LCP1000-12.5K | DPiS, DP41-S, DP25B-S |
| 18,000   | 8165   | LCP1250-18K   | DPiS, DP41-S, DP25B-S |
| 20,000   | 9072   | LCP1250-20K   | DPiS, DP41-S, DP25B-S |
| 30,000   | 13,608 | LCP1500-30K   | DPiS, DP41-S, DP25B-S |

Comes complete with NIST traceable calibration certificate.

**Ordering Example:** LCP750-5K, 2268 kgf (5000 lb) capacity load pin with integral twist-lock connector.

Custom capacities and sizes not shown on this page are available. please contact OMEGA for details.

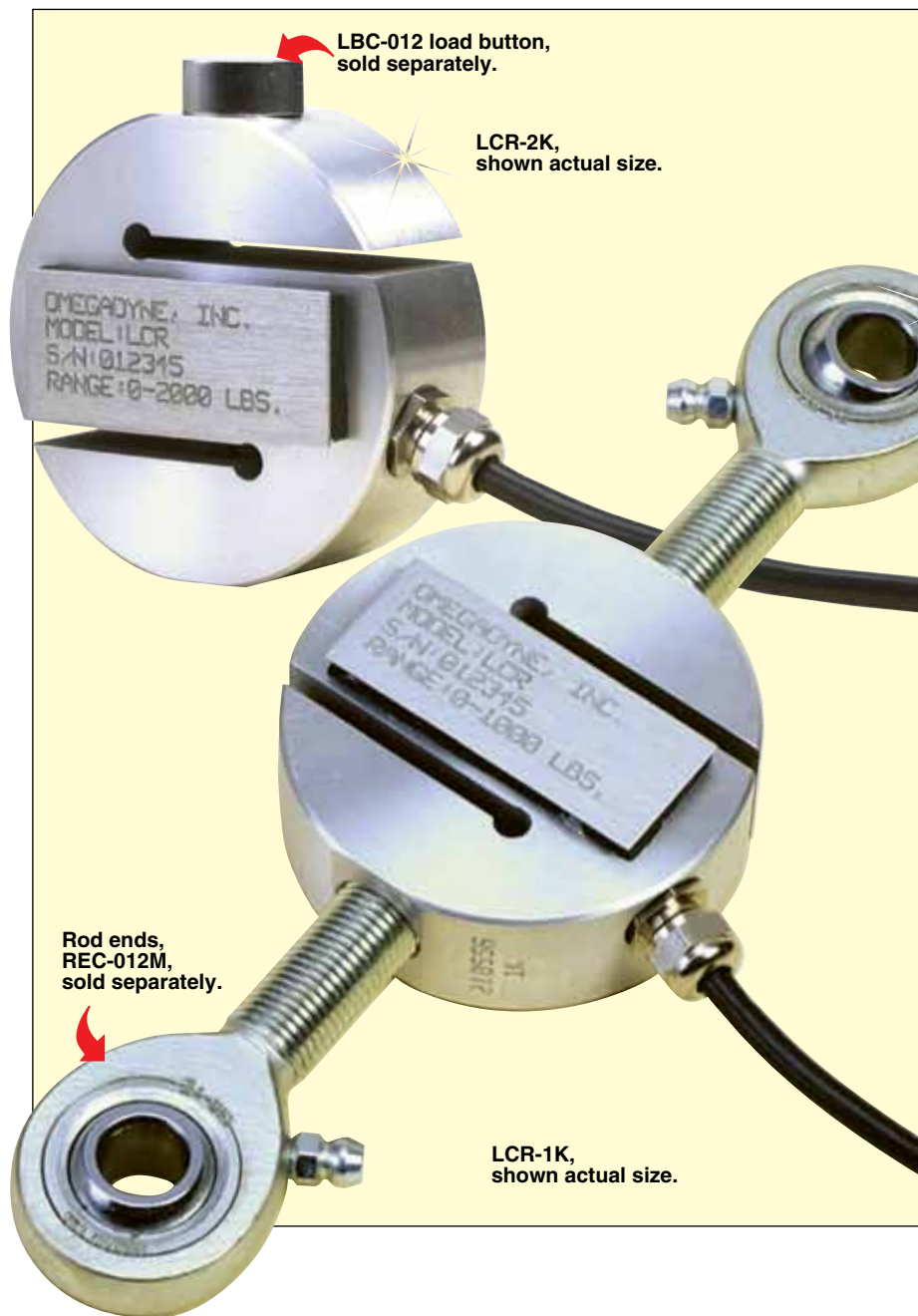
**25 to 10,000 lb Capacities**  
**11 to 4536 kgf Capacities**

**LCR Series**



Standard

- ✓ High Accuracy
- ✓ 5-Point Calibration Included
- ✓ 0.25% Interchangeability for Multiple Load Cell Applications
- ✓ Lightweight Aluminum Construction Ranges to 1000 lb
- ✓ Rugged Stainless Steel on Upper Ranges



**SPECIFICATIONS**

**Excitation:** 10 Vdc, 15V max

**Output:** 3 mV/V  $\pm 0.25\%$

**Calibration:** 5 point in tension (0%, 50%, 100%, 50%, 0%)

**Linearity:**  $\pm 0.03\%$

**Hysteresis:**  $\pm 0.02\%$

**Repeatability:**  $\pm 0.01\%$

**Creep (20 min):**  $\pm 0.03\%$

**Operating Temperature:** -18 to 71°C (0 to 150°F)

**Compensated Temperature:** 17 to 71°C (60 to 160°F)

**Thermal Effects:**

**Zero:**  $\pm 0.0027\%$  FS/°C

**Span:**  $\pm 0.0015\%$  rdg/°C

**Safe Overload:** 150% of capacity

**Ultimate Overload:** 300% of capacity

**Bridge Resistance:** 350  $\Omega$  nominal

**Protection Level:** IP55

**Material:**

$\leq 1000$  lb Ranges: Aluminum

$> 1000$  lb Ranges: 17-4 PH SS

**Electrical Connection:** 6 m (20')

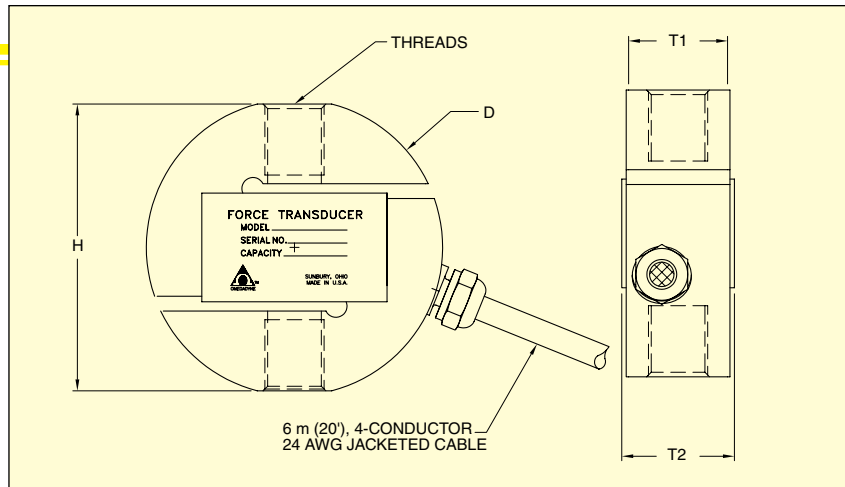
**Wiring:**

**Red:** (+) Excitation

**Black:** (-) Excitation

**Green:** (+) Output

**White:** (-) Output



| CAPACITY |      | THREADS       | Dimensions: mm (inch) |          |           | WEIGHT   |             | DEFL.      | kg (lb) |
|----------|------|---------------|-----------------------|----------|-----------|----------|-------------|------------|---------|
| lb       | kgf  |               | H                     | D        | T1        | T2       |             |            |         |
| 25       | 11   | 1/4-28 UNF-2B | 49 (1.94)             | 51 (2)   | 14 (0.55) | 23 (0.9) | 0.28 (0.01) | 0.18 (0.4) |         |
| 50       | 23   | 1/4-28 UNF-2B | 49 (1.94)             | 51 (2)   | 14 (0.55) | 23 (0.9) | 0.25 (0.01) | 0.18 (0.4) |         |
| 100      | 45   | 1/4-28 UNF-2B | 49 (1.94)             | 51 (2)   | 14 (0.55) | 23 (0.9) | 0.23 (0.01) | 0.18 (0.4) |         |
| 150      | 68   | 1/4-28 UNF-2B | 49 (1.94)             | 51 (2)   | 14 (0.55) | 23 (0.9) | 0.23 (0.01) | 0.18 (0.4) |         |
| 200      | 91   | 1/4-28 UNF-2B | 49 (1.94)             | 51 (2)   | 14 (0.55) | 23 (0.9) | 0.25 (0.01) | 0.18 (0.4) |         |
| 250      | 113  | 1/2-20 UNF-2B | 61 (2.42)             | 64 (2.5) | 22 (0.88) | 30 (1.2) | 0.23 (0.01) | 0.36 (0.8) |         |
| 500      | 227  | 1/2-20 UNF-2B | 61 (2.42)             | 64 (2.5) | 22 (0.88) | 30 (1.2) | 0.23 (0.01) | 0.36 (0.8) |         |
| 750      | 340  | 1/2-20 UNF-2B | 61 (2.42)             | 64 (2.5) | 22 (0.88) | 30 (1.2) | 0.23 (0.01) | 0.36 (0.8) |         |
| 1000     | 454  | 1/2-20 UNF-2B | 61 (2.42)             | 64 (2.5) | 22 (0.88) | 30 (1.2) | 0.23 (0.01) | 1.04 (2.3) |         |
| 2000     | 907  | 1/2-20 UNF-2B | 61 (2.42)             | 64 (2.5) | 22 (0.88) | 30 (1.2) | 0.23 (0.01) | 1.04 (2.3) |         |
| 3000     | 1361 | 1/2-20 UNF-2B | 61 (2.42)             | 64 (2.5) | 22 (0.88) | 30 (1.2) | 0.23 (0.01) | 1.04 (2.3) |         |
| 5000     | 2269 | 3/4-16 UNF-2B | 87 (3.4)              | 89 (3.5) | 32 (1.25) | 38 (1.5) | 0.28 (0.01) | 2.54 (5.6) |         |
| 10,000   | 4537 | 3/4-16 UNF-2B | 87 (3.4)              | 89 (3.5) | 32 (1.25) | 46 (1.8) | 0.36 (0.01) | 3.09 (6.8) |         |

| CAPACITY |      | MODEL NO.      | COMPATIBLE METERS     | LOAD BUTTON    | ROD END         |
|----------|------|----------------|-----------------------|----------------|-----------------|
| lb       | kgf  |                |                       | MODEL NO.      | MODEL NO.       |
| 25       | 11   | <b>LCR-25</b>  | DP41-S, DP25B-S, DPiS | <b>LBC-014</b> | <b>REC-014M</b> |
| 50       | 23   | <b>LCR-50</b>  | DP41-S, DP25B-S, DPiS | <b>LBC-014</b> | <b>REC-014M</b> |
| 100      | 45   | <b>LCR-100</b> | DP41-S, DP25B-S, DPiS | <b>LBC-014</b> | <b>REC-014M</b> |
| 150      | 68   | <b>LCR-150</b> | DP41-S, DP25B-S, DPiS | <b>LBC-014</b> | <b>REC-014M</b> |
| 200      | 91   | <b>LCR-200</b> | DP41-S, DP25B-S, DPiS | <b>LBC-014</b> | <b>REC-014M</b> |
| 250      | 113  | <b>LCR-250</b> | DP41-S, DP25B-S, DPiS | <b>LBC-012</b> | <b>REC-012M</b> |
| 500      | 227  | <b>LCR-500</b> | DP41-S, DP25B-S, DPiS | <b>LBC-012</b> | <b>REC-012M</b> |
| 750      | 340  | <b>LCR-750</b> | DP41-S, DP25B-S, DPiS | <b>LBC-012</b> | <b>REC-012M</b> |
| 1000     | 454  | <b>LCR-1K</b>  | DP41-S, DP25B-S, DPiS | <b>LBC-012</b> | <b>REC-012M</b> |
| 2000     | 907  | <b>LCR-2K</b>  | DP41-S, DP25B-S, DPiS | <b>LBC-012</b> | <b>REC-012M</b> |
| 3000     | 1361 | <b>LCR-3K</b>  | DP41-S, DP25B-S, DPiS | <b>LBC-012</b> | <b>REC-012M</b> |
| 5000     | 2269 | <b>LCR-5K</b>  | DP41-S, DP25B-S, DPiS | <b>LBC-034</b> | <b>REC-034M</b> |
| 10,000   | 4537 | <b>LCR-10K</b> | DP41-S, DP25B-S, DPiS | <b>LBC-034</b> | <b>REC-034M</b> |

Comes complete with 5-point NIST-traceable calibration and 59 k shunt data.

Ordering Example: **LCR-1K**, 1000 lb capacity load cell, and two **REC-012M**, rod ends.

\* DPiS meter suitable for one direction measurement only.

# LOAD WASHERS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FOR MEASURING BOLT COMPRESSIONAL FORCES STANDARD AND METRIC MODELS

### Compression

0-200 lb to 0-200,000 lb  
0-1000 to 0-200 kN

1 Newton = 0.2248 lb  
1 daNewton = 10 Newtons  
1 lb = 454 g  
1 t = 1000 kgf = 2204 lb

### LCWD/LCMWD Series



Standard

- ✓ 200 kN/200,000 lb Capacity
- ✓ Compact Design
- ✓ Spherical Washers Included
- ✓ Load Buttons Included
- ✓ Spherical Washers Recommended When Used with Bolts
- ✓ Load Button Recommended When Used as Compression Load Cell

### SPECIFICATIONS

Excitation: 10 Vdc (15V maximum)

Output:

<500 lb/2kN: 1 mV/V nominal  
>500 lb/2kN: 2 mV/V nominal

Accuracy (Linearity, Hysteresis and Repeatability Combined):

≤10K lb/50 kN: ±0.5% BFSL  
>10K lb/50 kN: ±0.75% BFSL

Zero Balance: ±4.0% FSO

Operating Temp Range:

-40 to 127°C (-40 to 260°F)

Compensated Temp Range:

16 to 71°C (60 to 160°F)

Thermal Effects:

Zero: ±0.018% FSO/°C

Span: ±0.018% FSO/°C

Safe Overload: 120% of capacity

Ultimate Overload: 200% of capacity

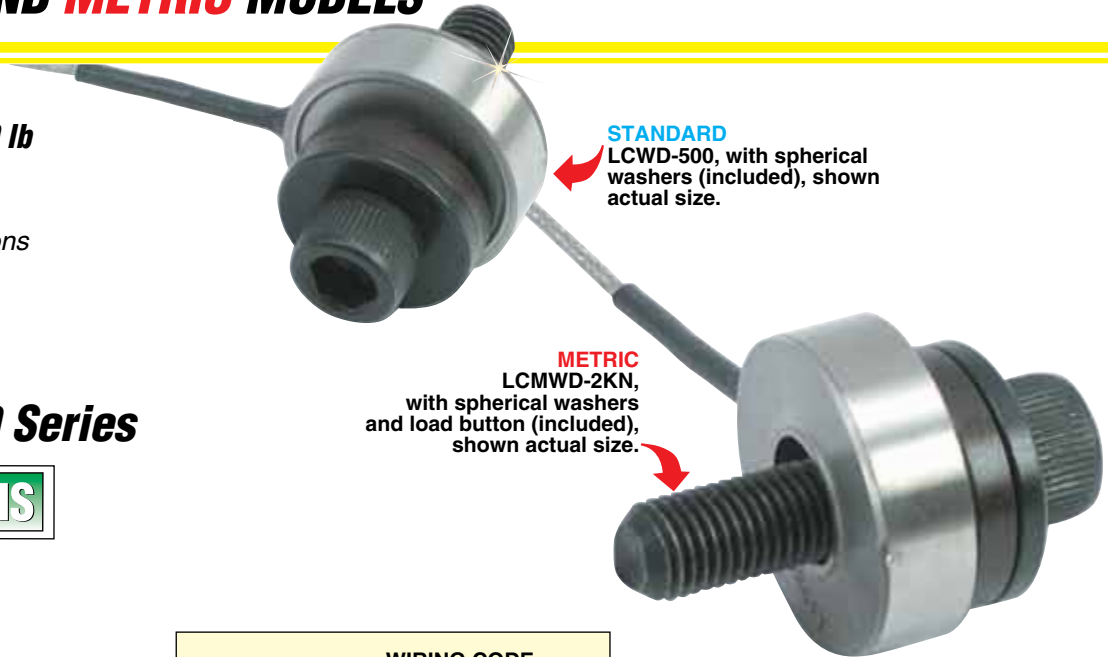
Bridge Resistance:

<50K lb/200 kN: 350 Ω min

≥50K lb/200 kN: 700 Ω

Full Scale Deflection: 0.001" typical

Construction: Stainless steel

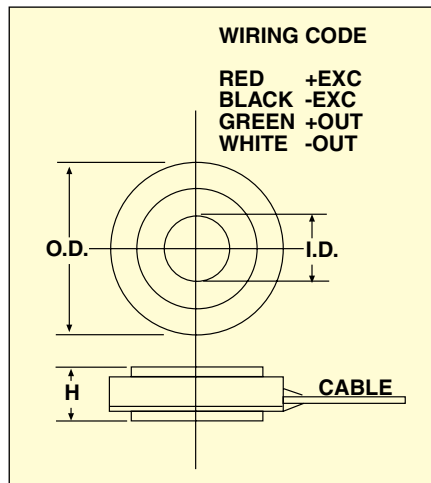


#### STANDARD

LCWD-500, with spherical washers (included), shown actual size.

#### METRIC

LCMWD-2KN, with spherical washers and load button (included), shown actual size.



#### Dimensions: mm (inch)

| CAPACITY        | ID          | OD        | H          |
|-----------------|-------------|-----------|------------|
| ≤10K lb (50 kN) | 10.2 (0.40) | 25 (1.0)  | 9.0 (0.35) |
| 20K lb (100 kN) | 12.7 (0.50) | 30 (1.2)  | 10 (0.40)  |
| 50K lb (200 kN) | 19.3 (0.76) | 44 (1.75) | 13 (0.50)  |
| 100K lb         | 25.7 (1.01) | 57 (2.25) | 18 (0.70)  |
| 200K lb         | 38.4 (1.51) | 77 (3.00) | 32 (1.25)  |

#### Caution

This unit is not field serviceable. Modifying and/or tampering will forfeit the warranty and may be dangerous. Use appropriate protective equipment and/or garments when testing or installing, including safety glasses.

### STANDARD MODELS

#### To Order

| CAPACITY |         | MODEL NO. | COMPATIBLE METERS**     | SPHERICAL WASHERS† |              |
|----------|---------|-----------|-------------------------|--------------------|--------------|
| lb       | N       |           |                         | MODEL              | ID mm (inch) |
| 200      | 890     | LCWD-200  | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 500      | 2224    | LCWD-500  | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 1000     | 4448    | LCWD-1K   | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 2000     | 8897    | LCWD-2K   | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 5000     | 22,242  | LCWD-5K   | DP41-S, DP25B-S, DPiS   | SPW-2              | 8.7 (0.34)   |
| 10,000   | 44,484  | LCWD-10K  | DP41-S, DP25B-S*, DPiS* | SPW-2              | 8.7 (0.34)   |
| 20,000   | 88,968  | LCWD-20K  | DP41-S, DP25B-S*, DPiS* | SPW-3              | 10 (0.41)    |
| 50,000   | 222,420 | LCWD-50K  | DP41-S, DP25B-S*, DPiS* | SPW-5              | 17 (0.66)    |
| 100,000  | 444,840 | LCWD-100K | DP41-S, DP25B-S*, DPiS* | SPW-7              | 24 (0.94)    |
| 200,000  | 889,680 | LCWD-200K | DP41-S, DP25B-S*, DPiS* | SPW-10             | 33 (1.31)    |

Comes complete with 4-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

† One set of spherical washers and one set of load buttons supplied with each load cell.

Ordering Examples: LCWD-500, 500 lb capacity load washer supplied with 2 load buttons and a set of spherical washers.

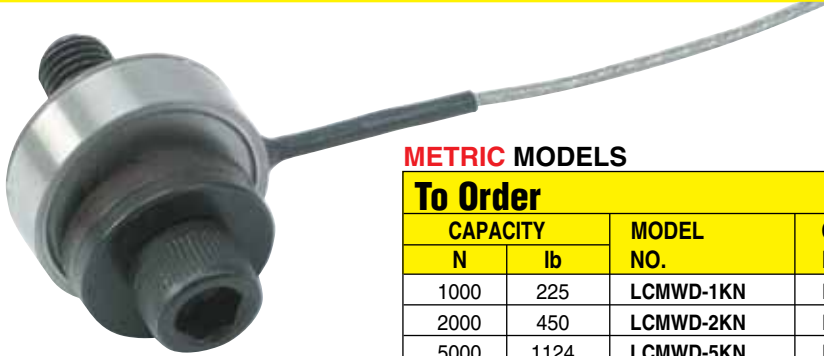
LCWD-100K, 100,000 lb capacity load washer supplied with 2 load buttons and set of spherical washers.

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

1.5 m (5') insulated shielded cable

1-00

# FOR MEASURING BOLT COMPRESSIONAL FORCES STANDARD AND METRIC MODELS



**METRIC**  
LCMWD-1KN, with spherical washers (included), shown actual size.

## METRIC MODELS

| To Order |        |             |                         |                    |            |
|----------|--------|-------------|-------------------------|--------------------|------------|
| CAPACITY |        | MODEL NO.   | COMPATIBLE METERS       | SPHERICAL WASHERS† |            |
| N        | lb     |             |                         | MODEL              | ID         |
| 1000     | 225    | LCMWD-1KN   | DPiS, DP41-S, DP25B-S   | SPW-2              | 8.7 (0.34) |
| 2000     | 450    | LCMWD-2KN   | DPiS, DP41-S, DP25B-S   | SPW-2              | 8.7 (0.34) |
| 5000     | 1124   | LCMWD-5KN   | DPiS, DP41-S, DP25B-S   | SPW-2              | 8.7 (0.34) |
| 10,000   | 2248   | LCMWD-10KN  | DPiS*, DP41-S, DP25B-S* | SPW-2              | 8.7 (0.34) |
| 20,000   | 4496   | LCMWD-20KN  | DPiS*, DP41-S, DP25B-S* | SPW-2              | 8.7 (0.34) |
| 50,000   | 11,240 | LCMWD-50KN  | DPiS*, DP41-S, DP25B-S* | SPW-2              | 8.7 (0.34) |
| 100,000  | 22,481 | LCMWD-100KN | DPiS*, DP41-S, DP25B-S* | SPW-3              | 10 (0.41)  |
| 200,000  | 44,962 | LCMWD-200KN | DPiS*, DP41-S, DP25B-S* | SPW-5              | 17 (0.66)  |

Comes complete with 5-point NIST-traceable calibration and 59 kΩ shunt data.

\* 4-digit meter. \*\* Visit us online for compatible meters.

† One set of spherical washers and one set of load buttons supplied with each load cell.

**Ordering Examples:** LCMWD-10KN, 10 kN capacity load washer supplied with 2 load buttons and a set of spherical washers.

LCMWD-200KN, 200 kN capacity load washer supplied with 2 load buttons and a set of spherical washers.

## STRAIN GAGE/BRIDGE TRANSDUCER-SIGNAL CONDITIONERS

### iDRX-ST



The iDRN-ST and iDRX-ST signal conditioners provide highly accurate, stable, isolated measurement for strain gage transducers such as load cells, torque transducers, non-amplified pressure transducers, and other bridge based transducers. Both models can accept signals from 30 to 100 mV full scale and provide 10 Vdc reference voltage which may be used for transducer excitation.



Shown smaller than actual size.

- ✓ Unipolar/Bipolar  
30 mV to 100 mV
- ✓ 13-Bit Resolution
- ✓ 10 Vdc Excitation
- ✓ 0.2% FS Accuracy
- ✓ 1800 Vdc Isolation
- ✓ 250 Vac/1 Min Input  
Overvoltage Protection
- ✓ Free Setup and  
Configuration Software

| To Order  |  |
|-----------|--|
| MODEL NO. | DESCRIPTION  |
| iDRX-ST   | Digital signal conditioner for strain gages and bridge transducers with RS485 output |
| iDRN-ST   | Signal conditioner for strain gages and bridge transducers with analog output        |
| -FS       | Factory setup and scaling  |

Comes complete with operator's manual.

**Ordering Example:** iDRX-ST, digital signal conditioner for strain gages and bridge transducers with RS485 output, CAT-285, bi-directional RS232-RS485 converter for iDRX series.

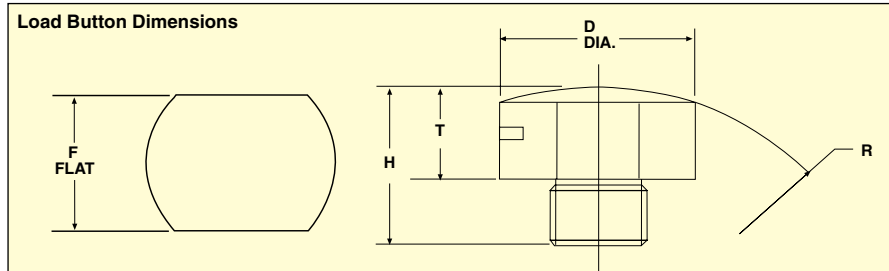
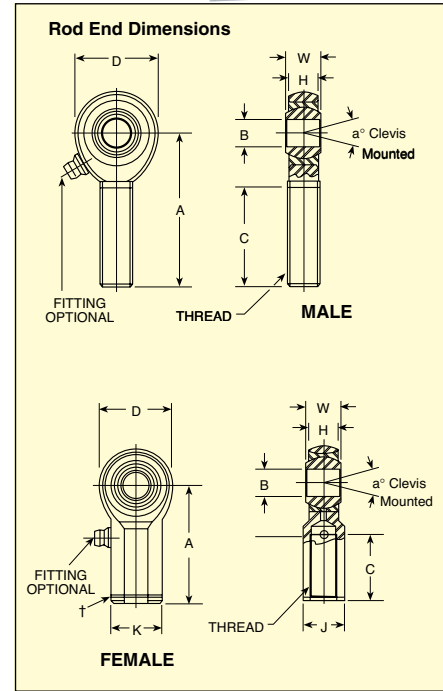
For iDRN/iDRX accessories and power supplies, please visit us online.

# LOAD BUTTONS AND ROD ENDS FOR METRIC LOAD CELLS



## Load Buttons

| Dimensions: mm (inch) |            |                |                |                |                |                |
|-----------------------|------------|----------------|----------------|----------------|----------------|----------------|
| MODEL NO.             | THREAD     | H              | T              | D              | F              | R              |
| MLBC-M6               | M6 x 1.0   | 12.7<br>(0.50) | 5.1<br>(0.20)  | 15.2<br>(0.60) | 12.7<br>(0.50) | 50.8<br>(2.00) |
| MLBC-M8               | M8 x 1.25  | 12.7<br>(0.50) | 5.1<br>(0.20)  | 15.2<br>(0.60) | 12.7<br>(0.50) | 50.8<br>(2.00) |
| MLBC-M10              | M10 x 1.5  | 15.2<br>(0.60) | 7.6<br>(0.30)  | 19.1<br>(0.75) | 15.9<br>(0.63) | 50.8<br>(2.00) |
| MLBC-M12              | M12 x 1.75 | 17.8<br>(0.70) | 7.6<br>(0.30)  | 19.1<br>(0.75) | 15.9<br>(0.63) | 102<br>(4.02)  |
| MLBC-M16              | M16 x 2.0  | 22.9<br>(0.90) | 7.6<br>(0.30)  | 38.1<br>(1.50) | 31.8<br>(1.25) | 127<br>(5.00)  |
| MLBC-M20              | M20 x 1.5  | 22.9<br>(0.90) | 7.6<br>(0.30)  | 38.1<br>(1.50) | 31.8<br>(1.25) | 127<br>(5.00)  |
| MLBC-M24              | M24 x 2.0  | 27.9<br>(1.10) | 7.6<br>(0.30)  | 38.1<br>(1.50) | 31.8<br>(1.25) | 203<br>(8.00)  |
| MLBC-M36              | M36 x 2.0  | 57.2<br>(2.25) | 25.4<br>(1.00) | 63.5<br>(2.50) | 57.2<br>(2.25) | 356<br>(14.02) |



## Load Cell Options (Limited Models Only)

**Temperature Compensation:**  
 "-TC1" Extended Compensated Range (-46 to 93°C/-50 to 200°F) not exceeding operating range  
 "-TC2" 163°C (350°F)

## Additional Cable Length:

- 4-conductor PVC
- 4-conductor PTFE
- 6-conductor PVC
- 6-conductor PTFE

## Mating Connectors:

- PT06F10-6S
- PT06A10-6S (SR)

## Calibration/Recalibration:

- "-NC5" 5-point calibration 0%, 50%, 100%, 50%, 0% Extra calibration points

## Built-In Amplifiers:

- 0 to 5 Vdc
- 4 to 20 mA

## In-Line Amplifiers:

Consult Engineering

Consult sales for price and availability.

## Rod Ends

| Dimensions: mm (inch) |             |            |            |               |            |               |            |    |    |    |                  |
|-----------------------|-------------|------------|------------|---------------|------------|---------------|------------|----|----|----|------------------|
| MALE ROD ENDS         | THREAD SIZE | B          | W          | H             | A          | D             | C          | a° | K  | J  | STATIC LOAD (lb) |
| MREC-M5M              | M5 x 0.8    | 5 (0.197)  | 8 (0.315)  | 6.25 (0.246)  | 33 (1.300) | 16 (0.630)    | 20 (0.787) | 14 | —  | —  | 12,611           |
| MREC-M6M              | M6 x 1.0    | 6 (0.236)  | 9 (0.354)  | 7 (0.275)     | 36 (1.417) | 19 (0.748)    | 22 (0.866) | 13 | —  | —  | 17,720           |
| MREC-M8M              | M8 x 1.25   | 8 (0.315)  | 12 (0.472) | 8.75 (0.344)  | 42 (1.653) | 22.25 (0.876) | 25 (0.984) | 18 | —  | —  | 33,135           |
| MREC-M10M             | M10 x 1.5   | 10 (0.394) | 14 (0.551) | 10.5 (0.413)  | 48 (1.990) | 27 (1.063)    | 29 (1.142) | 17 | —  | —  | 50,227           |
| MREC-M12M             | M12 x 1.75  | 12 (0.472) | 16 (0.630) | 12 (0.472)    | 54 (2.126) | 30 (1.181)    | 33 (1.300) | 17 | —  | —  | 44,490           |
| MREC-M16M             | M16 x 2.0   | 16 (0.630) | 21 (0.826) | 14.25 (0.561) | 66 (2.598) | 38 (1.496)    | 40 (1.575) | 23 | —  | —  | 76,291           |
| MREC-M20M             | M20 x 1.5   | 20 (0.787) | 25 (0.984) | 18 (0.709)    | 78 (3.071) | 46 (1.811)    | 47 (1.850) | 20 | —  | —  | 120,212          |
| MREC-M24M             | M24 x 2.0   | 25 (0.984) | 31 (1.220) | 22 (0.866)    | 95 (3.740) | 60 (2.362)    | 57 (2.244) | 19 | —  | —  | 251,780          |
| FEMALE ROD ENDS       |             |            |            |               |            |               |            |    |    |    |                  |
| MREC-M5F              | M5 x 0.8    | 5 (0.197)  | 8 (0.315)  | 6.25 (0.246)  | 27 (1.063) | 16 (0.630)    | 14 (0.551) | 14 | 11 | 9  | 16,396           |
| MREC-M6F              | M6 x 1.0    | 6 (0.236)  | 9 (0.354)  | 7 (0.275)     | 30 (1.181) | 19 (0.748)    | 14 (0.551) | 13 | 13 | 11 | 25,781           |
| MREC-M10F             | M10 x 1.5   | 10 (0.394) | 14 (0.551) | 10.5 (0.413)  | 43 (1.693) | 27 (1.063)    | 21 (0.827) | 17 | 19 | 17 | 50,227           |
| MREC-M12F             | M12 x 1.75  | 12 (0.472) | 16 (0.630) | 12 (0.472)    | 50 (1.968) | 30 (1.181)    | 24 (0.945) | 17 | 22 | 19 | 44,490           |
| MREC-M20F             | M20 x 1.5   | 20 (0.787) | 25 (0.984) | 18 (0.709)    | 77 (3.031) | 46 (1.811)    | 40 (1.575) | 20 | 24 | 20 | 120,212          |



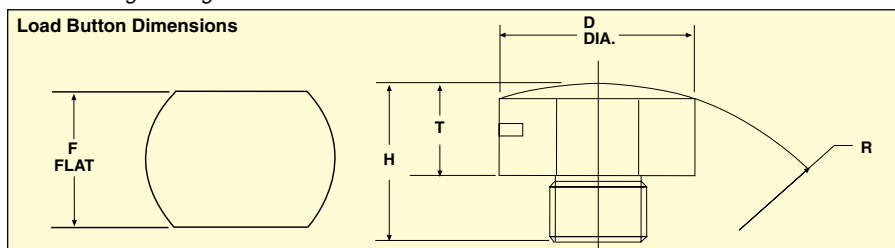
# LOAD BUTTONS AND ROD ENDS FOR STANDARD LOAD CELLS



## Load Buttons

| Dimensions: mm (in) |        |            |           |           |           |            |
|---------------------|--------|------------|-----------|-----------|-----------|------------|
| MODEL               | THREAD | H          | T         | D         | F         | R          |
| LBC-014             | ¼-28   | 13 (0.50)  | 5 (0.20)  | 15 (0.60) | 13 (0.50) | 51 (2.0)   |
| LBC-038             | ¾-24   | 15 (0.60)  | 8 (0.30)  | 19 (0.75) | 16 (0.63) | 51 (2.0)   |
| LBC-012             | ½-20   | 18 (0.70)  | 8 (0.30)  | 19 (0.75) | 16 (0.63) | 102 (4.0)  |
| LBC-034             | ¾-16   | 23 (0.90)  | 8 (0.30)  | 38 (1.50) | 32 (1.25) | 152 (6.0)  |
| LBC-100             | 1-14   | 28 (1.10)  | 8 (0.30)  | 38 (1.50) | 32 (1.25) | 203 (8.0)  |
| LBC-101             | 1-12   | 28 (1.10)  | 8 (0.30)  | 38 (1.50) | 32 (1.25) | 203 (8.0)  |
| LBC-114             | 1¼-12  | 38 (1.50)  | 13 (0.50) | 51 (2.00) | 44 (1.75) | 254 (10.0) |
| LBC-112             | 1½-12  | 57 (2.25)  | 25 (1.00) | 64 (2.50) | 57 (2.25) | 356 (14.0) |
| LBC-200-12          | 2-12   | 89 (3.50)  | 28 (1.10) | 57 (2.25) | 44 (1.75) | 203 (8.0)  |
| LBC-300-8           | 3-8    | 133 (5.25) | 47 (1.86) | 83 (3.25) | 67 (2.63) | 305 (12.0) |

\* Consult Engineering.



### Load Cell Options (Limited Models Only)

#### Temperature Compensation:

“TC1” Extended Compensated Range (-46 to 93°C/-50 to 200°F) not exceeding operating range

“TC2” 163°C (350°F)

#### Additional Cable Length:

- 4-conductor PVC
- 4-conductor PTFE
- 6-conductor PVC
- 6-conductor PTFE

#### Mating Connectors:

- PT06F10-6S
- PT06A10-6S (SR)

#### Calibration/Recalibration:

“NC5” 5-point calibration 0%, 50%, 100%, 50%, 0% Extra calibration points

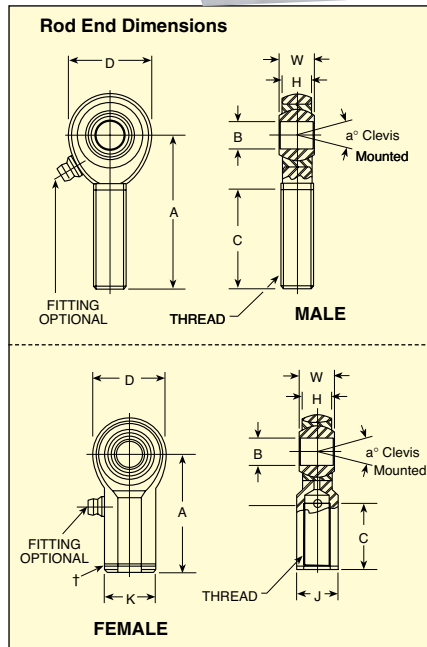
#### Built-In Amplifiers:

- 0 to 5 Vdc
- 4 to 20 mA

#### In-Line Amplifiers:

Consult Engineering

Consult sales for price and availability.



## Rod Ends

| Dimensions: mm (in) |                   |             |            |            |             |            |             |     |            |            |                  |          |
|---------------------|-------------------|-------------|------------|------------|-------------|------------|-------------|-----|------------|------------|------------------|----------|
| MALE ROD ENDS       | THREAD UNF-3A     | B           | W          | H          | A           | D          | C           | a°  | K          | J          | STATIC LOAD (lb) | WT. (lb) |
| REC-010M*           | 10-32             | 5 (0.190)   | 8 (0.312)  | 6 (0.234)  | 32 (1.25)   | 16 (0.625) | 19 (0.750)  | 17  | -          | -          | 1170             | 0.03     |
| REC-014M            | ¼-28              | 5 (0.190)   | 8 (0.312)  | 6 (0.250)  | 40 (1.562)  | 19 (0.750) | 25 (1.000)  | 10  | -          | -          | 2158             | 0.04     |
| REC-038M            | ¾-24              | 8 (0.3125)  | 11 (0.437) | 9 (0.344)  | 49 (1.938)  | 25 (1.000) | 32 (1.250)  | 12  | -          | -          | 5323             | 0.25     |
| REC-012M            | ½-20              | 11 (0.4375) | 14 (0.562) | 11 (0.437) | 62 (2.438)  | 33 (1.312) | 38 (1.500)  | 12  | -          | -          | 23,452           | 0.25     |
| REC-058M            | ⅝-18              | 13 (0.5000) | 16 (0.625) | 13 (0.500) | 67 (2.625)  | 38 (1.500) | 41 (1.625)  | 10  | -          | -          | 31,390           | 0.38     |
| REC-034M            | ¾-16              | 16 (0.6250) | 19 (0.750) | 14 (0.562) | 73 (2.875)  | 44 (1.750) | 44 (1.750)  | 13  | -          | -          | 40,572           | 0.60     |
| REC-100M            | 1-14              | 25 (1.000)  | 35 (1.375) | 25 (1.000) | 105 (4.125) | 70 (2.750) | 545 (2.120) | 14  | -          | -          | 43,541           | 2.1      |
| REC-114M            | 1¼-12             | 32 (1.250)  | 28 (1.093) | 24 (0.937) | 105 (4.125) | 70 (2.750) | 54 (2.125)  | 7   | -          | -          | 44,500           | 2.4      |
| REC-112M            | 1½-12             | 38 (1.500)  | 33 (1.312) | 29 (1.125) | 137 (5.375) | 89 (3.500) | 76 (3.000)  | 6.5 | -          | -          | 138,826          | 4.8      |
| FEMALE ROD ENDS     | UNF-2B            | B           | W          | H          | A           | D          | C           | a°  | K          | J          | STATIC LOAD (lb) | WT. (lb) |
| REC-006F*           | 6-32 <sup>†</sup> | 3 (0.1250)  | 6 (0.250)  | 5 (0.187)  | 21 (0.812)  | 13 (0.500) | 11 (0.437)  | 16  | 8 (0.312)  | 6 (0.250)  | 1202             | 0.02     |
| REC-010F*           | 10-32             | 5 (0.190)   | 8 (0.312)  | 6 (0.234)  | 27 (1.062)  | 16 (0.625) | 13 (0.500)  | 17  | 10 (0.406) | 8 (0.312)  | 2028             | 0.04     |
| REC-012F            | ½-20              | 13 (0.500)  | 16 (0.625) | 13 (0.500) | 54 (2.125)  | 33 (1.312) | 30 (1.187)  | 12  | 22 (0.875) | 19 (0.750) | 16,238           | -        |
| REC-014F            | ¼-28              | 6 (0.250)   | 10 (0.375) | 7 (0.265)  | 33 (1.312)  | 19 (0.750) | 17 (0.687)  | 21  | 12 (0.469) | 10 (0.375) | 3114             | 0.05     |
| REC-034F            | ¾-16              | 19 (0.750)  | 22 (0.875) | 17 (0.687) | 73 (2.875)  | 44 (1.750) | 44 (1.750)  | 14  | 29 (1.125) | 25 (1.000) | 28,081           | -        |
| REC-038F            | ¾-24              | 10 (0.375)  | 13 (0.500) | 10 (0.406) | 41 (1.625)  | 25 (1.000) | 24 (0.937)  | 12  | 17 (0.687) | 14 (0.562) | 9544             | -        |

<sup>†</sup> UNC thread.

# LOW PROFILE LOAD CELLS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## WATERPROOF FOR WET OR WASHDOWN APPLICATIONS

Compression Calibrated in compression  
5 to 500,000 lb Capacities  
2.3 kgf to 225T\* Capacities

### LSHD Series Compression



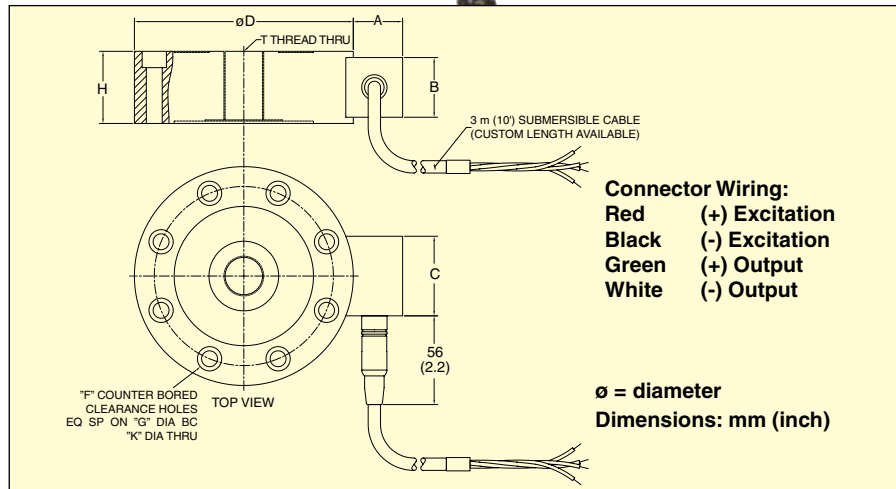
- ✓ High Accuracy
- ✓ 5-Point NIST Traceable Calibration Included
- ✓ Hermetically Sealed for Wet and Submerged Applications
- ✓ All Stainless Steel Construction for Harsh Industrial Environments
- ✓ 1% Interchangeability for Scale Applications
- ✓ High Capability to Resist Side Loads
- ✓ Low Profile for Easy Installations
- ✓ 3 m (10') Waterproof Cable Standard

The LSHD Series load cells are hermetically sealed and have a high pressure, high temperature molded cable seal to assure long life in wet or submerged applications such as truck or rail scales. They are supplied with a standard length of 3 m (10') of cable, however longer lengths are available. Many standard lengths are stocked plus custom lengths are also available.



LSHD

Waterproof high pressure molded cable connection.



### SPECIFICATIONS

**Excitation:** 10 Volts, 15 Vdc maximum  
**Output Ranges ≤ 25 lb:** 2 mV/V ± 1%  
 Ranges > 25 lb: 3 mV/V ± 1%  
**Calibration:** 5 points in compression  
 0%, 50%, 100%, 50%, 0% capacity  
**Linearity ≤ 25 lb:** ± 0.2% FSO  
 Ranges > 25 lb: ± 0.1% FSO  
**Hysteresis ≤ 25 lb:** ± 0.1% FSO  
 Ranges > 25 lb: ± 0.08% FSO  
**Repeatability ≤ 25 lb:** ± 0.1% FSO  
 Ranges > 25 lb: ± 0.03% FSO

**Zero Balance:** ± 1% FSO  
**FS Deflection:** 0.025 to 0.075 mm (0.001 to 0.003")  
**Operating Temperature:** -18 to 82°C (0 to 180°F)  
**Compensated Temperature:** 15 to 71°C (60 to 160°F)  
**Thermal Effects:**  
 Span: ± 0.0036% rdg/°C  
 Zero: ± 0.0036% FSO/°C  
**Safe Overload:** 150% Capacity  
**Ultimate Overload:** 300% Capacity

| CAPACITY (LBS)     | Dimensions: mm (inch) |            |            |             |    |               |           |           |           |
|--------------------|-----------------------|------------|------------|-------------|----|---------------|-----------|-----------|-----------|
|                    | D                     | H          | K          | G           | F  | T-THREADS     | B         | C         | A         |
| 5 to 25            | 64 (2.50)             | 20 (0.80)  | 4.6 (0.18) | 51 (2.00)   | 6  | ¼ - 28UNF-2B  | 19 (0.75) | 32 (1.25) | 23 (0.92) |
| 50 to 1000         | 76 (3.00)             | 25 (1.00)  | 7 (0.28)   | 57 (2.25)   | 6  | ⅜ - 24UNF-2B  | 19 (0.75) | 32 (1.25) | 23 (0.92) |
| 2000 to 5000       | 89 (3.50)             | 25 (1.00)  | 9 (0.34)   | 67 (2.63)   | 6  | ½ - 20UNF-2B  | 19 (0.75) | 32 (1.25) | 23 (0.92) |
| 7500 to 15,000     | 140 (5.50)            | 46 (1.80)  | 10 (0.40)  | 114 (4.50)  | 8  | 1 - 14UNS-2B  | 38 (1.50) | 51 (2.00) | 32 (1.24) |
| 20,000 to 50,000   | 152 (6.00)            | 46 (1.80)  | 13 (0.53)  | 124 (4.88)  | 8  | 1½ - 12UNF-2B | 38 (1.50) | 51 (2.00) | 32 (1.24) |
| 75,000 to 100,000  | 229 (9.00)            | 64 (2.50)  | 17 (0.66)  | 197 (7.75)  | 12 | 2 - 12UN-2B   | 38 (1.50) | 51 (2.00) | 32 (1.24) |
| 150,000 to 200,000 | 279 (11.00)           | 76 (3.00)  | 20 (0.78)  | 241 (9.50)  | 12 | 2½ - 12UN-2B  | 38 (1.50) | 51 (2.00) | 32 (1.24) |
| 300,000 to 500,000 | 356 (14.00)           | 108 (4.25) | 25 (1.00)  | 298 (11.75) | 12 | 3½ - 8UN-2B   | 38 (1.50) | 51 (2.00) | 32 (1.24) |

\* Metric Models Available: Contact Sales for specific model number, price and delivery information.

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

LOAD CELLS



# WATERPROOF LOAD CELLS

**Bridge Resistance:** 350  $\Omega$  nominal

**Protection Level:** IP68

**Electrical Connection:** 3 m (10')  
submersible cable

*Other lengths available see table*

**Construction:** 17-4 pH stainless steel

**Submersible Depth:**

**5 to 10K Range:** 3 m (10')

**20 to 50K Range:** 6 m (20')

**75 to 500K Range:** 15 m (50')

## SUBMERSIBLE CABLE

| LENGTH       | LENGTH cont'd |
|--------------|---------------|
| 0.6 m (2')   | 15.2 m (50')  |
| 1.5 m (5')   | 18.3 m (60')  |
| 3.0 m (10')  | 19.8 m (65')  |
| 4.5 m (15')  | 22.8 m (75')  |
| 6.0 m (20')  | 30.4 m (100') |
| 7.6 m (25')  | 45.7 m (150') |
| 9.1 m (30')  | 60.9 m (200') |
| 12.2 m (40') | 91.4 m (300') |

*Custom cable length available.*

## POPULAR OPTIONS

| DESCRIPTION  | SUFFIX                |
|--|-----------------------|
| $\pm 5$ Vdc Output<br>(calibrated<br>0 to 5 Vdc in<br>tension) | "-5T"<br>(Ranges 75k) |
| Overload Stops   | Consult factory       |
| Dual Bridge  | Available             |

## To Order

| CAPACITY |      | MODEL NO. | COMPATIBLE METERS       | LOAD BUTTON | ROD END  |
|----------|------|-----------|-------------------------|-------------|----------|
| lb       | kg   |           |                         |             |          |
| 5        | 2.3  | LSHD-5    | DP41-S, DP25B-S, DPi8-S | LBC-14      | REC-014M |
| 10       | 4.5  | LSHD-10   | DP41-S, DP25B-S, DPi8-S | LBC-14      | REC-014M |
| 25       | 11   | LSHD-25   | DP41-S, DP25B-S, DPi8-S | LBC-14      | REC-014M |
| 50       | 23   | LSHD-50   | DP41-S, DP25B-S, DPi8-S | LBC-38      | REC-038M |
| 100      | 45   | LSHD-100  | DP41-S, DP25B-S, DPi8-S | LBC-38      | REC-038M |
| 250      | 114  | LSHD-250  | DP41-S, DP25B-S, DPi8-S | LBC-38      | REC-038M |
| 500      | 227  | LSHD-500  | DP41-S, DP25B-S, DPi8-S | LBC-38      | REC-038M |
| 1000     | 455  | LSHD-1K   | DP41-S, DP25B-S, DPi8-S | LBC-38      | REC-038M |
| 2000     | 909  | LSHD-2K   | DP41-S, DP25B-S, DPi8-S | LBC-012     | REC-012M |
| 3000     | 1.3T | LSHD-3K   | DP41-S, DP25B-S, DPi8-S | LBC-012     | REC-012M |
| 4000     | 1.8T | LSHD-4K   | DP41-S, DP25B-S, DPi8-S | LBC-012     | REC-012M |
| 5000     | 2.2T | LSHD-5K   | DP41-S, DP25B-S, DPi8-S | LCB-012     | REC-100M |
| 7500     | 3.4T | LSHD-7.5K | DP41-S, DP25B-S, DPi8-S | LBC-100     | REC-100M |
| 10,000   | 4.5T | LSHD-10K  | DP41-S, DP25B-S, DPi8-S | LBC-100     | REC-100M |
| 15,000   | 6.8T | LSHD-15K  | DP41-S, DP25B-S, DPi8-S | LBC-100     | REC-100M |
| 20,000   | 9.1T | LSHD-20K  | DP41-S, DP63900-S       | LBC-112     | REC-112M |
| 30,000   | 13T  | LSHD-30K  | DP41-S, DP63900-S       | LBC-112     | REC-112M |
| 50,000   | 22T  | LSHD-50K  | DP41-S, DP63900-S       | LBC-112     | REC-112M |
| 75,000   | 34T  | LSHD-75K  | DP41-S, DP63900-S       | —           | —        |
| 100,000  | 45T  | LSHD-100K | DP41-S, DP63900-S       | —           | —        |
| 150,000  | 68T  | LSHD-150K | DP41-S, DP63900-S       | —           | —        |
| 200,000  | 90T  | LSHD-200K | DP41-S, DP63900-S       | —           | —        |
| 300,000  | 135T | LSHD-300K | DP41-S, DP63900-S       | —           | —        |
| 400,000  | 180T | LSHD-400K | DP41-S, DP63900-S       | —           | —        |
| 500,000  | 225T | LSHD-500K | DP41-S, DP63900-S       | —           | —        |

*Comes complete with 5-point NIST traceable calibration certificate, 59K shunt data, and 3 m (10') cable.*

**Note:** Ranges over 300,000 lb are calibrated at 300,000 lb.

**Ordering Examples:** LSHD-500 is a 500 lb range waterproof load cell.

LSHD-20K, 20,000 lb range waterproof load cell.

# Temperature, Pressure, Humidity & Tri-Axial Shock Data Logger

## OM-CP-SHOCK300 Tri-Axial Shock Data Logger



- Compact size
- 3-axis shock
- Temperature, humidity, pressure  
(OM-CP-ULTRASHOCK-A only)
- Fully configurable measurements
- Long life rechargeable battery
- Large capacity event memory
- Programmable start time
- Real time operation
- CE compliant
- Separate low-g and high-g accelerometers



The OM-CP-ULTRASHOCK-A is a 3-axis shock / acceleration data logger with additional channels for temperature, humidity and barometric pressure. Each of the six channels may be made active or inactive as needed. Disabling channels will provide additional storage to the enabled channels.

The OM-CP-SHOCK300 is a 3-axis shock / acceleration data logger. Each of the three channels may be made active or inactive as needed. Disabling channels will provide additional storage to the enabled channels.

The OM-CP-ULTRASHOCK-A and OM-CP-SHOCK300 are specifically designed for documenting dynamic environments such as moving vehicles, trucks, containers, ships, etc. The device is also valuable in characterizing environments such as production and assembly lines of delicate electronics, IC fabrication, communications and computer components.

The OM-CP-ULTRASHOCK-A and OM-CP-SHOCK300 contain two separate accelerometers to provide high sensitivity and accuracy up to 15g or higher levels of shock monitoring up to 300g. One of three operating ranges must be chosen during setup for a logging session. Those ranges are +/- 15g (low g accelerometer), +/- 100g

### OM-CP-SHOCK300 Specifications

| SHOCK                       |   |        |        |
|-----------------------------|---|--------|--------|
| Accelerometer Type          | MEMS Semiconductor                            |        |        |
| Acceleration Range (g)      | ±15 g   | ±100 g | ±300 g |
| Acceleration Resolution (g) | 0.02 g  | 0.05 g | 0.2 g  |
| Calibrated Accuracy (g)     | ±0.3 g  | ±2.0 g | ±6.0 g |
| Sampling Rate               | 1000 Hz                                       |        |        |
| Accelerometer Freq. Resp.   | >1000 Hz (15 g)<br>>500 Hz (100 g, 300 g)     |        |        |
| Reading Rate                | 1024 Hz to 5 minutes, selectable in software. |        |        |



## OM-CP-ULTRASHOCK-A Specifications

| TEMPERATURE                 |   |        |        |
|-----------------------------|---|--------|--------|
| Sensor                      | Semiconductor   |        |        |
| Range                       | -20 °C to +60 °C  |        |        |
| Resolution                  | 0.1 °C  |        |        |
| Accuracy                    | ±0.5 °C (+5 °C to +60 °C)   |        |        |
| HUMIDITY                    |   |        |        |
| Sensor                      | Capacitive Polymer  |        |        |
| Range                       | 0 %RH to 95 %RH   |        |        |
| Resolution                  | 0.1 %RH   |        |        |
| Calibrated Accuracy         | ±3 %RH (±2 %RH typical at 25 °C)  |        |        |
| Specified Accuracy Range    | +20 °C to +40 °C; 25 %RH to 75 %RH  |        |        |
| PRESSURE                    |   |        |        |
| Sensor                      | Semiconductor Strain Gage   |        |        |
| Range                       | 100 mbar to 1300 mbar   |        |        |
| Resolution                  | 0.05 mbar   |        |        |
| Calibrated Accuracy         | ±1.5 mbar at 25 °C; at 750 mbar   |        |        |
| SHOCK                       |   |        |        |
| Accelerometer Type          | MEMS Semiconductor  |        |        |
| Acceleration Range (g)      | ±15 g   | ±100 g | ±300 g |
| Acceleration Resolution (g) | 0.02 g  | 0.05 g | 0.2 g  |
| Calibrated Accuracy (g)     | ±0.3 g  | ±2.0 g | ±6.0 g |
| Sampling Rate               | 1000 Hz   |        |        |
| Accelerometer Freq. Resp.   | >1000 Hz (15 g)<br>>500 Hz (100 g, 300 g)   |        |        |
| Reading Rate                | 1024 Hz to 5 minutes for shock, selectable in software. Temperature, pressure and humidity sampled approx. every 2 seconds at intervals shorter than 2 seconds. Otherwise, sampled at the reading rate. |        |        |

## General Specifications

| GENERAL                |   |
|------------------------|---|
| Memory                 | 3,593,358 readings (598,893 per channel, all channels in use)   |
| Start Modes            | Software programmable immediate start or delay start, up to 6 months in advance   |
| Real Time Recording    | May be used with PC to monitor and record data in real time at a 1 second sample rate   |
| Password Protection    | An optional password may be programmed into the device to restrict access to configuration options. Data may be read out with the password.   |
| Calibration            | Digital calibration through software  |
| Calibration Date       | Automatically recorded within device  |
| Battery Type           | Internal Lithium Ion pack, charger included   |
| Battery Life           | 90 days typical at 64Hz rate  |
| Data Format            | Date and time stamped gravities (g and mg), temperature (°C, °F, K, °R), humidity (%RH, mg/ml water vapor concentration), pressure (PSIA, inHg, mmHg, bar, atm, Torr, Pa, kPa, MPa) |
| IP Rating              | IP64  |
| Time Accuracy          | 10 seconds/month (at 0 °C to 50 °C)   |
| Computer Interface     | USB-C cable required (included); 1MBAud   |
| Supported Software     | Windows XP SP3/7/8/10   |
| Software Compatibility | Standard Software version 4.2.15.0 or later<br>Secure Software version 4.2.14.0 or later  |
| Operating Environment  | -20 °C to +60 °C,<br>0 %RH to 95 %RH non-condensing   |
| Dimensions             | 3.4 in x 1.7 in x 1.3 in<br>(86 mm x 43 mm x 33 mm)   |
| Weight                 | 8 oz (227 g)  |
| Enclosure              | Anodized aluminum   |
| Approvals              | CE compliant<br>EMC Directive 2014/30/EU<br>RoHS Directive 2011/65/EU   |

**BATTERY WARNING:** FIRE, EXPLOSION AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CRUSH, PENETRATE, INCINERATE OR DISASSEMBLE. AVOID TEMPERATURES ABOVE THE MAXIMUM OPERATING TEMPERATURE OF THE PRODUCT. DISPOSE OF PROPERLY. CHARGE ONLY WITH THE PROVIDED OMEGA CHARGER, OR FROM OTHER USB POWER SOURCE VIA THE OMEGA PROVIDED CABLE.

| To Order           |  |
|--------------------|--|
| P/N                | Description  |
| OM-CP-ULTRASHOCK-A | Temperature, Humidity, Pressure and ±15 g / ±100 g / ±300 g Tri-Axial Shock Data Logger, Battery Charger and USB-C Interface Cable |
| OM-CP-SHOCK300     | ±15 g / ±100 g / ±300 g Tri-Axial Shock Data Logger, Battery Charger and USB-C Interface Cable                                     |

## Temperature, Humidity, Pressure and Tri-Axial Shock Data Loggers Part of the NOMAD® Family

### OM-CP-ULTRASHOCK



- ✓ Built-In Accelerometers
- ✓ All Inclusive Design
- ✓ Compact
- ✓ Programmable Start Time
- ✓ High Speed Download
- ✓ Real-Time Operation
- ✓ Reusable
- ✓ User Friendly



OM-CP-ULTRASHOCK-50 data logger shown smaller than actual size.

The OM-CP-ULTRASHOCK is a battery powered, stand alone temperature, pressure, humidity and 3-axis shock recorder.

The OM-CP-ULTRASHOCK measures and records temperature, pressure and humidity at the selected reading rates, while shock is recorded as the peak acceleration levels over the same interval.

The OM-CP-ULTRASHOCK is specifically designed for documenting dynamic environments such as moving vehicles, trucks, containers, ships, etc. The device is also valuable in characterizing environments such as production and assembly lines of delicate electronics, IC fabrication, communications and computer components.

This compact, portable, easy to use device will measure and record up to 174,762 measurements per channel. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The device can be started and stopped directly from your computer and it's small size allows it to fit almost anywhere.

The OM-CP-ULTRASHOCK makes data retrieval quick and easy. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.

#### Specifications

##### TEMPERATURE

**Sensor:** Semiconductor  
**Range:** -20 to 60°C (-4 to 140°F)  
**Resolution:** 0.1°C  
**Accuracy:** ±0.5°C (0 to 50°C)

##### HUMIDITY

**Sensor:** Capacitive Polymer  
**Range:** 0 to 95% RH  
**Accuracy:** ±3% RH (±2% RH Typical at 25°C)  
**Resolution:** 0.1% RH  
**Specified Accuracy Range:** 10 to 40°C; 10 to 80% RH

##### PRESSURE

**Sensor:** Semiconductor strain gage  
**Range:** 0 to 30 psia  
**Resolution:** 0.002 psia  
**Calibrated Accuracy:** ±1.0% FSR 25°C; ±0.2% typical

##### SHOCK

**Accelerometer Type:** MEMS Semiconductor

|                             |      |      |      |      |
|-----------------------------|------|------|------|------|
| Acceleration Range (g)      | ±5   | ±50  | ±100 | ±250 |
| Calibrated Accuracy (g)     | ±0.2 | ±1   | ±2   | ±4   |
| Acceleration Resolution (g) | 0.01 | 0.05 | 0.1  | 0.2  |

##### Sampling Rate:

1.953 millisecond (512 Hz)

##### Acceleration Frequency

**Response:** 0 Hz to approximately 400 Hz

**Readings:** 64 readings every second to 1 every 5 minutes

**Recording Interval:** 64 Hz to 5 minutes for shock, selectable in software. Temperature, pressure and humidity sampled approximately every 2 seconds at intervals shorter than 2 seconds. Otherwise, sampled at the reading rate.

**Memory:** 174,762 readings per channel

**Start Mode:** Immediate start or delay start, up to 6 months in advance

##### Real-Time Recording:

Device can be used with PC to monitor and record instantaneous measurements in real-time

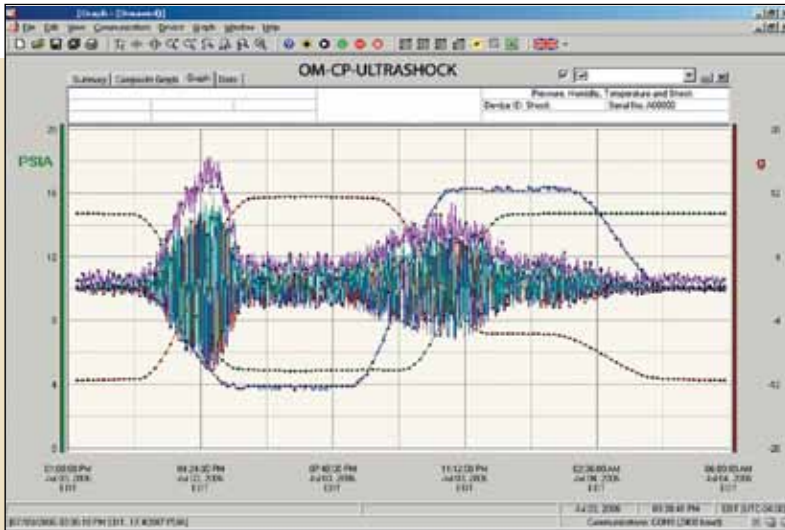
##### Password Protection:

An optional password may be programmed into the device to restrict access to configuration options. Data may be read out with the password

**Calibration:** Digital calibration through software

**Calibration Date:** Automatically recorded within device

**Power:** 9V lithium or alkaline (battery included); user replaceable



| Reading No. | X-Axis G | Y-Axis G | Z-Axis G | Vec-Sum G | Date and Time            | Annotation |
|-------------|----------|----------|----------|-----------|--------------------------|------------|
| 1           | 0.07     | -0.01    | -0.85    | 0.85      | May 02, 2000 12:54:41 PM |            |
| 2           | 0.07     | -0.01    | -0.85    | 0.85      | May 02, 2000 12:54:43 PM |            |
| 3           | 0.04     | -0.05    | -0.82    | 0.82      | May 02, 2000 12:54:45 PM |            |
| 4           | 0.04     | -0.05    | -0.82    | 0.82      | May 02, 2000 12:54:47 PM |            |
| 5           | 0.10     | -0.01    | -0.82    | 0.83      | May 02, 2000 12:54:49 PM |            |
| 6           | 0.17     | -0.05    | -0.82    | 0.84      | May 02, 2000 12:54:51 PM |            |
| 7           | 0.04     | -0.08    | -0.89    | 0.89      | May 02, 2000 12:54:53 PM |            |
| 8           | 0.07     | -0.05    | -0.82    | 0.82      | May 02, 2000 12:54:55 PM |            |
| 9           | 0.04     | -0.01    | -0.82    | 0.82      | May 02, 2000 12:54:57 PM |            |
| 10          | 0.04     | -0.01    | -0.82    | 0.82      | May 02, 2000 12:54:59 PM |            |
| 11          | 0.17     | -0.01    | -0.85    | 0.87      | May 02, 2000 12:55:01 PM |            |
| 12          | 0.07     | -0.14    | -0.89    | 0.89      | May 02, 2000 12:55:03 PM |            |
| 13          | 0.04     | -0.11    | -0.82    | 0.83      | May 02, 2000 12:55:05 PM |            |
| 14          | 0.07     | -0.05    | -0.85    | 0.85      | May 02, 2000 12:55:07 PM |            |

OM-CP-IFC200, Windows software displays data in graphical or tabular format.

| Statistics | Min      | Max     |
|------------|----------|---------|
| Peak X     | -34.40 G | 19.12 G |
| Peak Y     | -33.04 G | 13.58 G |
| Peak Z     | -42.87 G | 38.63 G |

**Data Format:**

Date and time stamped;  
 gravities (g and mg),  
 temperature (°C, °F, K, °R),  
 humidity (%RH, mg/ml water vapor concentration),  
 pressure (psia, inHg, mm Hg, bar, atm, torr, Pa, kPa, MPa)  
**Time Accuracy:**  
 ±1 min per month at 2 to 30°C

**Battery Life:** 3 to 7 days typical with lithium battery, 1 min reading rate @ 25°C  
**Computer Interface:** PC or USB (interface cable required); 115,200 baud  
**Software:** XP SP3/Vista/7 and 8 (32-bit and 64-bit)

**Operating Environment:** -20 to 60°C (-4 to 140°F)  
 0 to 95% RH non-condensing  
**Dimensions:** 89 H x 111 W x 26 mm D (3.5 x 4.4 x 1.0")  
**Weight:** 341 g (12 oz)  
**Material:** Anodized aluminum

| To Order                  |  |
|---------------------------|--|
| Model No.                 | Description  |
| OM-CP-ULTRASHOCK-50       | Tri-axial shock data logger, ±50 g   |
| OM-CP-ULTRASHOCK-50-CERT  | Tri-axial shock data logger, ±50 g with NIST calibration certificate   |
| OM-CP-ULTRASHOCK-5        | Tri-axial shock data logger, ±5 g  |
| OM-CP-ULTRASHOCK-5-CERT   | Tri-axial shock data logger, ±5 g with NIST calibration certificate  |
| OM-CP-ULTRASHOCK-100      | Tri-axial shock data logger, ±100 g  |
| OM-CP-ULTRASHOCK-100-CERT | Tri-axial shock data logger, ±100 g with NIST calibration certificate  |
| OM-CP-ULTRASHOCK-250      | Tri-axial shock data logger, ±250 g  |
| OM-CP-ULTRASHOCK-250-CERT | Tri-axial shock data logger, ±250 g with NIST calibration certificate  |
| OM-CP-IFC200              | Windows software and 1.8 m (6') USB interface cable  |
| OM-CP-SVP-SYSTEM          | FDA 21 CFR part 11 compliant IQ/OQ/PQ secure software validation workbook and software package (unlimited users, license per computer) |
| OM-CP-BAT103              | Replacement 9V lithium battery   |
| OM-CP-SHOCK-MAG-KIT       | Magnet mount kit for data logger   |

Comes complete with 9V lithium battery. Operator's manual and USB interface cable are included with the OM-CP-IFC200 Windows software (required to operate the data logger and sold separately).

Ordering Example: OM-CP-ULTRASHOCK-50-CERT humidity, temperature, pressure and tri-axial shock data logger, OM-CP-IFC200 Windows software with USB interface cable.

# 3-Axis USB Vibration/ Acceleration Data Logger

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OM-VIB-101

All models shown smaller than actual size.

OM-VIB-101



OM-VIB-101 and mounting pedestal (included).

- ✓ Mountable Data Logger Uses Three Accelerometers to Precisely Measure Acceleration of Operating Equipment on X, Y and Z Axes
- ✓ Stores up to 327,600 Data Points in Flash Memory
- ✓ One Button Starts/Stops Data Logging Without a PC
- ✓ Plug-and-Play USB 2.0 Interface—No Need for Cables, Cradles or Docks
- ✓ PC Interface/Analysis Software Can Download Recorded Data or Acquire Real-Time Data or Real-Time Frequency Data
- ✓ Software is Used to Set System Clock, Operating Mode (Normal, Time-Triggered or Motion Measuring), Sampling Rate and Axial High/Low Alarm Thresholds
- ✓ Powerful Analysis Modes Include Fast Fourier Transform Frequency Conversion and Time-Domain Analysis
- ✓ One-Click Exporting of Tabular Data to .txt File or Graph to Printer

- ✓ Red and Green LEDs Indicate Device Status (Recording, Not Recording, Low Battery, Memory Full)
- ✓ Powered by High-Capacity, Long-Life, Non-Rechargeable Li-Ion Battery (Included)
- ✓ Includes Mounting Pedestal with Magnets and Three Screw Holes

The OM-VIB-101 is ideal for assessing the health and diagnosing performance problems of rotating machinery. Slight changes in the axial accelerations of a motor over time can reveal whether a motor is running efficiently and even indicate whether it may fail in the future. The OM-VIB-101 uses three components to collect and present vibration data:

- 1) Memory stick-sized USB data logger containing three precision accelerometers
- 2) Pedestal for mounting the data logger on an operating piece of equipment
- 3) Powerful Windows®-compatible graphics application. Once the logger has been dismounted, plugging it into a computer's USB port automatically imports hours of vibration, motion and tilt data to the application.

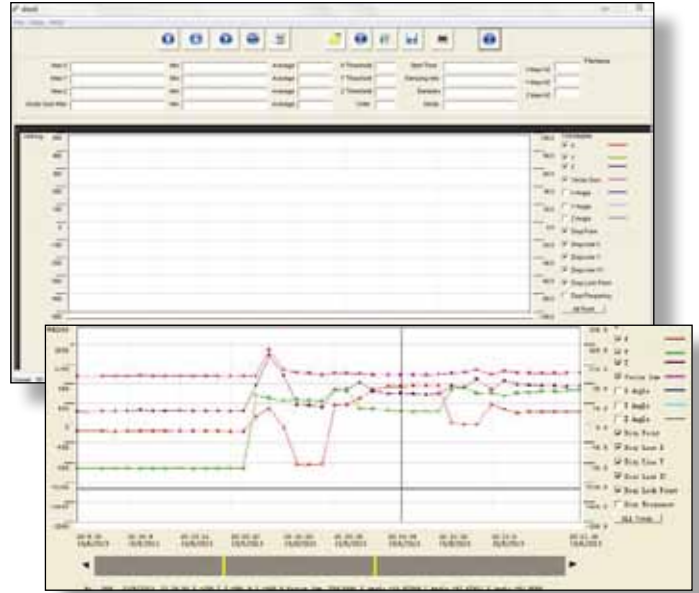
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### Specifications

- Acceleration Range:** -16 to 16 g
- Accuracy:** ±0.5 g typical
- Frequency Range:** 0 to 60 Hz
- Data Logging Capacity:** 327,600 data points in 16 MB flash memory
- User-Selectable Sampling Time:** 50 ms to 24 hours
- Interface:** USB 2.0
- Software Compatibility:** Windows® XP/Vista/7/8
- Maximum Continuous Logging Time:** 60 hours
- Operating Temperature:** 0 to 45°C (32 to 113°F) @ 5 to 95% RH
- Power Source:** 3.6V/1200 mA rechargeable lithium battery (included)
- Dimensions (Including Mounting Pedestal):** 113 L x 54 W x 32.5 mm D (4.45 x 2.13 x 1.28")
- Weight (Without Battery):** 73.5 g (2.6 oz)



Windows compatible software shows data in graphical or tabular formats (vibration data screen shown).



OM-VIB-101 in mounting pedestal (included) on a small motor.



OM-VIB-101 mounting pedestal (included).



OM-VIB-101



OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.

| To Order   |   |
|------------|---|
| Model No.  | Description                                   |
| OM-VIB-101 | 3-axis USB vibration/acceleration data logger |
| OM-EL-BATT | Replacement 3.6V lithium battery              |

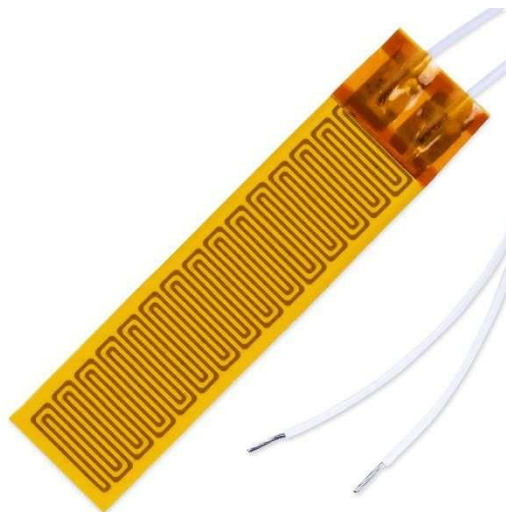
Comes complete with Windows software on CD, protective cap, mounting pedestal, USB extension cable, Li-Ion battery and user's manual.  
Ordering Example: OM-VIB-101 3-axis USB vibration/acceleration data logger and OCW-1, OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 2 years.

## Polyimide Flexible Heaters with Polyimide Strain Relief

OMEGA's PLM-Series polyimide flexible heaters are offered in various shapes, wattages and voltages. All models can be supplied in self-adhesive or non-adhesive options to fit most installation needs. The polyimide insulation makes these heaters chemically resistant and flexible so they can fit on rounded surfaces with ease.

### Features

- All polyimide strain relief and insulation
- Optional pressure sensitive adhesive models
- Temperatures from -57°C (-71°F) to 232°C (450°F)
- Non-magnetic heating element
- Watt densities of 2.5 W/in<sup>2</sup>, 5 W/in<sup>2</sup> or 10 W/in<sup>2</sup>
- Thickness of 0.01" and wire length tolerance of ±0.4"



### Specifications

Operating Temperature:

No Adhesive Options: -57 to 232°C (-71 to 450°F)

Self-Adhesive Options: -40 to 149°C (-40 to 300°F)

Maximum Thickness: .01", .strain relief max is .08" (.10" for heaters ≥ 3 Amp)

Watt Density: 2.5 W/in<sup>2</sup>, 5 W/in<sup>2</sup>, 10 W/in<sup>2</sup>

Leads: PTFE Insulated, 12" ±0.4" Length, UL10109, 22 AWG (UL1332, 16 AWG for heaters ≥ 3 Amp)

Dielectric Strength: 1250 VAC

Minimum Bending Radius: 0.032"

Maximum Operating Voltage: 28V, 115V or 230V

| Model Description       | Model   | Width     | Length   | Power Density              | Adhesive Option        |
|-------------------------|---------|-----------|----------|----------------------------|------------------------|
| Standard 115 V max      | PLM-*   | 05 – 0.5" | 01 – 1"  | /2 – 2.5 W/in <sup>2</sup> | -P (optional adhesive) |
| Low voltage 28 V max    | PLMLV-* | 1 – 1"    | 02 – 2"  | /5 – 5 W/in <sup>2</sup>   |                        |
| Round version 115 V max | PLMR-*  | ...       | ...      | /10 – 10 W/in <sup>2</sup> |                        |
|                         |         | 12 – 12"  | 12 – 12" |                            |                        |

### Examples

**PLMLV-204/10-P:** Low Voltage Polyimide Heater, 28 V Max, 2 in Width, 4 in Length, 10 W/in<sup>2</sup>, Self-Adhesive

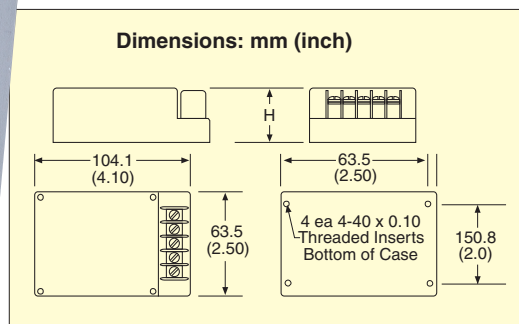
**PLM-1012/2:** Polyimide Heater, 115 V Max, 10 in Width, 12 in Length, 2.5 W/in<sup>2</sup>, No Adhesive

# PROVIDES REGULATED EXCITATION FOR STRAIN GAGES AND PRESSURE TRANSDUCERS

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PSS-10 shown smaller than actual size.



## PSS Series



- ✓ Recessed Barrier Strip Secures Wire Without Twisting
- ✓ Compact Design Allows Mounting Where Space is Restricted
- ✓ Ideally Suited for Use With Strain Gages, Transducers, Microprocessor Systems, and Test Equipment

## SPECIFICATIONS

**Input Voltage:** 115 Vac, 220 Vac (-220 suffix) or 230 Vac (-230 suffix) ±10 Vac

**Input Frequency Range:** 50 to 60 Hz

**Isolation Resistance:** 50 MΩ min

**Voltage:** 1500 Vrms

**Temperature Coefficient:** ±0.02%

**Noise and Ripple:** 1 mVrms single and dual output; 2 mVrms triple

**Output Storage Temperature:** -25 to 85°C (-13 to 185°F)

**Maximum Case Operating Temperature Without Derating:** 71°C (160°F)

**Short Circuit Protection:** Foldback current limiting

## To Order

|               | MODEL NO. | OUTPUT VOLTAGE | OUTPUT CURRENT                 | VOLTAGE ACCURACY | LINE & LOAD (NL TO FL) REGULATIONS | DIM "H"   |
|---------------|-----------|----------------|--------------------------------|------------------|------------------------------------|-----------|
| SINGLE OUTPUT | PSS-5A    | +5V            | 500 mA                         | ±1%              | ±0.05%                             | 19 (.88)  |
|               | PSS-5B    | +5V            | 1000 mA                        | ±1%              | ±0.05%                             | 31 (1.25) |
|               | PSS-10    | +10V           | 500 mA                         | ±1%              | ±0.05%                             | 39 (1.56) |
|               | PSS-12    | +12V           | 500 mA                         | ±1%              | ±0.10%                             | 39 (1.56) |
|               | PSS-15    | +15V           | 500 mA                         | ±1%              | ±0.10%                             | 39 (1.56) |
| DUAL OUTPUT   | PSS-D12A  | ±12V or 24V    | 100 mA                         | ±0.5%            | ±0.10%                             | 19 (.88)  |
|               | PSS-D12B  | ±12V or 24V    | 300 mA                         | ±0.5%            | ±0.10%                             | 39 (1.56) |
|               | PSS-D15A  | ±15V or 30V    | ±50 mA                         | ±0.5%            | ±0.02%                             | 19 (.88)  |
|               | PSS-D15B  | ±15V or 30V    | ±100 mA                        | ±0.5%            | ±0.02%                             | 19 (.88)  |
|               | PSS-D15C  | ±15V or 30V    | ±200 mA                        | ±0.5%            | ±0.05%                             | 31 (1.25) |
| TRIPLE OUTPUT | PSS-T12   | ±12V & 5V      | ±12V @ 120 mA;<br>5V @ 500 mA; | ±1%              | ±0.10%                             | 39 (1.56) |
|               | PSS-T15   | ±12V & 5V      | ±15V @ 100 mA;<br>5V @ 500 mA; | ±1%              | ±0.10%                             | 39 (1.56) |

|                         | MODEL NO.     | OUTPUT VOLTAGE | OUTPUT CURRENT | VOLTAGE ACCURACY | LINE & LOAD (NL TO FL) REGULATIONS | DIM "H"   |
|-------------------------|---------------|----------------|----------------|------------------|------------------------------------|-----------|
| 220/230V Powered Models | PSS-10-220    | +10V           | 500 mA         | ±1%              | ±0.05%                             | 39 (1.56) |
|                         | PSS-D12A-220V | ±12V or +24V   | 100 mA         | ±0.5%            | ±0.02%                             | 39 (1.56) |

## ACCESSORY

| MODEL NO.     | DESCRIPTION                              |
|---------------|--|
| POWER CORD-SE | Power cord with stripped end termination |

**Ordering Examples:** PSS-10, 10 Vdc, 400 mA power supply.

PSS-5A, 5 Vdc, 500 mA power supply.

# SUMMING JUNCTION BOXES

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## NEMA 4X (IP66) ENCLOSURE

### Summing Junction Boxes for 2, 3, or 4 Load Cells

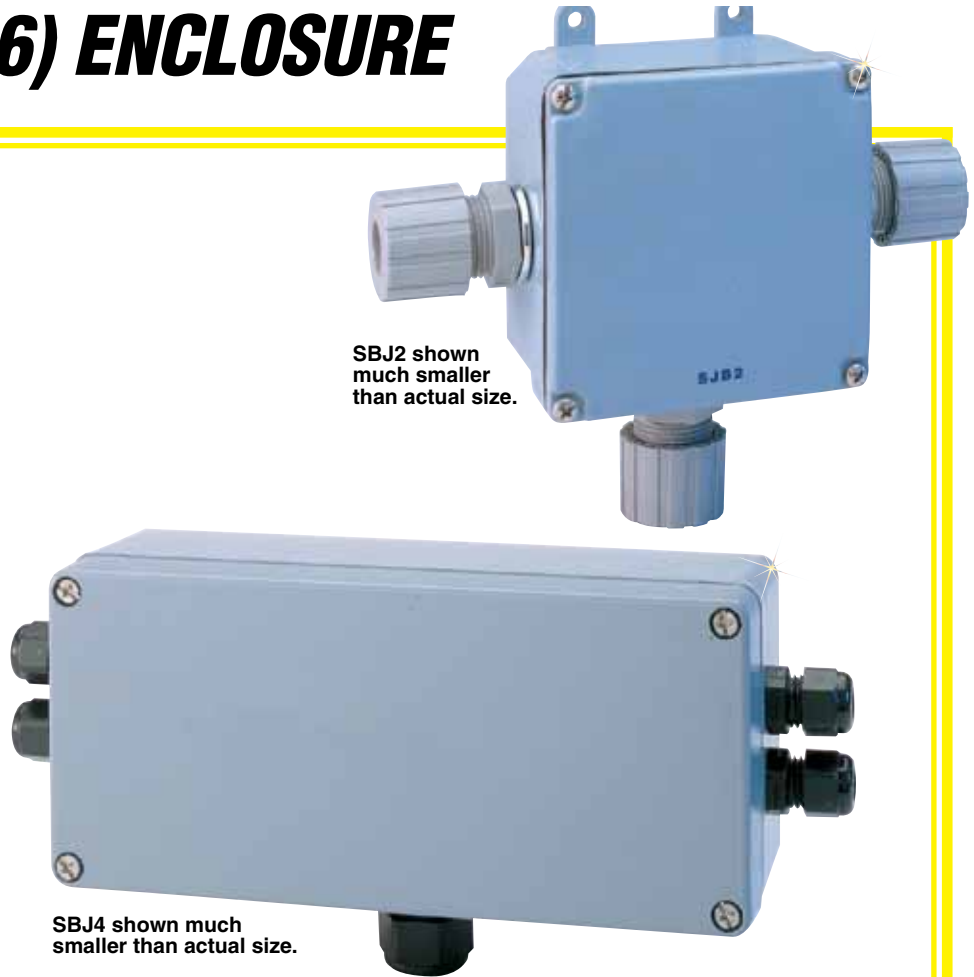
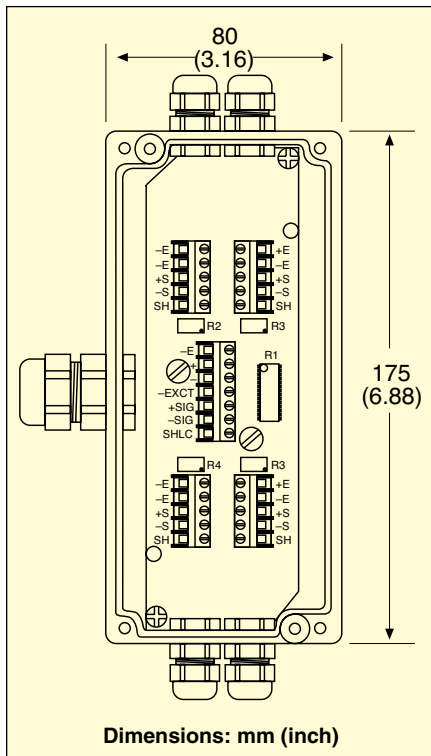
1 Newton = 0.2248 lb  
 1 daNewton = 10 Newtons  
 1 lb = 454 g  
 1 t = 1000 kg = 2204 lb

### SBJ Series



- ✓ NEMA 4X (IP66) Enclosure
- ✓ Heavy-Duty Case for Industrial Applications
- ✓ Models for 2, 3, or 4 Load Cell Installations

The SBJ Series summing junction box electronically sums the outputs of bridge-type load cells to form a single output equal to the sum of the loads on each load cell.



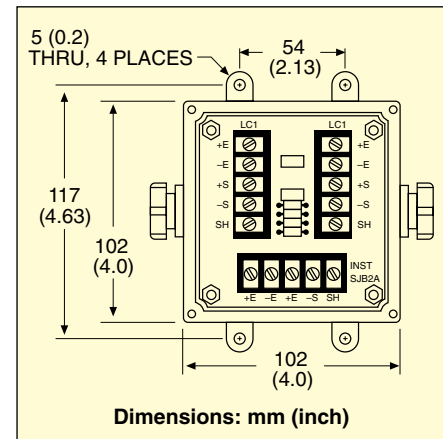
Potentiometers in series with the bridge excitation are provided to match the outputs of the load cell. It is commonly used in industrial scale, bin, tank, hopper, and platform applications. The load cell should be the same capacity as the summing junction box and have output interchangeability of better than 3%.

### SPECIFICATIONS

**Case:** NEMA 4X (IP66)

**Feedthroughs:** Compression type for wire up to 6.35 mm (0.25") diameter

**Span:** ±3% adjustment



**To Order Visit [omega.com/sbj2](http://omega.com/sbj2) for Pricing and Details**

| CAPACITY | MODEL NO. | DESCRIPTION             |
|----------|-----------|-------------------------|
| 2        | SBJ2      | Sums 2 load cells       |
| 3 or 4   | SBJ4      | Sums up to 4 load cells |

**Ordering Examples:** SBJ2, NEMA 4X (IP66) summing junction box for 2 load cells.  
 SBJ4, NEMA 4X (IP66) summing junction box for up to 4 load cells.

# DEFINITION STRAIN GAGE

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## Corner Tee rosettes—2 ELEMENT 90°



| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM.<br>RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch) <sup>†</sup>  |   |         |   | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) | TERMINATION    | TEMP<br>COMP   | TERM<br>PAD |                |             |              |    |
|-----------------------------------|-----------------------|---------------------------|---------------------------------------|---|---------|---|---|----------------|----------------|-------------|----------------|-------------|--------------|----|
|                                   |                       |                           | GRID                                  |   | CARRIER |   |   |                |                |             |                |             |              |    |
|                                   |                       |                           | A                                     | B | C       | D |   |                |                |             |                |             |              |    |
| Shown actual<br>size, 9.3 mm<br>  | SGD-1/120-RYB21       | 120                       | Small corner<br>Tee Rosette<br>120 Ω  |   |         |   | 3   | Ribbon Leads   | ST             | BPT-1       |                |             |              |    |
|                                   | SGD-1/120-RYB23       | 120                       |                                       |   |         |   | 1.6<br>(0.063)  | 1.7<br>(0.067) | 9.3<br>(0.37)  |             | 9.3<br>(0.37)  | 4           | Ribbon Leads | AL |
|                                   | SGD-1/120-RYB81       | 120                       |                                       |   |         |   |   |                |                |             | 3              | Solder Pads | ST           |    |
|                                   | SGD-1/120-RYB83       | 120                       |                                       |   |         |   |   |                |                |             | 4              | Solder Pads | AL           |    |
| Shown actual<br>size, 9.3 mm<br>  | SGD-1/350-RYB21       | 350                       | Small corner<br>Tee Rosette<br>350 Ω  |   |         |   | 6   | Ribbon Leads   | ST             | BPT-1       |                |             |              |    |
|                                   | SGD-1/350-RYB23       | 350                       |                                       |   |         |   | 1.6<br>(0.063)  | 1.7<br>(0.067) | 9.3<br>(0.37)  |             | 9.3<br>(0.37)  | 8.5         | Ribbon Leads | AL |
|                                   | SGD-1/350-RYB81       | 350                       |                                       |   |         |   |   |                |                |             | 6              | Solder Pads | ST           |    |
|                                   | SGD-1/350-RYB83       | 350                       |                                       |   |         |   |   |                |                |             | 8.5            | Solder Pads | AL           |    |
| Shown actual<br>size, 11 mm<br>   | SGD-3/120-RYB21       | 120                       | Medium corner<br>Tee Rosette<br>120 Ω |   |         |   | 4.5   | Ribbon Leads   | ST             | BPT-2       |                |             |              |    |
|                                   | SGD-3/120-RYB23       | 120                       |                                       |   |         |   | 3.0<br>(0.118)  | 1.7<br>(0.067) | 11.0<br>(0.43) |             | 11.0<br>(0.43) | 6           | Ribbon Leads | AL |
|                                   | SGD-3/120-RYB81       | 120                       |                                       |   |         |   |   |                |                |             | 4.5            | Solder Pads | ST           |    |
|                                   | SGD-3/120-RYB83       | 120                       |                                       |   |         |   |   |                |                |             | 6              | Solder Pads | AL           |    |
| Shown actual<br>size, 11 mm<br>   | SGD-3/350-RYB21       | 350                       | Medium corner<br>Tee Rosette<br>350 Ω |   |         |   | 8.5   | Ribbon Leads   | ST             | BPT-3       |                |             |              |    |
|                                   | SGD-3/350-RYB23       | 350                       |                                       |   |         |   | 3.0<br>(0.118)  | 2.1<br>(0.83)  | 11.0<br>(0.43) |             | 11.0<br>(0.43) | 12          | Ribbon Leads | AL |
|                                   | SGD-3/350-RYB81       | 350                       |                                       |   |         |   |   |                |                |             | 8.5            | Solder Pads | ST           |    |
|                                   | SGD-3/350-RYB83       | 350                       |                                       |   |         |   |   |                |                |             | 12             | Solder Pads | AL           |    |
| Shown actual<br>size, 16.3 mm<br> | SGD-6/120-RYB21       | 120                       | Large corner<br>Tee Rosette<br>120 Ω  |   |         |   | 8.5   | Ribbon Leads   | ST             | BPT-4       |                |             |              |    |
|                                   | SGD-6/120-RYB23       | 120                       |                                       |   |         |   | 6.0<br>(0.236)  | 3.2<br>(0.126) | 16.3<br>(0.64) |             | 16.3<br>(0.64) | 12          | Ribbon Leads | AL |
|                                   | SGD-6/120-RYB81       | 120                       |                                       |   |         |   |   |                |                |             | 8.5            | Solder Pads | ST           |    |
|                                   | SGD-6/120-RYB83       | 120                       |                                       |   |         |   |   |                |                |             | 12             | Solder Pads | AL           |    |
| Shown actual<br>size, 16.3 mm<br> | SGD-6/350-RYB21       | 350                       | Large corner<br>Tee Rosette<br>350 Ω  |   |         |   | 14  | Ribbon Leads   | ST             | BPT-4       |                |             |              |    |
|                                   | SGD-6/350-RYB23       | 350                       |                                       |   |         |   | 6.0<br>(0.236)  | 3.1<br>(0.122) | 16.3<br>(0.64) |             | 16.3<br>(0.64) | 20          | Ribbon Leads | AL |
|                                   | SGD-6/350-RYB81       | 350                       |                                       |   |         |   |   |                |                |             | 14             | Solder Pads | ST           |    |
|                                   | SGD-6/350-RYB83       | 350                       |                                       |   |         |   |   |                |                |             | 20             | Solder Pads | AL           |    |

| DISCOUNT SCHEDULE |     |
|-------------------|-----|
| 1 to 10 pkgs      | Net |
| 11 to 24 pkgs     | .5% |

<sup>†</sup> For dimensions key, visit us online.  
**Note:** For strain gage accessories visit us online.  
**Ordering Example:** SGD-1/120-RYB83,  
 120 Ω nominal-resistance strain gage

**NOTE:**  
 ST = Steel  
 AL = Aluminum

STRAIN GAGES

# DECISION STRAIN GAGE

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## RECTANGULAR CORNER ROSETTE 0/45/90°

**Custom-Designed Strain Gages Available!**  
No Minimum Quantities.  
Consult Engineering.



| To Order                        |                        |                        |  |   |         |   |   |              |           |          |
|---------------------------------|------------------------|------------------------|--|---|---------|---|---|--------------|-----------|----------|
| GAGE PATTERN<br>Leads not shown | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch)†   |   |         |   | MAX PERMITTED<br>BRIDGE ENERGIZING<br>VOLTAGE<br>(Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|                                 |                        |                        | GRID   |   | CARRIER |   |   |              |           |          |
|                                 |                        |                        | A  | B | C       | D |   |              |           |          |
|                                 | SGD-1/120-RYT21        | 120                    | 1.6 1.7 9.3 9.3<br>(0.063) (0.067) (0.366) (0.366)<br>Small corner rectangular<br>3-element rosette<br>120 Ω     |   |         |   | 3   | Ribbon Leads | ST        | BPT-1    |
|                                 | SGD-1/120-RYT23        | 120                    |  |   |         |   | 4   | Ribbon Leads | AL        |          |
|                                 | SGD-1/120-RYT81        | 120                    |  |   |         |   | 3   | Solder Pads  | ST        |          |
|                                 | SGD-1/120-RYT83        | 120                    |  |   |         |   | 4   | Solder Pads  | AL        |          |
|                                 | SGD-1/350-RYT21        | 350                    | 1.6 1.7 9.3 9.3<br>(0.063) (0.067) (0.366) (0.366)<br>Small corner rectangular<br>3-element rosette<br>350 Ω     |   |         |   | 6   | Ribbon Leads | ST        | BPT-1    |
|                                 | SGD-1/350-RYT23        | 350                    |  |   |         |   | 8.5   | Ribbon Leads | AL        |          |
|                                 | SGD-1/350-RYT81        | 350                    |  |   |         |   | 6   | Solder Pads  | ST        |          |
|                                 | SGD-1/350-RYT83        | 350                    |  |   |         |   | 8.5   | Solder Pads  | AL        |          |
|                                 | SGD-3/120-RYT21        | 120                    | 3.0 1.7 11.0 11.0<br>(0.118) (0.067) (0.43) (0.43)<br>Medium corner<br>rectangular<br>3-element rosette<br>120 Ω |   |         |   | 4.5   | Ribbon Leads | ST        | BPT-2    |
|                                 | SGD-3/120-RYT23        | 120                    |  |   |         |   | 6   | Ribbon Leads | AL        |          |
|                                 | SGD-3/120-RYT81        | 120                    |  |   |         |   | 4.5   | Solder Pads  | ST        |          |
|                                 | SGD-3/120-RYT83        | 120                    |  |   |         |   | 6   | Solder Pads  | AL        |          |
|                                 | SGD-3/350-RYT21        | 350                    | 3.0 2.1 11.0 11.0<br>(0.118) (0.83) (0.43) (0.43)<br>Medium corner<br>rectangular<br>3-element rosette<br>350 Ω  |   |         |   | 8.5   | Ribbon Leads | ST        | BPT-2    |
|                                 | SGD-3/350-RYT23        | 350                    |  |   |         |   | 12  | Ribbon Leads | AL        |          |
|                                 | SGD-3/350-RYT81        | 350                    |  |   |         |   | 8.5   | Solder Pads  | ST        |          |
|                                 | SGD-3/350-RYT83        | 350                    |  |   |         |   | 12  | Solder Pads  | AL        |          |
|                                 | SGD-6/120-RYT21        | 120                    | 6.0 3.2 16.3 16.3<br>(0.236) (0.126) (0.64) (0.64)<br>Large corner rectangular<br>3-element rosette<br>120 Ω     |   |         |   | 8.5   | Ribbon Leads | ST        | BPT-3    |
|                                 | SGD-6/120-RYT23        | 120                    |  |   |         |   | 12  | Ribbon Leads | AL        |          |
|                                 | SGD-6/120-RYT81        | 120                    |  |   |         |   | 8.5   | Solder Pads  | ST        |          |
|                                 | SGD-6/120-RYT83        | 120                    |  |   |         |   | 12  | Solder Pads  | AL        |          |
|                                 | SGD-6/350-RYT21        | 350                    | 6.0 3.1 16.3 16.3<br>(0.236) (0.122) (0.64) (0.64)<br>Large corner rectangular<br>3-element rosette<br>350 Ω     |   |         |   | 14  | Ribbon Leads | ST        | BPT-3    |
|                                 | SGD-6/350-RYT23        | 350                    |  |   |         |   | 20  | Ribbon Leads | AL        |          |
|                                 | SGD-6/350-RYT81        | 350                    |  |   |         |   | 14  | Solder Pads  | ST        |          |
|                                 | SGD-6/350-RYT83        | 350                    |  |   |         |   | 20  | Solder Pads  | AL        |          |

### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | .5% |
| 25 to 49 pkgs. .... | 10% |

† For dimensions key, visit us online.

**Note:** For strain gage accessories, visit us online.

**Ordering Example:** SGD-1/120-RYT83, 120 Ω nominal-resistance strain gage.

**NOTE**

ST = Steel  
AL = Aluminum

# DEFINITION STRAIN GAGE

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## RECTANGULAR ROSETTE SINGLE PLANE, PLANAR COMPACT GEOMETRY 0/45/90°

**Custom-Designed  
Strain Gages  
Available!  
No Minimum Quantities.  
Consult Engineering.**



### To Order

| GAGE PATTERN<br>Leads not shown | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS<br>mm (inch)†   |                |                |                 | MAX V*<br>(Vrms) | TERMINATION    | TEMP<br>COMP    | TERM<br>PAD     |
|---------------------------------|-----------------------|-----------------------------|--|----------------|----------------|-----------------|------------------|----------------|-----------------|-----------------|
|                                 |                       |                             | GRID   |                | CARRIER        |                 |                  |                |                 |                 |
|                                 |                       |                             | A  | B              | C              | D               |                  |                |                 |                 |
|                                 | SGD-1/120-RY21        | 120                         | 1.6<br>(0.063)   | 1.7<br>(0.067) | 6.8<br>(0.268) | 10.5<br>(0.413) | 3                | Ribbon Leads   | ST              | BPT-1           |
|                                 | SGD-1/120-RY23        | 120                         | Miniature rectangular,<br>single plane rosette,<br>compact geometry<br>120 Ω |                |                |                 | 4                | Ribbon Leads   | AL              |                 |
|                                 | SGD-1/120-RY81        | 120                         |  |                |                |                 | 3                | Solder Pads    | ST              |                 |
|                                 | SGD-1/120-RY83        | 120                         |  |                |                |                 | 4                | Solder Pads    | AL              |                 |
|                                 | SGD-1/350-RY21        | 350                         |  |                |                |                 | 1.6<br>(0.063)   | 1.7<br>(0.067) | 6.8<br>(0.268)  | 10.5<br>(0.413) |
|                                 | SGD-1/350-RY23        | 350                         | Miniature rectangular,<br>single plane rosette,<br>compact geometry<br>350 Ω |                |                |                 | 8.5              | Ribbon Leads   | AL              |                 |
|                                 | SGD-1/350-RY81        | 350                         |  |                |                |                 | 6                | Solder Pads    | ST              |                 |
|                                 | SGD-1/350-RY83        | 350                         |  |                |                |                 | 8.5              | Solder Pads    | AL              |                 |
|                                 | SGD-2/350-RY11        | 350                         |  |                |                |                 | 2.0<br>(0.079)   | 2.0<br>(0.079) | 6.8<br>(0.268)  | 10.5<br>(0.413) |
|                                 | SGD-2/350-RY13        | 350                         | Small rectangular,<br>single plane rosette,<br>compact geometry<br>350 Ω     |                |                |                 | 9.5              | Ribbon Leads   | AL              |                 |
|                                 | SGD-2/350-RY31        | 350                         |  |                |                |                 | 6.5              | Solder Pads    | ST              |                 |
|                                 | SGD-2/350-RY33        | 350                         |  |                |                |                 | 9.5              | Solder Pads    | AL              |                 |
|                                 | SGD-3/120-RY21        | 120                         |  |                |                |                 | 3.0<br>(0.118)   | 1.7<br>(0.067) | 8.3<br>(0.327)  | 13<br>(0.51)    |
|                                 | SGD-3/120-RY23        | 120                         | Medium rectangular,<br>single plane rosette,<br>compact geometry<br>120 Ω    |                |                |                 | 6                | Ribbon Leads   | AL              |                 |
|                                 | SGD-3/120-RY81        | 120                         |  |                |                |                 | 4.5              | Solder Pads    | ST              |                 |
|                                 | SGD-3/120-RY83        | 120                         |  |                |                |                 | 6                | Solder Pads    | AL              |                 |
|                                 | SGD-3/350-RY21        | 350                         |  |                |                |                 | 3.0<br>(0.118)   | 2.1<br>(0.083) | 8.3<br>(0.327)  | 13<br>(0.51)    |
|                                 | SGD-3/350-RY23        | 350                         | Medium rectangular,<br>single plane rosette,<br>compact geometry<br>350 Ω    |                |                |                 | 12               | Ribbon Leads   | AL              |                 |
|                                 | SGD-3/350-RY81        | 350                         |  |                |                |                 | 8.5              | Solder Pads    | ST              |                 |
|                                 | SGD-3/350-RY83        | 350                         |  |                |                |                 | 12               | Solder Pads    | AL              |                 |
|                                 | SGD-6/120-RY21        | 120                         |  |                |                |                 | 6.0<br>(0.236)   | 3.2<br>(0.126) | 13.4<br>(0.528) | 21.4<br>(0.84)  |
|                                 | SGD-6/120-RY23        | 120                         | Large rectangular,<br>single plane rosette,<br>compact geometry<br>120 Ω     |                |                |                 | 12               | Ribbon Leads   | AL              |                 |
|                                 | SGD-6/120-RY81        | 120                         |  |                |                |                 | 8.5              | Solder Pads    | ST              |                 |
|                                 | SGD-6/120-RY83        | 120                         |  |                |                |                 | 12               | Solder Pads    | AL              |                 |
|                                 | SGD-6/350-RY21        | 350                         |  |                |                |                 | 6.0<br>(0.236)   | 3.2<br>(0.126) | 13.4<br>(0.528) | 21.4<br>(0.84)  |
|                                 | SGD-6/350-RY23        | 350                         | Large rectangular,<br>single plane rosette,<br>compact geometry<br>350 Ω     |                |                |                 | 20               | Ribbon Leads   | AL              |                 |
|                                 | SGD-6/350-RY81        | 350                         |  |                |                |                 | 14               | Solder Pads    | ST              |                 |
|                                 | SGD-6/350-RY83        | 350                         |  |                |                |                 | 20               | Solder Pads    | AL              |                 |

#### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | 5%  |
| 25 to 49 pkgs. .... | 10% |

† For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGD-3/350-RY21, rectangular planar rosette, package of 5, nominal resistance 350 Ω

**NOTE**

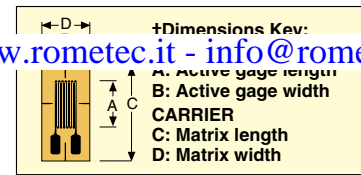
ST = Steel  
AL = Aluminum

STRAIN GAGES

# PRECISION STRAIN GAGE

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## DELTA ROSETTE SINGLE PLANE, PLANAR COMPACT GEOMETRY 0/60/120°



### To Order

**Custom-Designed Strain Gages Available!**  
 No Minimum Quantities. Consult Engineering.

Visit us online

| GAGE PATTERN<br>Leads not shown | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch) <sup>†</sup>                    |         |         |         | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|---------------------------------|-----------------------|------------------------|---|---------|---------|---------|------------------|--------------|-----------|----------|
|                                 |                       |                        | GRID  |         | CARRIER |         |                  |              |           |          |
|                                 |                       |                        | A   | B       | C       | D       |                  |              |           |          |
|                                 | SGD-1/120-RY621       | 120                    | 1.6   | 1.7     | 6.8     | 10.5    | 3                | Ribbon Leads | ST        | BPT-1    |
|                                 | SGD-1/120-RY623       | 120                    | (0.063)   | (0.067) | (0.268) | (0.413) | 4                | Ribbon Leads | AL        |          |
|                                 | SGD-1/120-RY681       | 120                    | Miniature delta, single plane rosette, compact geometry |         |         |         | 3                | Solder Pads  | ST        |          |
|                                 | SGD-1/120-RY683       | 120                    | 120 Ω   |         |         |         | 4                | Solder Pads  | AL        |          |
|                                 | SGD-1/350-RY621       | 350                    | 1.6   | 2.1     | 6.8     | 10.5    | 6                | Ribbon Leads | ST        | BPT-1    |
|                                 | SGD-1/350-RY623       | 350                    | (0.063)   | (0.083) | (0.268) | (0.413) | 8.5              | Ribbon Leads | AL        |          |
|                                 | SGD-1/350-RY681       | 350                    | Miniature delta, single plane rosette, compact geometry |         |         |         | 6                | Solder Pads  | ST        |          |
|                                 | SGD-1/350-RY683       | 350                    | 350 Ω   |         |         |         | 8.5              | Solder Pads  | AL        |          |
|                                 | SGD-3/120-RY621       | 120                    | 3.0   | 1.7     | 8.3     | 13      | 4.5              | Ribbon Leads | ST        | BPT-2    |
|                                 | SGD-3/120-RY623       | 120                    | (0.118)   | (0.067) | (0.327) | (0.51)  | 6                | Ribbon Leads | AL        |          |
|                                 | SGD-3/120-RY681       | 120                    | Medium delta, single plane rosette, compact geometry    |         |         |         | 4.5              | Solder Pads  | ST        |          |
|                                 | SGD-3/120-RY683       | 120                    | 120 Ω   |         |         |         | 6                | Solder Pads  | AL        |          |
|                                 | SGD-3/350-RY621       | 350                    | 3.0   | 2.1     | 8.3     | 13      | 8.5              | Ribbon Leads | ST        | BPT-2    |
|                                 | SGD-3/350-RY623       | 350                    | (0.118)   | (0.083) | (0.327) | (0.51)  | 12               | Ribbon Leads | AL        |          |
|                                 | SGD-3/350-RY681       | 350                    | Medium delta, single plane rosette, compact geometry    |         |         |         | 8.5              | Solder Pads  | ST        |          |
|                                 | SGD-3/350-RY683       | 350                    | 350 Ω   |         |         |         | 12               | Solder Pads  | AL        |          |
|                                 | SGD-6/120-RY621       | 120                    | 6.0   | 3.2     | 13.4    | 21.4    | 8.5              | Ribbon Leads | ST        | BPT-3    |
|                                 | SGD-6/120-RY623       | 120                    | (0.236)   | (0.126) | (0.528) | (0.84)  | 12               | Ribbon Leads | AL        |          |
|                                 | SGD-6/120-RY681       | 120                    | Large delta, single plane rosette, compact geometry     |         |         |         | 8.5              | Solder Pads  | ST        |          |
|                                 | SGD-6/120-RY683       | 120                    | 120 Ω   |         |         |         | 12               | Solder Pads  | AL        |          |
|                                 | SGD-6/350-RY621       | 350                    | 6.0   | 3.1     | 13.4    | 21.4    | 14               | Ribbon Leads | ST        | BPT-3    |
|                                 | SGD-6/350-RY623       | 350                    | (0.236)   | (0.122) | (0.528) | (0.84)  | 20               | Ribbon Leads | AL        |          |
|                                 | SGD-6/350-RY681       | 350                    | Large delta, single plane rosette, compact geometry     |         |         |         | 14               | Solder Pads  | ST        |          |
|                                 | SGD-6/350-RY683       | 350                    | 350 Ω   |         |         |         | 20               | Solder Pads  | AL        |          |

| DISCOUNT SCHEDULE    |                 |
|----------------------|-----------------|
| 1 to 10 pkgs.....    | Net             |
| 11 to 24 pkgs.....   | 5%              |
| 25 to 49 pkgs.....   | 10%             |
| 50 and up and OEM... | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories, visit us online.  
**Ordering Example:** SGD-3/350-RY621, delta planar rosette, package of 5, nominal resistance 350 Ω.

**NOTE**  
 ST = Steel  
 AL = Aluminum



# PRECISION STRAIN GAGE

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## TEE STACKED ROSETTE—2 ELEMENT 90° FOR MEASURING AXIAL STRAIN

**NOTE**  
ST = Steel  
AL = Aluminum

**Custom-Designed  
Strain Gages  
Available!**  
No Minimum Quantities.  
Consult Engineering.



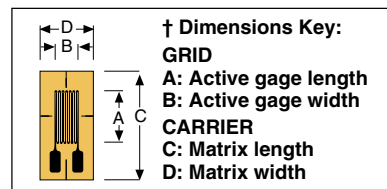
### To Order

| GAGE PATTERN<br>Leads not shown | MODEL NO.      | NOM. RESIS- TANCE (Ω) | DIMENSIONS mm (inch)†  |     |              |    | MAX V* (Vrms) | TERMINATION | TEMP COMP    | TERM PAD |     |             |    |
|---------------------------------|----------------|-----------------------|--|-----|--------------|----|---------------|-------------|--------------|----------|-----|-------------|----|
|                                 |                |                       | GRID   |     | CARRIER      |    |               |             |              |          |     |             |    |
|                                 |                |                       | A  | B   | C            | D  |               |             |              |          |     |             |    |
| <br>Shown actual size, 5.6 mm   | SGD-2/120-XY11 | 120                   | 2.00 1.10 5.60 5.60<br>(0.079) (0.043) (0.220) (0.220)<br>Small Tee stacked rosette pattern<br>120 Ω   | 3   | Ribbon Leads | ST | BTP-2         |             |              |          |     |             |    |
|                                 | SGD-2/120-XY13 | 120                   |  |     |              |    |               | 4           | Ribbon Leads | AL       |     |             |    |
|                                 | SGD-2/120-XY41 | 120                   |  |     |              |    |               |             |              |          | 3   | Solder Pads | ST |
|                                 | SGD-2/120-XY43 | 120                   |  |     |              |    |               |             |              |          |     |             |    |
| <br>Shown actual size, 5.6 mm   | SGD-2/350-XY11 | 350                   | 2.00 1.10 5.60 5.60<br>(0.079) (0.043) (0.220) (0.220)<br>Small Tee stacked rosette pattern<br>350 Ω   | 5   | Ribbon Leads | ST | BTP-2         |             |              |          |     |             |    |
|                                 | SGD-2/350-XY13 | 350                   |  |     |              |    |               | 7           | Ribbon Leads | AL       |     |             |    |
|                                 | SGD-2/350-XY41 | 350                   |  |     |              |    |               |             |              |          | 5   | Solder Pads | ST |
|                                 | SGD-2/350-XY43 | 350                   |  |     |              |    |               |             |              |          |     |             |    |
| <br>Shown actual size, 7.1 mm   | SGD-3/120-XY11 | 120                   | 3.00 1.70 7.10 7.10<br>(0.118) (0.067) (0.280) (0.280)<br>Medium Tee stacked rosette pattern<br>120 Ω  | 4.5 | Ribbon Leads | ST | BTP-3         |             |              |          |     |             |    |
|                                 | SGD-3/120-XY13 | 120                   |  |     |              |    |               | 6           | Ribbon Leads | AL       |     |             |    |
|                                 | SGD-3/120-XY41 | 120                   |  |     |              |    |               |             |              |          | 4.5 | Solder Pads | ST |
|                                 | SGD-3/120-XY43 | 120                   |  |     |              |    |               |             |              |          |     |             |    |
| <br>Shown actual size, 7.1 mm   | SGD-3/350-XY11 | 350                   | 3.00 1.70 7.10 7.10<br>(0.118) (0.067) (0.280) (0.280)<br>Medium Tee stacked rosette pattern<br>350 Ω  | 7.5 | Ribbon Leads | ST | BTP-3         |             |              |          |     |             |    |
|                                 | SGD-3/350-XY13 | 350                   |  |     |              |    |               | 10          | Ribbon Leads | AL       |     |             |    |
|                                 | SGD-3/350-XY41 | 350                   |  |     |              |    |               |             |              |          | 7.5 | Solder Pads | ST |
|                                 | SGD-3/350-XY43 | 350                   |  |     |              |    |               |             |              |          |     |             |    |
| <br>Shown actual size, 11.4 mm  | SGD-7/120-XY11 | 120                   | 6.50 3.10 11.40 11.40<br>(0.256) (0.122) (0.449) (0.449)<br>Large Tee stacked rosette pattern<br>120 Ω | 9   | Ribbon Leads | ST | BTP-4         |             |              |          |     |             |    |
|                                 | SGD-7/120-XY13 | 120                   |  |     |              |    |               | 12          | Ribbon Leads | AL       |     |             |    |
|                                 | SGD-7/120-XY41 | 120                   |  |     |              |    |               |             |              |          | 9   | Solder Pads | ST |
|                                 | SGD-7/120-XY43 | 120                   |  |     |              |    |               |             |              |          |     |             |    |
| <br>Shown actual size, 11.4 mm  | SGD-7/350-XY11 | 350                   | 6.50 3.10 11.40 11.40<br>(0.256) (0.122) (0.449) (0.449)<br>Large Tee stacked rosette pattern<br>350 Ω | 15  | Ribbon Leads | ST | BTP-4         |             |              |          |     |             |    |
|                                 | SGD-7/350-XY13 | 350                   |  |     |              |    |               | 20          | Ribbon Leads | AL       |     |             |    |
|                                 | SGD-7/350-XY41 | 350                   |  |     |              |    |               |             |              |          | 15  | Solder Pads | ST |
|                                 | SGD-7/350-XY43 | 350                   |  |     |              |    |               |             |              |          |     |             |    |

### DISCOUNT SCHEDULE

|                            |                 |
|----------------------------|-----------------|
| 1 to 10 pkgs . . . . .     | Net             |
| 11 to 24 pkgs . . . . .    | 5%              |
| 25 to 49 pkgs . . . . .    | 10%             |
| 50 and up and OEM. . . . . | Consult Factory |

† For dimensions key, visit us online.  
 \* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories, visit us online.  
**Ordering Example:** SGD-7/350-XY11, 6.5 mm grid, 350 Ω large stacked Tee rosette pattern.



# PRECISION STRAIN GAGE

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## RECTANGULAR CORNER ROSETTES AND RESIDUAL STRESS PATTERN

Custom Precision Strain Gages Available! No Minimum Quantities. Consult Engineering.

### To Order



| GAGE PATTERN<br>Leads not shown                  | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE (Ω) | DIMENSIONS mm (inch) <sup>†</sup> |             |             |             | MAX PERMITTED BRIDGE ENERGIZING VOLTAGE (Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|--|------------------------|---------------------|-----------------------------------|-------------|-------------|-------------|--|--------------|-----------|----------|
|  |                        |                     | GRID                              |             | CARRIER     |             |  |              |           |          |
|  |                        |                     | A                                 | B           | C           | D           |  |              |           |          |
| <b>RECTANGULAR CORNER ROSETTE</b>                |                        |                     |                                   |             |             |             |  |              |           |          |
| <p>Shown actual size, 27 mm, leads not shown</p> | SGD-13/120-RY91        | 120                 | 11.0 (0.433)                      | 5.0 (0.197) | 27.0 (0.06) | 27.0 (0.06) | 15   | Ribbon Leads | ST        | BPT-6    |
|  | SGD-13/120-RY93        | 120                 | Corner rosette extra-large 120 Ω  |             |             |             | 20   | Ribbon Leads | AL        |          |
|  | SGD-13/120-RY21        | 120                 |                                   |             |             |             | 15   | Solder Pads  | ST        |          |
|  | SGD-13/120-RY23        | 120                 |                                   |             |             |             | 20   | Solder Pads  | AL        |          |

Open-face gages available. Consult Pressure Sales and Engineering.

Note: For strain gage accessories, visit us online.

Ordering Example: SGD-13/120-RY91, 120 Ω nominal-resistance strain gage.

**NOTE**  
ST = Steel  
AL = Aluminum

### To Order



| GAGE PATTERN<br>Leads not shown        | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE (Ω) | DIMENSIONS mm (inch) <sup>†</sup> |              |               |               | MAX PERMITTED BRIDGE ENERGIZING VOLTAGE (Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|--|------------------------|---------------------|-----------------------------------|--------------|---------------|---------------|--|--------------|-----------|----------|
|  |                        |                     | GRID                              |              | CARRIER       |               |  |              |           |          |
|  |                        |                     | A                                 | B            | C             | D             |  |              |           |          |
| <b>RESIDUAL STRESS PATTERN ROSETTE</b> |                        |                     |                                   |              |               |               |  |              |           |          |
| <p>Shown actual size, 10.5 mm</p>      | SGD-1.5/120-SR11       | 120                 | 1.20 (0.047)                      | 1.33 (0.052) | 10.50 (0.413) | 10.50 (0.413) | 2.5  | Ribbon Leads | ST        | BPT-6    |
|  | SGD-1.5/120-SR13       | 120                 | Residual stress pattern 120 Ω     |              |               |               | 3.5  | Ribbon Leads | AL        |          |
|  | SGD-1.5/120-SR41       | 120                 |                                   |              |               |               | 2.5  | Solder Pads  | ST        |          |
|  | SGD-1.5/120-SR43       | 120                 |                                   |              |               |               | 3.5  | Solder Pads  | AL        |          |

### DISCOUNT SCHEDULE

1 to 10 pkgs. .... Net  
11 to 24 pkgs. .... 5%  
25 to 49 pkgs. .... 10%  
50 and up and OEM . . . . . Consult Factory

Open-face gages available. Consult Pressure Sales and Engineering.

Note: For strain gage accessories, visit us online.

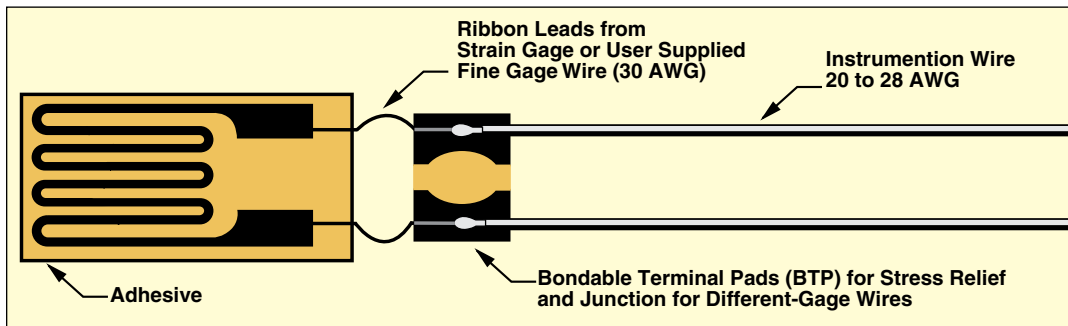
Ordering Example: SGD-1.5/120-SR11, 120 Ω nominal-resistance strain gage.

OMEGA offers stress relief or residual stress pattern strain gages. These strain gages are mounted onto a test piece

that is already stressed. Instrumentation is attached to all 3 elements in the rosette. The stress magnitude is determined by unloading the test specimen by boring-out or drilling a

small hole in the center of the strain gage. By removing material you are releasing the stress, and measuring the relaxed residual stress in the vicinity of the hole. Hole diameter and depth is 1.85 mm (0.07")

### TYPICAL STRAIN GAGE INSTALLATION



† Dimensions Key:

**GRID**  
A: Active gage length  
B: Active gage width

**CARRIER**  
C: Matrix length  
D: Matrix width

STRAIN GAGES E

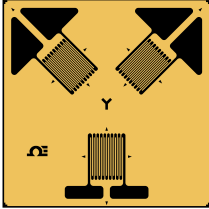
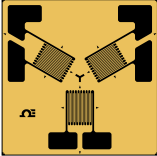
# ROSETTE STRAIN GAUGES

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## 0/45° AND 0/60° ROSETTES

**Custom-Designed  
Strain Gages  
Available!**  
No Minimum Quantities.  
Consult Engineering.

### To Order

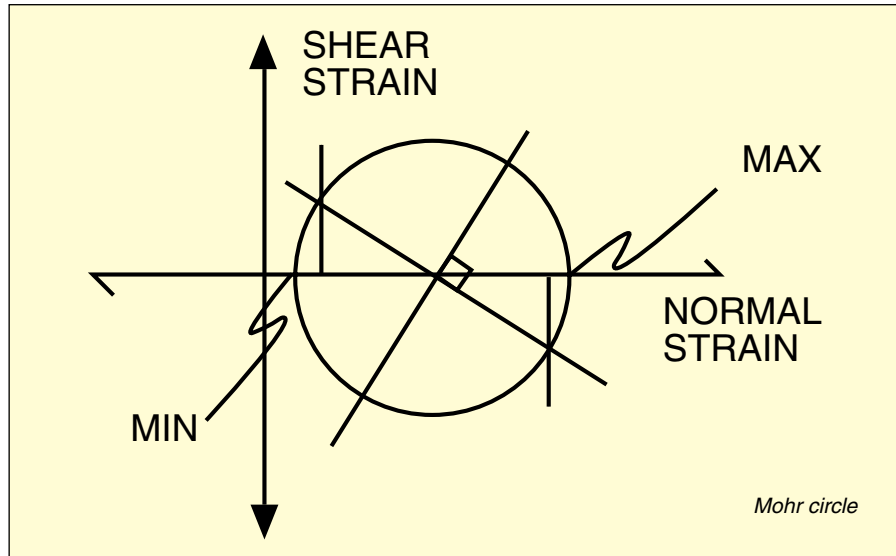
|   | MODEL NO.<br>Pkg of 5 | NOM.<br>RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)* |                 |                  |                  | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) |
|---|-----------------------|---------------------------|-----------------------|-----------------|------------------|------------------|---|
|   |                       |                           | GRID                  |                 | CARRIER          |                  |   |
|   |                       |                           | A                     | B               | C                | D                |   |
| <b>ENCAPSULATED WITH RIBBON LEADS—MATCHED TO STEEL</b>  |                       |                           |                       |                 |                  |                  |   |
| <b>Pattern 1</b><br>0°/45°/90°<br><br>3 mm grid                      | SGD-3/120-RY11        | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 5.5   |
|   | SGD-3/350-RY11        | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 9.5   |
|   | †SGD-3/120-RY41       | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 5.5   |
|   | †SGD-3/350-RY41       | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 9.5   |
| <b>ENCAPSULATED WITH RIBBON LEADS—MATCHED TO ALUMINUM</b>   |                       |                           |                       |                 |                  |                  |   |
| †Pattern 2<br>0°/60°/120°<br><br>2 mm grid<br>Typical gage pattern. | SGD-3/120-RY13        | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 8   |
|   | SGD-3/350-RY13        | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 13  |
|   | †SGD-3/120-RY43       | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 8   |
|   | †SGD-3/350-RY43       | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 13  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO STEEL</b>   |                       |                           |                       |                 |                  |                  |   |
| Visit us online, for<br>selection guide<br>and exact pattern.<br>Open-face gages<br>available. Consult<br>Pressure Sales and<br>Engineering.          | SGD-3/120-RY31        | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 5.5   |
|   | SGD-3/350-RY31        | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 9.5   |
|   | †SGD-3/120-RY71       | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 5.5   |
|   | †SGD-3/350-RY71       | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 9.5   |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO ALUMINUM</b>  |                       |                           |                       |                 |                  |                  |   |
|   | SGD-3/120-RY33        | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 8   |
|   | SGD-3/350-RY33        | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 13  |
|   | †SGD-3/120-RY73       | 120                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 8   |
|   | †SGD-3/350-RY73       | 350                       | 3.00<br>(0.118)       | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 13  |

† Pattern 2.

\* For dimensions key, visit us online.

\*\* For accessory terminal pads, visit us online.

Ordering Example: SGD-2/350-RY33, 350 Ω nominal-resistance strain gage.



Rosettes are used to compute the state of stress at a particular point. The plotted results will form a Mohr circle, which gives the value and orientation of principal strains.

### To Order

|   | MODEL NO.<br>Pkg of 10 | NOM.<br>RESISTANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch)* |                |                |   | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) |
|---|------------------------|------------------------------------|-----------------------|----------------|----------------|---|---|
|   |                        |                                    | GRID                  |                | CARRIER        |   |   |
|   |                        |                                    | A                     | B              | C              | D |   |
| <b>0°/45°/90° ENCAPSULATED WITH 2 LEAD WIRES 1 m (3') LONG—MATCHED TO STEEL</b> |                        |                                    |                       |                |                |   |   |
|   | KFG-1-120-D17-11L1M2S  | 120                                | 1.0<br>(0.039)        | 1.2<br>(0.047) | 5.0<br>(0.2)   | — | 1.5   |
|   | KFG-2-120-D17-11L1M2S  | 120                                | 2.0<br>(0.079)        | 1.3<br>(0.051) | 8.0<br>(0.31)  | — | 2   |
|   | KFG-3-120-D17-11L1M2S  | 120                                | 3.0<br>(0.12)         | 1.3<br>(0.051) | 10.0<br>(0.39) | — | 4   |
|   | KFG-3-350-D17-11L1M2S  | 350                                | 3.0<br>(0.12)         | 1.3<br>(0.051) | 10.0<br>(0.39) | — | 15  |
|   | KFG-5-120-D17-11L1M2S  | 120                                | 5.0<br>(0.2)          | 1.4<br>(0.055) | 11.0<br>(0.43) | — | 8   |
|   | KFG-5-350-D17-11L1M2S  | 350                                | 5.0<br>(0.2)          | 1.4<br>(0.055) | 11.0<br>(0.43) | — | 20  |
| <b>0°/45°/90° ENCAPSULATED WITH 3 LEAD WIRES 3 m (9') LONG—MATCHED TO STEEL</b> |                        |                                    |                       |                |                |   |   |
|   | KFG-1-120-D17-11L3M3S  | 120                                | 1.0<br>(0.039)        | 1.2<br>(0.047) | 5.0<br>(0.2)   | — | 1.5   |
|   | KFG-2-120-D17-11L3M3S  | 120                                | 2.0<br>(0.079)        | 1.3<br>(0.051) | 8.0<br>(0.31)  | — | 2   |
|   | KFG-3-120-D17-11L3M3S  | 120                                | 3.0<br>(0.12)         | 1.3<br>(0.051) | 10.0<br>(0.39) | — | 4   |
|   | KFG-3-350-D17-11L3M3S  | 350                                | 3.0<br>(0.12)         | 1.3<br>(0.051) | 10.0<br>(0.39) | — | 15  |
|   | KFG-5-120-D17-11L3M3S  | 120                                | 5.0<br>(0.2)          | 1.4<br>(0.055) | 11.0<br>(0.43) | — | 8   |
|   | KFG-5-350-D17-11L3M3S  | 350                                | 5.0<br>(0.2)          | 1.4<br>(0.055) | 11.0<br>(0.43) | — | 20  |

\* For dimensions key, visit us online.

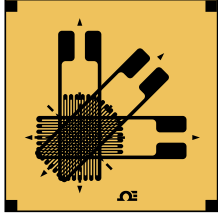
**Ordering Example:** KFG-2-120-D17-11L3M3S, package of 10 pre-wired rosette strain gages, encapsulated with 3 lead wires attached to each element with temperature characteristics matched to steel.

# TRIAXIAL STRAIN GAGES 0/45°/90°

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## To Order

| MODEL NO.<br>Pkg of 5                                    | NOM.<br>RESISTANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch)* |                 |                  |                  | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) |
|--|------------------------------------|-----------------------|-----------------|------------------|------------------|---|
|  |                                    | GRID                  |                 | CARRIER          |                  |   |
|  |                                    | A                     | B               | C                | D                |   |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO STEEL</b>          |                                    |                       |                 |                  |                  |   |
| SGD-2/120-RY51   | 120                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 3   |
| SGD-2/350-RY51   | 350                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 5   |
| SGD-3/120-RY51   | 120                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 4.5   |
| SGD-3/350-RY51   | 350                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 7.5   |
| SGD-7/120-RY51   | 120                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 9   |
| SGD-7/350-RY51   | 350                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 15  |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO ALUMINUM</b>       |                                    |                       |                 |                  |                  |   |
| SGD-2/120-RY53   | 120                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 4   |
| SGD-2/350-RY53   | 350                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 7   |
| SGD-3/120-RY53   | 120                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 6   |
| SGD-3/350-RY53   | 350                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 10  |
| SGD-7/120-RY53   | 120                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 12  |
| SGD-7/350-RY53   | 350                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 20  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO STEEL</b>    |                                    |                       |                 |                  |                  |   |
| SGD-2/120-RY61   | 120                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 3   |
| SGD-2/350-RY61   | 350                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 5   |
| SGD-3/120-RY61   | 120                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 4.5   |
| SGD-3/350-RY61   | 350                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 7.5   |
| SGD-7/120-RY61   | 120                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 9   |
| SGD-7/350-RY61   | 350                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 15  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO ALUMINUM</b> |                                    |                       |                 |                  |                  |   |
| SGD-2/120-RY63   | 120                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 4   |
| SGD-2/350-RY63   | 350                                | 2.00<br>(0.079)       | 1.10<br>(0.043) | 5.60<br>(0.220)  | 5.60<br>(0.220)  | 7   |
| SGD-3/120-RY63   | 120                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 6   |
| SGD-3/350-RY63   | 350                                | 3.00<br>(0.118)       | 1.70<br>(0.067) | 7.10<br>(0.280)  | 7.10<br>(0.280)  | 10  |
| SGD-7/120-RY63   | 120                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 12  |
| SGD-7/350-RY63   | 350                                | 6.50<br>(0.256)       | 3.10<br>(0.122) | 11.40<br>(0.449) | 11.40<br>(0.449) | 20  |



Typical gage pattern.

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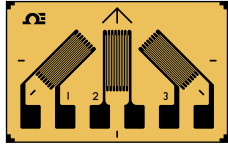
Ordering Example: SGD-2/350-RY51. 350  $\Omega$  nominal-resistance strain gage.

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# 3-FI FMENT 15° STRAIN GAGES

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## To Order



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| MODEL NO.<br>Pkg of 5                                    | NOM. RESISTANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch)* |                 |                  |                 | MAX PERMITTED BRIDGE ENERGIZING VOLTAGE (Vrms) |
|--|---------------------------------|-----------------------|-----------------|------------------|-----------------|--|
|  |                                 | GRID                  |                 | CARRIER          |                 |  |
|  |                                 | A                     | B               | C                | D               |  |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO STEEL</b>          |                                 |                       |                 |                  |                 |  |
| SGD-1/120-RY21   | 120                             | 1.6<br>(0.063)        | 1.7<br>(0.067)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 3  |
| SGD-1/350-RY21   | 350                             | 1.6<br>(0.063)        | 2.1<br>(0.083)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 6  |
| SGD-2/350-RY11   | 350                             | 2.00<br>(0.079)       | 2.00<br>(0.079) | 10.50<br>(0.413) | 6.80<br>(0.268) | 6.5  |
| SGD-3/120-RY21   | 120                             | 3<br>(0.118)          | 1.7<br>(0.067)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 4.5  |
| SGD-3/350-RY21   | 350                             | 3<br>(0.118)          | 2.1<br>(0.083)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 8.5  |
| SGD-6/120-RY21   | 120                             | 6<br>(0.236)          | 3.2<br>(0.126)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 8.5  |
| SGD-6/350-RY21   | 350                             | 6<br>(0.236)          | 3.1<br>(0.122)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 14   |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO ALUMINUM</b>       |                                 |                       |                 |                  |                 |  |
| SGD-1/120-RY23   | 120                             | 1.6<br>(0.063)        | 1.7<br>(0.067)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 4  |
| SGD-1/350-RY23   | 350                             | 1.6<br>(0.063)        | 2.1<br>(0.083)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 8.5  |
| SGD-2/350-RY13   | 350                             | 2.00<br>(0.079)       | 2.00<br>(0.079) | 10.50<br>(0.413) | 6.80<br>(0.268) | 9.5  |
| SGD-3/120-RY23   | 120                             | 3<br>(0.118)          | 1.7<br>(0.067)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 6  |
| SGD-3/350-RY23   | 350                             | 3<br>(0.118)          | 2.1<br>(0.083)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 12   |
| SGD-6/120-RY23   | 120                             | 6<br>(0.236)          | 3.2<br>(0.126)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 12   |
| SGD-6/350-RY23   | 350                             | 6<br>(0.236)          | 3.1<br>(0.122)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 20   |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO STEEL</b>    |                                 |                       |                 |                  |                 |  |
| SGD-1/120-RY81   | 120                             | 1.6<br>(0.063)        | 1.7<br>(0.067)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 3  |
| SGD-1/350-RY81   | 350                             | 1.6<br>(0.063)        | 2.1<br>(0.083)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 6  |
| SGD-2/350-RY31   | 350                             | 2.00<br>(0.079)       | 2.00<br>(0.079) | 10.50<br>(0.413) | 6.80<br>(0.268) | 6.5  |
| SGD-3/120-RY81   | 120                             | 3<br>(0.118)          | 1.7<br>(0.067)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 4.5  |
| SGD-3/350-RY81   | 350                             | 3<br>(0.118)          | 2.1<br>(0.083)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 8.5  |
| SGD-6/120-RY81   | 120                             | 6<br>(0.236)          | 3.2<br>(0.126)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 8.5  |
| SGD-6/350-RY81   | 350                             | 6<br>(0.236)          | 3.1<br>(0.122)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 14   |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO ALUMINUM</b> |                                 |                       |                 |                  |                 |  |
| SGD-1/120-RY83   | 120                             | 1.6<br>(0.063)        | 1.7<br>(0.067)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 4  |
| SGD-1/350-RY83   | 350                             | 1.6<br>(0.063)        | 2.1<br>(0.083)  | 6.8<br>(0.27)    | 10.5<br>(0.41)  | 8.5  |
| SGD-2/350-RY33   | 350                             | 2.00<br>(0.079)       | 2.00<br>(0.079) | 10.50<br>(0.413) | 6.80<br>(0.268) | 9.5  |
| SGD-3/120-RY83   | 120                             | 3<br>(0.118)          | 1.7<br>(0.067)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 6  |
| SGD-3/350-RY83   | 350                             | 3<br>(0.118)          | 2.1<br>(0.083)  | 8.3<br>(0.33)    | 13<br>(0.51)    | 12   |
| SGD-6/120-RY83   | 120                             | 6<br>(0.236)          | 3.2<br>(0.126)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 12   |
| SGD-6/350-RY83   | 350                             | 6<br>(0.236)          | 3.1<br>(0.122)  | 13.4<br>(0.53)   | 21.4<br>(0.84)  | 20   |

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Ordering Example:  
SGD-1/120-RY83,  
120  $\Omega$  nominal-resistance strain gage.

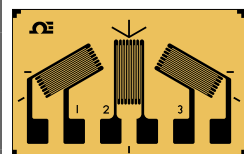
STRAIN GAGES



# 3-FI FMENT 60° STRAIN GAGES

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## To Order



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| MODEL NO.<br>Pkg of 5                                    | NOM.<br>RESISTANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch)* |                |                |                | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) |
|--|------------------------------------|-----------------------|----------------|----------------|----------------|---|
|  |                                    | GRID                  |                | CARRIER        |                |   |
|  |                                    | A                     | B              | C              | D              |   |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO STEEL</b>          |                                    |                       |                |                |                |   |
| SGD-1/120-RY621  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 3   |
| SGD-1/350-RY621  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 6   |
| SGD-3/120-RY621  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 8.3<br>(0.33)  | 13<br>(0.51)   | 4.5   |
| SGD-3/350-RY621  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 8.3<br>(0.33)  | 13<br>(0.51)   | 8.5   |
| SGD-6/120-RY621  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 13.4<br>(0.53) | 21.4<br>(0.84) | 8.5   |
| SGD-6/350-RY621  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 13.4<br>(0.53) | 21.4<br>(0.84) | 14  |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO ALUMINUM</b>       |                                    |                       |                |                |                |   |
| SGD-1/120-RY623  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 4   |
| SGD-1/350-RY623  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 8.5   |
| SGD-3/120-RY623  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 8.3<br>(0.33)  | 13<br>(0.51)   | 6   |
| SGD-3/350-RY623  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 8.3<br>(0.33)  | 13<br>(0.51)   | 12  |
| SGD-6/120-RY623  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 13.4<br>(0.53) | 21.4<br>(0.84) | 12  |
| SGD-6/350-RY623  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 13.4<br>(0.53) | 21.4<br>(0.84) | 20  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO STEEL</b>    |                                    |                       |                |                |                |   |
| SGD-1/120-RY681  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 3   |
| SGD-1/350-RY681  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 6   |
| SGD-3/120-RY681  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 8.3<br>(0.33)  | 13<br>(0.51)   | 4.5   |
| SGD-3/350-RY681  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 8.3<br>(0.33)  | 13<br>(0.51)   | 8.5   |
| SGD-6/120-RY681  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 13.4<br>(0.53) | 21.4<br>(0.84) | 8.5   |
| SGD-6/350-RY681  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 13.4<br>(0.53) | 21.4<br>(0.84) | 14  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO ALUMINUM</b> |                                    |                       |                |                |                |   |
| SGD-1/120-RY683  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 4   |
| SGD-1/350-RY683  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 6.8<br>(0.27)  | 10.5<br>(0.41) | 8.5   |
| SGD-3/120-RY683  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 8.3<br>(0.33)  | 13<br>(0.51)   | 6   |
| SGD-3/350-RY683  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 8.3<br>(0.33)  | 13<br>(0.51)   | 12  |
| SGD-6/120-RY683  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 13.4<br>(0.53) | 21.4<br>(0.84) | 12  |
| SGD-6/350-RY683  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 13.4<br>(0.53) | 21.4<br>(0.84) | 20  |

\* For dimensions key, visit us online. \*\* For accessory terminal pads, visit us online.

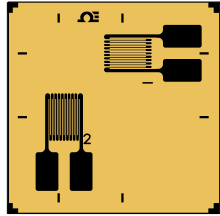
Ordering Example: SGD-1/120-RY683, 120  $\Omega$  nominal-resistance strain gage.

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# 2-FI FMENT 90° RIAXIAI STRAIN GAGES

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## To Order



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No Minimum Quantities. Consult Engineering.

| MODEL NO.<br>Pkg of 5                                    | NOM.<br>RESISTANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch)* |                |                |                | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) |
|--|------------------------------------|-----------------------|----------------|----------------|----------------|---|
|  |                                    | GRID                  |                | CARRIER        |                |   |
|  |                                    | A                     | B              | C              | D              |   |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO STEEL</b>          |                                    |                       |                |                |                |   |
| SGD-1/120-RYB21  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 3   |
| SGD-1/350-RYB21  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 6   |
| SGD-3/120-RYB21  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 4.5   |
| SGD-3/350-RYB21  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 8.5   |
| SGD-6/120-RYB21  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 8.5   |
| SGD-6/350-RYB21  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 14  |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO ALUMINUM</b>       |                                    |                       |                |                |                |   |
| SGD-1/120-RYB23  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 4   |
| SGD-1/350-RYB23  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 8.5   |
| SGD-3/120-RYB23  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 6   |
| SGD-3/350-RYB23  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 12  |
| SGD-6/120-RYB23  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 12  |
| SGD-6/350-RYB23  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 20  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO STEEL</b>    |                                    |                       |                |                |                |   |
| SGD-1/120-RYB81  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 3   |
| SGD-1/350-RYB81  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 6   |
| SGD-3/120-RYB81  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 4.5   |
| SGD-3/350-RYB81  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 8.5   |
| SGD-6/120-RYB81  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 8.5   |
| SGD-6/350-RYB81  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 14  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO ALUMINUM</b> |                                    |                       |                |                |                |   |
| SGD-1/120-RYB83  | 120                                | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 4   |
| SGD-1/350-RYB83  | 350                                | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 8.5   |
| SGD-3/120-RYB83  | 120                                | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 6   |
| SGD-3/350-RYB83  | 350                                | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 12  |
| SGD-6/120-RYB83  | 120                                | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 12  |
| SGD-6/350-RYB83  | 350                                | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 20  |

\* For dimensions key, visit us online. \*\* For accessory terminal pads, visit us online.

Ordering Example: SGD-1/120-RYB83, 120  $\Omega$  nominal-resistance strain gage.

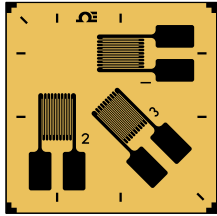
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# 3-FI FMENT 45°/90° STRAIN GAGES

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## To Order



Typical gage pattern.

Visit us online, for selection guide and exact pattern. Open-face gages available. Consult Pressure Sales and Engineering.

**Custom-Designed Strain Gages Available!**  
No Minimum Quantities. Consult Engineering.

| MODEL NO.<br>Pkg of 5                                    | NOM.<br>RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)* |                |                |                | MAX<br>PERMITTED<br>BRIDGE<br>ENERGIZING<br>VOLTAGE<br>(Vrms) |
|--|---------------------------|-----------------------|----------------|----------------|----------------|---|
|  |                           | GRID                  |                | CARRIER        |                |   |
|  |                           | A                     | B              | C              | D              |   |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO STEEL</b>          |                           |                       |                |                |                |   |
| SGD-1/120-RYT21  | 120                       | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 3   |
| SGD-1/350-RYT21  | 350                       | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 6   |
| SGD-3/120-RYT21  | 120                       | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 4.5   |
| SGD-3/350-RYT21  | 350                       | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 8.5   |
| SGD-6/120-RYT21  | 120                       | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 8.5   |
| SGD-6/350-RYT21  | 350                       | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 14  |
| <b>ENCAPSULATED WITH LEADS—MATCHED TO ALUMINUM</b>       |                           |                       |                |                |                |   |
| SGD-1/120-RYT23  | 120                       | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 4   |
| SGD-1/350-RYT23  | 350                       | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 8.5   |
| SGD-3/120-RYT23  | 120                       | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 6   |
| SGD-3/350-RYT23  | 350                       | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 12  |
| SGD-6/120-RYT23  | 120                       | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 12  |
| SGD-6/350-RYT23  | 350                       | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 20  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO STEEL</b>    |                           |                       |                |                |                |   |
| SGD-1/120-RYT81  | 120                       | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 3   |
| SGD-1/350-RYT81  | 350                       | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 6   |
| SGD-3/120-RYT81  | 120                       | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 4.5   |
| SGD-3/350-RYT81  | 350                       | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 8.5   |
| SGD-6/120-RYT81  | 120                       | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 8.5   |
| SGD-6/350-RYT81  | 350                       | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 14  |
| <b>ENCAPSULATED WITH SOLDER PADS—MATCHED TO ALUMINUM</b> |                           |                       |                |                |                |   |
| SGD-1/120-RYT83  | 120                       | 1.6<br>(0.063)        | 1.7<br>(0.067) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 4   |
| SGD-1/350-RYT83  | 350                       | 1.6<br>(0.063)        | 2.1<br>(0.083) | 9.3<br>(0.37)  | 9.3<br>(0.37)  | 8.5   |
| SGD-3/120-RYT83  | 120                       | 3<br>(0.118)          | 1.7<br>(0.067) | 11<br>(0.43)   | 11<br>(0.43)   | 6   |
| SGD-3/350-RYT83  | 350                       | 3<br>(0.118)          | 2.1<br>(0.083) | 11<br>(0.43)   | 11<br>(0.43)   | 12  |
| SGD-6/120-RYT83  | 120                       | 6<br>(0.236)          | 3.2<br>(0.126) | 16.3<br>(0.64) | 16.3<br>(0.64) | 12  |
| SGD-6/350-RYT83  | 350                       | 6<br>(0.236)          | 3.1<br>(0.122) | 16.3<br>(0.64) | 16.3<br>(0.64) | 20  |

\* For dimensions key, visit us online. \*\* For accessory terminal pads, visit us online.

Ordering Example: SGD-1/120-RYT83, 120 Ω nominal-resistance strain gage.

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# PRECISION STRAIN GAGE

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## DUAL-PARALLEL STRAIN GAGES FOR MONITORING BENDING STRAIN DUAL LINEAR PATTERN



| To Order                        |                       |                                 |   |                 |                 |                 |                  |                 |                  |                 |
|---------------------------------|-----------------------|---------------------------------|---|-----------------|-----------------|-----------------|------------------|-----------------|------------------|-----------------|
| GAGE PATTERN<br>Leads not shown | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>( $\Omega$ ) | DIMENSIONS<br>mm (inch) <sup>†</sup>  |                 |                 |                 | MAX V*<br>(Vrms) | TERMINATION     | TEMP COMP        | TERM PAD        |
|                                 |                       |                                 | GRID  |                 | CARRIER         |                 |                  |                 |                  |                 |
|                                 |                       |                                 | A   | B               | C               | D               |                  |                 |                  |                 |
| Shown actual size, 5.5 mm<br>   | SGD-2/350-DY11        | 350                             | 2.00<br>(0.079)   | 2.00<br>(0.079) | 5.50<br>(0.217) | 5.90<br>(0.232) | 6.5              | Ribbon Leads    | ST               | BPT-2           |
|                                 | SGD-2/350-DY13        | 350                             | Miniature parallel dual grid pattern, bending strain 350 $\Omega$   |                 |                 |                 | 9.5              | Ribbon Leads    | AL               |                 |
|                                 | SGD-2/350-DY41        | 350                             |   |                 |                 |                 | 6.5              | Solder Pads     | ST               |                 |
|                                 | SGD-2/350-DY43        | 350                             |   |                 |                 |                 | 9.5              | Solder Pads     | AL               |                 |
| Shown actual size, 7.5 mm<br>   | SGD-2/1000-DY11       | 1000                            |   |                 |                 |                 | 2.10<br>(0.083)  | 2.70<br>(0.106) | 7.50<br>(0.295)  | 8.00<br>(0.315) |
|                                 | SGD-2/1000-DY13       | 1000                            | Miniature parallel dual grid pattern, bending strain 1000 $\Omega$  |                 |                 |                 | 18               | Ribbon Leads    | AL               |                 |
|                                 | SGD-2/1000-DY41       | 1000                            |   |                 |                 |                 | 13               | Solder Pads     | ST               |                 |
|                                 | SGD-2/1000-DY43       | 1000                            |   |                 |                 |                 | 18               | Solder Pads     | AL               |                 |
| Shown actual size, 6 mm<br>     | SGD-3/350-DY11        | 350                             |   |                 |                 |                 | 3.00<br>(0.118)  | 1.60<br>(0.063) | 6.00<br>(0.236)  | 4.10<br>(0.161) |
|                                 | SGD-3/350-DY13        | 350                             | Medium parallel dual grid pattern, grid width narrow, bending strain 350 $\Omega$                           |                 |                 |                 | 10               | Ribbon Leads    | AL               |                 |
|                                 | SGD-3/350-DY41        | 350                             |   |                 |                 |                 | 7.5              | Solder Pads     | ST               |                 |
|                                 | SGD-3/350-DY43        | 350                             |   |                 |                 |                 | 10               | Solder Pads     | AL               |                 |
| Shown actual size, 7.4 mm<br>   | SGD-3/1000-DY11       | 1000                            |   |                 |                 |                 | 3.00<br>(0.118)  | 3.40<br>(0.134) | 7.40<br>(0.291)  | 8.90<br>(0.350) |
|                                 | SGD-3/1000-DY13       | 1000                            | Medium parallel dual grid pattern, bending strain, higher resistance, reduced heat generation 1000 $\Omega$ |                 |                 |                 | 25               | Ribbon Leads    | AL               |                 |
|                                 | SGD-3/1000-DY41       | 1000                            |   |                 |                 |                 | 17               | Solder Pads     | ST               |                 |
|                                 | SGD-3/1000-DY43       | 1000                            |   |                 |                 |                 | 25               | Solder Pads     | AL               |                 |
| Shown actual size, 11.8 mm<br>  | SGD-7/1000-DY11       | 1000                            |   |                 |                 |                 | 7.00<br>(0.276)  | 3.60<br>(0.142) | 11.80<br>(0.465) | 9.70<br>(0.382) |
|                                 | SGD-7/1000-DY13       | 1000                            | Large parallel dual grid pattern, bending strain, higher resistance, reduced heat generation 1000 $\Omega$  |                 |                 |                 | 40               | Ribbon Leads    | AL               |                 |
|                                 | SGD-7/1000-DY41       | 1000                            |   |                 |                 |                 | 27               | Solder Pads     | ST               |                 |
|                                 | SGD-7/1000-DY43       | 1000                            |   |                 |                 |                 | 40               | Solder Pads     | AL               |                 |
| Shown actual size, 11.4 mm<br>  | SGD-7/350-DY11        | 350                             |   |                 |                 |                 | 6.50<br>(0.256)  | 3.10<br>(0.122) | 11.40<br>(0.449) | 8.40<br>(0.331) |
|                                 | SGD-7/350-DY13        | 350                             | Large parallel dual grid pattern, bending strain, grid width narrow 350 $\Omega$                            |                 |                 |                 | 40               | Ribbon Leads    | AL               |                 |
|                                 | SGD-7/350-DY41        | 350                             |   |                 |                 |                 | 15               | Solder Pads     | ST               |                 |
|                                 | SGD-7/350-DY43        | 350                             |   |                 |                 |                 | 40               | Solder Pads     | AL               |                 |

### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | 5%  |

<sup>†</sup> For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

**Note:** For strain gage accessories visit us online.

**Ordering Example:** SGD-2/350-DY43, 350  $\Omega$  nominal-resistance

**NOTE**  
ST = Steel  
AL = Aluminum

# PRECISION STRAIN GAGE

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## PRECISION LINEAR PATTERN AND EXTRA LONG PATTERN



### To Order

| GAGE PATTERN<br>Leads not shown | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)†   |    |              |              | MAX V*<br>(Vrms) | TERMINATION | TEMP COMP | TERM PAD |
|---------------------------------|------------------------|------------------------|---|----|--------------|--------------|------------------|-------------|-----------|----------|
|                                 |                        |                        | GRID  |    | CARRIER      |              |                  |             |           |          |
|                                 |                        |                        | A   | B  | C            | D            |                  |             |           |          |
| Shown actual size 17.7 mm<br>   | SGD-10/350-LY11        | 350                    | 10.00 (0.394)    4.90 (0.193)    17.70 (0.697)    8.00 (0.315)<br>Linear pattern, large size<br>350 Ω   | 22 | Ribbon Leads | ST           | BPT-5            |             |           |          |
|                                 | SGD-10/350-LY13        | 350                    |   |    | 32           | Ribbon Leads |                  | AL          |           |          |
|                                 | SGD-10/350-LY41        | 350                    |   |    | 22           | Solder Pads  |                  | ST          |           |          |
|                                 | SGD-10/350-LY43        | 350                    |   |    | 32           | Solder Pads  |                  | AL          |           |          |
| Shown actual size 17.7 mm<br>   | SGD-10/1000-LY11       | 1000                   | 10.00 (0.394)    4.90 (0.193)    17.70 (0.697)    8.00 (0.315)<br>Linear pattern, large size, higher resistance, reduced heat generation<br>1000 Ω        | 40 | Ribbon Leads | ST           | BPT-5            |             |           |          |
|                                 | SGD-10/1000-LY13       | 1000                   |   |    | 55           | Ribbon Leads |                  | AL          |           |          |
|                                 | SGD-10/1000-LY41       | 1000                   |   |    | 40           | Solder Pads  |                  | ST          |           |          |
|                                 | SGD-10/1000-LY43       | 1000                   |   |    | 55           | Solder Pads  |                  | AL          |           |          |
| Shown actual size 22.7 mm<br>   | SGD-13/350-LY11        | 350                    | 13.00 (0.511)    7.20 (0.283)    22.70 (0.893)    10.00 (0.393)<br>Linear pattern, grid length long<br>350 Ω  | 30 | Ribbon Leads | ST           | BPT-6            |             |           |          |
|                                 | SGD-13/350-LY13        | 350                    |   |    | 40           | Ribbon Leads |                  | AL          |           |          |
|                                 | SGD-13/350-LY41        | 350                    |   |    | 30           | Solder Pads  |                  | ST          |           |          |
|                                 | SGD-13/350-LY43        | 350                    |   |    | 40           | Solder Pads  |                  | AL          |           |          |
| Shown actual size 22.7 mm<br>   | SGD-13/1000-LY11       | 1000                   | 13.00 (0.511)    7.20 (0.283)    22.70 (0.893)    10.00 (0.393)<br>Linear pattern, grid length long, higher resistance, reduced heat generation<br>1000 Ω | 55 | Ribbon Leads | ST           | BPT-6            |             |           |          |
|                                 | SGD-13/1000-LY13       | 1000                   |   |    | 75           | Ribbon Leads |                  | AL          |           |          |
|                                 | SGD-13/1000-LY41       | 1000                   |   |    | 55           | Solder Pads  |                  | ST          |           |          |
|                                 | SGD-13/1000-LY43       | 1000                   |   |    | 75           | Solder Pads  |                  | AL          |           |          |

### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | 5%              |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

† For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGD-13/350-LY13, 13 mm grid, 350 Ω nominal-resistance strain gage.

**NOTE**

ST = Steel  
AL = Aluminum

### Extra-Long For Inhomogeneous Material

### To Order

| GAGE PATTERN<br>Leads not shown          | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)† |              |                |               | MAX V*<br>(Vrms) | TERMINATION | TEMP COMP | TERM PAD |
|--|-----------------------|------------------------|-----------------------|--------------|----------------|---------------|------------------|-------------|-----------|----------|
|  |                       |                        | GRID                  |              | CARRIER        |               |                  |             |           |          |
|  |                       |                        | A                     | B            | C              | D             |                  |             |           |          |
| Shown smaller than actual size 50 mm<br> | SGD-30/120-LY40       | 120                    | 25.00 (0.984)         | 8.00 (0.315) | 40.00 (1.575)  | 12.00 (0.472) | 12               | Solder Pads | UNC       | BPT-6    |
|  | SGD-30N/120-LY40      | 120                    | 30.00 (1.181)         | 3.00 (0.118) | 36.00 (1.417)  | 5.00 (0.197)  | 10               | Solder Pads | UNC       |          |
|  | SGD-30/350-LY40       | 350                    | 30.00 (1.181)         | 3.00 (0.118) | 36.00 (1.417)  | 5.00 (0.197)  | 14               | Solder Pads | UNC       |          |
|  | SGD-50/120-LY40       | 120                    | 50.00 (1.969)         | 4.30 (0.169) | 60.00 (2.362)  | 9.00 (0.354)  | 12               | Solder Pads | UNC       |          |
|  | SGD-150/240-LY40      | 240                    | 150.00 (5.906)        | 5.00 (0.197) | 165.00 (6.496) | 9.00 (0.354)  | 35               | Solder Pads | UNC       |          |

† For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGD-30/120-LY40, 120 Ω nominal-resistance strain gage.

**NOTE**

UNC = Uncompensated

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## PRECISION LINEAR PATTERN FOR STATIC AND DYNAMIC APPLICATIONS

### SGD Series


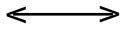





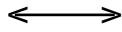
- ✓ Very Flexible, Mechanically Strong
- ✓ Small Bending Radius
- ✓ Broad Temperature Range
- ✓ Ribbon Leads or Solder Pads
- ✓ Clear Alignment Marks
- ✓ Affix with Cold or Hot Curing Adhesives

OMEGA® strain gages are available in a variety of models to cover most strain measurement applications. Their rugged construction and flexibility make them suitable for highly accurate static and dynamic measurement. The measuring grid is formed by etching constantan foil, which is then completely sealed in a carrier medium composed of polyimide film. The linear pattern strain gages are used to measure strain in a single direction. They are often used for experimental stress analysis applications. The strain gage pattern is shown on the left side of the table. Notice the "arrow" which indicates the principal stress direction.

The linear pattern strain gages are available in a variety of styles and sizes. OMEGA is offering miniature linear patterns for strain measurement of a stress concentration or high gradient areas. We also have wide or narrow grid patterns, and small, medium or large patterns. To determine if the strain gages have temperature characteristics matched to steel or aluminum, see the column labeled "COMP" short for compensation, "ST" indicates steel, "AL" indicates aluminum, "UNC" indicates uncompensated. See the column labeled "BTP" for accessory bondable terminal pad model numbers.

Dimensions are listed for pattern gage grid length (A) and width (B), and the matrix or carrier length (C) and width (D). The patterns include alignment triangles. The carrier or matrix material on the patterns may be trimmed in the field on all sides to within 0.25 mm of the foil grid with no effect on strain gage performance.

### To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch)†  |                 |                 |                 | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|---|------------------------|------------------------|---|-----------------|-----------------|-----------------|------------------|--------------|-----------|----------|
|   |                        |                        | GRID  |                 | CARRIER         |                 |                  |              |           |          |
|   |                        |                        | A   | B               | C               | D               |                  |              |           |          |
| <br>Shown actual size 4.70 mm<br> | SGD-1.5/120-LY11       | 120                    | 1.50<br>(0.059)   | 1.20<br>(0.047) | 4.70<br>(0.185) | 3.40<br>(0.134) | 2.5              | Ribbon Leads | ST        | BTP-1    |
|   | SGD-1.5/120-LY13       | 120                    | Miniature linear pattern<br>Measurement of stress concentration<br>120 Ω  |                 |                 |                 | 3.5              | Ribbon Leads | AL        |          |
|   | SGD-1.5/120-LY41       | 120                    |   |                 |                 |                 | 2.5              | Solder Pads  | ST        |          |
|   | SGD-1.5/120-LY43       | 120                    |   |                 |                 |                 | 3.5              | Solder Pads  | AL        |          |
| <br>Shown actual size 7.60 mm<br> | SGD-2/350-LY11         | 350                    | 2.00<br>(0.079)   | 2.50<br>(0.098) | 7.60<br>(0.299) | 5.80<br>(0.228) | 7.5              | Ribbon Leads | ST        | BTP-1    |
|   | SGD-2/350-LY13         | 350                    | Miniature linear pattern<br>Measurement of stress concentration, higher resistance<br>reduced heat generation 350 Ω |                 |                 |                 | 10               | Ribbon Leads | AL        |          |
|   | SGD-2/350-LY41         | 350                    |   |                 |                 |                 | 7.5              | Solder Pads  | ST        |          |
|   | SGD-2/350-LY43         | 350                    |   |                 |                 |                 | 10               | Solder Pads  | AL        |          |
| <br>Shown actual size 7.10 mm<br> | SGD-2D/350-LY11        | 350                    | 1.90<br>(0.075)   | 4.80<br>(0.189) | 7.10<br>(0.280) | 6.60<br>(0.260) | 10               | Ribbon Leads | ST        | BTP-2    |
|   | SGD-2D/350-LY13        | 350                    | Miniature linear pattern<br>grid width, wide<br>350 Ω   |                 |                 |                 | 14               | Ribbon Leads | AL        |          |
|   | SGD-2D/350-LY41        | 350                    |   |                 |                 |                 | 10               | Solder Pads  | ST        |          |
|   | SGD-2D/350-LY43        | 350                    |   |                 |                 |                 | 14               | Solder Pads  | AL        |          |
| <br>Shown actual size 7.00 mm<br> | SGD-3/350-LY11         | 350                    | 3.20<br>(0.126)   | 2.50<br>(0.098) | 7.00<br>(0.276) | 4.00<br>(0.157) | 9.5              | Ribbon Leads | ST        | BTP-3    |
|   | SGD-3/350-LY13         | 350                    | linear pattern leads/ pads at<br>on end of grid<br>350 Ω  |                 |                 |                 | 13               | Ribbon Leads | AL        |          |
|   | SGD-3/350-LY41         | 350                    |   |                 |                 |                 | 9.5              | Solder Pads  | ST        |          |
|   | SGD-3/350-LY43         | 350                    |   |                 |                 |                 | 13               | Solder Pads  | AL        |          |



STRAIN GAGES

| DISCOUNT SCHEDULE       |                 |
|-------------------------|-----------------|
| 1 to 10 pkgs. . . . .   | Net             |
| 11 to 24 pkgs. . . . .  | 5%              |
| 25 to 49 pkgs. . . . .  | 10%             |
| 50 and up and OEM . . . | Consult Factory |

† For dimensions key, visit us online.  
 \* Maximum permitted bridge energizing voltage (Vrms).  
 Note: For strain gage accessories visit us online.  
 Ordering Example: SGD-3/350-LY11, 3.2 mm grid, 350 Ω nominal-resistance strain gage.





**Custom-Designed Strain Gages Available!**  
 No Minimum Quantities.  
 Consult Engineering

**NOTE**  
 ST = Steel  
 AL = Aluminum

# PRECISION STRAIN GAGE

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## PRECISION LINEAR PATTERN FOR STATIC AND DYNAMIC APPLICATIONS

| To Order   |                        |                                      |                                      |                 |                 |                 |                  |              |              |             |
|--|------------------------|--------------------------------------|--------------------------------------|-----------------|-----------------|-----------------|------------------|--------------|--------------|-------------|
| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 10 | NOM. RESIS-<br>TANCE<br>( $\Omega$ ) | DIMENSIONS<br>mm (inch) <sup>†</sup> |                 |                 |                 | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP | TERM<br>PAD |
|  |                        |                                      | GRID                                 |                 | CARRIER         |                 |                  |              |              |             |
|  |                        |                                      | A                                    | B               | C               | D               |                  |              |              |             |
| Shown<br>actual size<br>7.80 mm<br><br>   | SGD-3/120-LY11         | 120                                  | 3.00<br>(0.118)                      | 1.50<br>(0.059) | 7.80<br>(0.307) | 3.80<br>(0.150) | 4                | Ribbon Leads | ST           | BTP-3       |
|  | SGD-3/120-LY13         | 120                                  |                                      |                 |                 |                 | 5.5              | Ribbon Leads | AL           |             |
|  | SGD-3/120-LY41         | 120                                  |                                      |                 |                 |                 | 4                | Solder Pads  | ST           |             |
|  | SGD-1.5/120-LY43       | 120                                  |                                      |                 |                 |                 | 5.5              | Solder Pads  | AL           |             |
| Shown<br>actual size<br>6.60 mm<br><br>   | SGD-3S/120-LY11        | 120                                  | 3.00<br>(0.118)                      | 1.70<br>(0.067) | 6.60<br>(0.260) | 3.30<br>(0.130) | 4.5              | Ribbon Leads | ST           | BTP-3       |
|  | SGD-3S/120-LY13        | 120                                  |                                      |                 |                 |                 | 6                | Ribbon Leads | AL           |             |
|  | SGD-3S/120-LY41        | 120                                  |                                      |                 |                 |                 | 4.5              | Solder Pads  | ST           |             |
|  | SGD-3S/120-LY43        | 120                                  |                                      |                 |                 |                 | 6                | Solder Pads  | AL           |             |
| Shown<br>actual size<br>7.90 mm<br><br> | SGD-4/120-LY11         | 120                                  | 3.80<br>(0.150)                      | 5.70<br>(0.224) | 7.90<br>(0.311) | 7.10<br>(0.280) | 9                | Ribbon Leads | ST           | BTP-3       |
|  | SGD-4/120-LY13         | 120                                  |                                      |                 |                 |                 | 12               | Ribbon Leads | AL           |             |
|  | SGD-4/120-LY41         | 120                                  |                                      |                 |                 |                 | 9                | Solder Pads  | ST           |             |
|  | SGD-4/120-LY43         | 120                                  |                                      |                 |                 |                 | 12               | Solder Pads  | AL           |             |
| Shown<br>actual size<br>9.80 mm<br><br> | SGD-5/350-LY11         | 350                                  | 4.50<br>(0.177)                      | 3.20<br>(0.126) | 9.80<br>(0.386) | 5.20<br>(0.205) | 12               | Ribbon Leads | ST           | BTP-4       |
|  | SGD-5/350-LY13         | 350                                  |                                      |                 |                 |                 | 17               | Ribbon Leads | AL           |             |
|  | SGD-5/350-LY41         | 350                                  |                                      |                 |                 |                 | 12               | Solder Pads  | ST           |             |
|  | SGD-5/350-LY43         | 350                                  |                                      |                 |                 |                 | 17               | Solder Pads  | AL           |             |



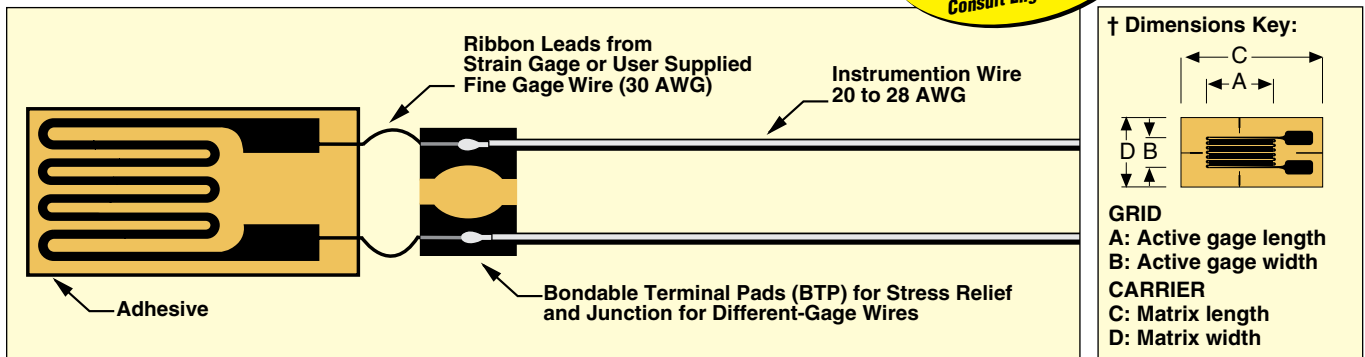
| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | .10%            |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories visit us online.  
**Ordering Example:** SGD-4/120-LY13, 3.8 mm grid, 120  $\Omega$  nominal-resistance strain gage.

**Custom-Designed Strain Gages Available!**  
 No Minimum Quantities.  
 Consult Engineering.

**NOTE**  
 ST = Steel  
 AL = Aluminum

### TYPICAL STRAIN GAGE INSTALLATION











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# PRECISION STRAIN GAGE

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## PRECISION LINEAR PATTERN FOR STATIC AND DYNAMIC APPLICATIONS

### To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 10 | NOM. RESIS-<br>TANCE<br>( $\Omega$ ) | DIMENSIONS<br>mm (inch) <sup>†</sup>  |    |              |              | MAX V*<br>(Vrms) | TERMINATION | TEMP<br>COMP | TERM<br>PAD |
|---|------------------------|--------------------------------------|---|----|--------------|--------------|------------------|-------------|--------------|-------------|
|   |                        |                                      | GRID  |    | CARRIER      |              |                  |             |              |             |
|   |                        |                                      | A   | B  | C            | D            |                  |             |              |             |
| <br>Shown actual size 11.4 mm<br>     | SGD-6/120-LY11         | 120                                  | 6.50 (0.256)    3.10 (0.122)    11.40 (0.449)    5.10 (0.201)<br>Linear pattern,<br>medium size<br>120 $\Omega$                                 | 9  | Ribbon Leads | ST           | BTP-4            |             |              |             |
|   | SGD-6/120-LY13         | 120                                  |   |    | 12           | Ribbon Leads |                  | AL          |              |             |
|   | SGD-6/120-LY41         | 120                                  |   |    | 9            | Solder Pads  |                  | ST          |              |             |
|   | SGD-6/120-LY43         | 120                                  |   |    | 12           | Solder Pads  |                  | AL          |              |             |
| <br>Shown actual size 11.4 mm<br>     | SGD-7/350-LY11         | 350                                  | 6.50 (0.256)    3.10 (0.122)    11.40 (0.449)    5.10 (0.201)<br>Linear pattern,<br>medium size<br>350 $\Omega$                                 | 15 | Ribbon Leads | ST           | BTP-5            |             |              |             |
|   | SGD-7/350-LY13         | 350                                  |   |    | 20           | Ribbon Leads |                  | AL          |              |             |
|   | SGD-7/350-LY41         | 350                                  |   |    | 15           | Solder Pads  |                  | ST          |              |             |
|   | SGD-7/350-LY43         | 350                                  |   |    | 20           | Solder Pads  |                  | AL          |              |             |
| <br>Shown actual size 11.8 mm<br> | SGD-7/1000-LY11        | 1000                                 | 7.00 (0.276)    3.60 (0.142)    11.80 (0.465)    5.60 (0.220)<br>Medium size, higher<br>resistance,<br>reduced heat generation<br>1000 $\Omega$ | 27 | Ribbon Leads | ST           | BTP-5            |             |              |             |
|   | SGD-7/1000-LY13        | 1000                                 |   |    | 37           | Ribbon Leads |                  | AL          |              |             |
|   | SGD-7/1000-LY41        | 1000                                 |   |    | 27           | Solder Pads  |                  | ST          |              |             |
|   | SGD-7/1000-LY43        | 1000                                 |   |    | 37           | Solder Pads  |                  | AL          |              |             |
| <br>Shown actual size 17.7 mm<br> | SGD-10/120-LY11        | 120                                  | 10.00 (0.394)    4.90 (0.193)    17.70 (0.697)    8.00 (0.315)<br>Linear pattern,<br>Large size<br>120 $\Omega$                                 | 14 | Ribbon Leads | ST           | BTP-5            |             |              |             |
|   | SGD-10/120-LY13        | 120                                  |   |    | 19           | Ribbon Leads |                  | AL          |              |             |
|   | SGD-10/120-LY41        | 120                                  |   |    | 14           | Solder Pads  |                  | ST          |              |             |
|   | SGD-10/120-LY43        | 120                                  |   |    | 19           | Solder Pads  |                  | AL          |              |             |



| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | .10%            |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories visit us online.  
**Ordering Example:** SGD-6/120-LY13, 6.5 mm grid, 120  $\Omega$  nominal-resistance strain gage.



**NOTE**  
 ST = Steel  
 AL = Aluminum

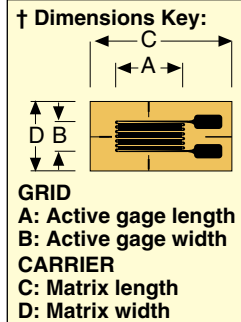
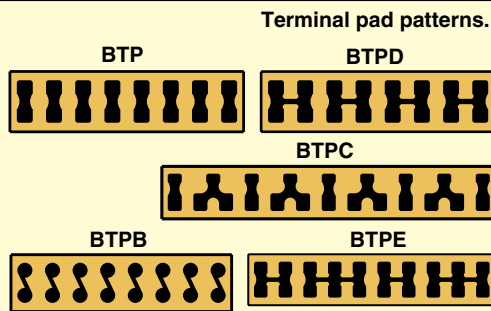
### BONDABLE TERMINAL PADS

When installing strain gages with ribbon leads or solder pads, use Bondable Terminal Pads (BTP) between the strain gage and the wires to your instrumentation.

The Bondable Terminal Pads provide a large easy to use soldering area and provide strain relief between the strain gage and the heavy instrument wires.

Using Bondable Terminal Pads is simple. Use the same adhesive and bonding procedure on the Bondable Terminal Pads as you use on the strain gage.

OMEGA offers BTPs in several sizes and wiring configurations to fit most all strain gage applications.



STRAIN GAGES E

# PRECISION STRAIN GAGE

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## PRECISION LINEAR PATTERN AND EXTRA LONG PATTERN



### To Order

| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 10 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch) <sup>†</sup>  |    |              |              | MAX V*<br>(Vrms) | TERMINATION | TEMP COMP | TERM PAD |
|----------------------------------|------------------------|------------------------|---|----|--------------|--------------|------------------|-------------|-----------|----------|
|                                  |                        |                        | GRID  |    | CARRIER      |              |                  |             |           |          |
|                                  |                        |                        | A   | B  | C            | D            |                  |             |           |          |
| Shown actual size<br>17.7 mm<br> | SGD-10/350-LY11        | 350                    | 10.00 (0.394)    4.90 (0.193)    17.70 (0.697)    8.00 (0.315)<br>Linear pattern,<br>large size<br>350 Ω  | 22 | Ribbon Leads | ST           | BTP-5            |             |           |          |
|                                  | SGD-10/350-LY13        | 350                    |   |    | 32           | Ribbon Leads |                  | AL          |           |          |
|                                  | SGD-10/350-LY41        | 350                    |   |    | 22           | Solder Pads  |                  | ST          |           |          |
|                                  | SGD-10/350-LY43        | 350                    |   |    | 32           | Solder Pads  |                  | AL          |           |          |
| Shown actual size<br>17.7 mm<br> | SGD-10/1000-LY11       | 1000                   | 10.00 (0.394)    4.90 (0.193)    17.70 (0.697)    8.00 (0.315)<br>Linear pattern, large size,<br>higher resistance,<br>reduced heat generation<br>1000 Ω        | 40 | Ribbon Leads | ST           | BTP-5            |             |           |          |
|                                  | SGD-10/1000-LY13       | 1000                   |   |    | 55           | Ribbon Leads |                  | AL          |           |          |
|                                  | SGD-10/1000-LY41       | 1000                   |   |    | 40           | Solder Pads  |                  | ST          |           |          |
|                                  | SGD-10/1000-LY43       | 1000                   |   |    | 55           | Solder Pads  |                  | AL          |           |          |
| Shown actual size<br>22.7 mm<br> | SGD-13/350-LY11        | 350                    | 13.00 (0.511)    7.20 (0.283)    22.70 (0.893)    10.00 (0.393)<br>Linear pattern,<br>grid length long<br>350 Ω   | 30 | Ribbon Leads | ST           | BTP-6            |             |           |          |
|                                  | SGD-13/350-LY13        | 350                    |   |    | 40           | Ribbon Leads |                  | AL          |           |          |
|                                  | SGD-13/350-LY41        | 350                    |   |    | 30           | Solder Pads  |                  | ST          |           |          |
|                                  | SGD-13/350-LY43        | 350                    |   |    | 40           | Solder Pads  |                  | AL          |           |          |
| Shown actual size<br>22.7 mm<br> | SGD-13/1000-LY11       | 1000                   | 13.00 (0.511)    7.20 (0.283)    22.70 (0.893)    10.00 (0.393)<br>Linear pattern, grid length long,<br>higher resistance, reduced<br>heat generation<br>1000 Ω | 55 | Ribbon Leads | ST           | BTP-6            |             |           |          |
|                                  | SGD-13/1000-LY13       | 1000                   |   |    | 75           | Ribbon Leads |                  | AL          |           |          |
|                                  | SGD-13/1000-LY41       | 1000                   |   |    | 55           | Solder Pads  |                  | ST          |           |          |
|                                  | SGD-13/1000-LY43       | 1000                   |   |    | 75           | Solder Pads  |                  | AL          |           |          |

### DISCOUNT SCHEDULE

|                      |                 |
|----------------------|-----------------|
| 1 to 10 pkgs. ....   | Net             |
| 11 to 24 pkgs. ....  | 5%              |
| 25 to 49 pkgs. ....  | 10%             |
| 50 and up and OEM .. | Consult Factory |

<sup>†</sup> For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGD-13/350-LY13, 13 mm grid, 350 Ω nominal-resistance strain gage.

**NOTE**

ST = Steel  
AL = Aluminum

### Extra-Long For Inhomogeneous Material

### To Order

| GAGE PATTERN<br>Leads not shown                | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch) <sup>†</sup> |              |                |               | MAX V*<br>(Vrms) | TERMINATION | TEMP COMP | TERM PAD |
|--|-----------------------|------------------------|--------------------------------------|--------------|----------------|---------------|------------------|-------------|-----------|----------|
|  |                       |                        | GRID                                 |              | CARRIER        |               |                  |             |           |          |
|  |                       |                        | A                                    | B            | C              | D             |                  |             |           |          |
| Shown smaller<br>than actual<br>size 50 mm<br> | SGD-30/120-LY40       | 120                    | 25.00 (0.984)                        | 8.00 (0.315) | 40.00 (1.575)  | 12.00 (0.472) | 12               | Solder Pads | UNC       | BTP-6    |
|  | SGD-30N/120-LY40      | 120                    | 30.00 (1.181)                        | 3.00 (0.118) | 36.00 (1.417)  | 5.00 (0.197)  | 10               | Solder Pads | UNC       |          |
|  | SGD-30/350-LY40       | 350                    | 30.00 (1.181)                        | 3.00 (0.118) | 36.00 (1.417)  | 5.00 (0.197)  | 14               | Solder Pads | UNC       |          |
|  | SGD-50/120-LY40       | 120                    | 50.00 (1.969)                        | 4.30 (0.169) | 60.00 (2.362)  | 9.00 (0.354)  | 12               | Solder Pads | UNC       |          |
|  | SGD-150/240-LY40      | 240                    | 150.00 (5.906)                       | 5.00 (0.197) | 165.00 (6.496) | 9.00 (0.354)  | 35               | Solder Pads | UNC       |          |

<sup>†</sup> For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGD-30/120-LY40, 120 Ω nominal-resistance strain gage.

**NOTE**

UNC = Uncompensated

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# PRECISION STRAIN GAGE

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## ROSETTE STRAIN GAGES 0/45/90° AND 0/60/120° RECTANGULAR AND DELTA, 3 ELEMENT

**Custom-Designed  
Strain Gages  
Available!  
No Minimum Quantities.  
Consult Engineering.**

OMEGA® offers planar and stacked rosettes. Planar rosettes have all 3 strain gage elements in one plane. Stacked rosettes have the 3 strain gage elements stacked one on top of the other. Consider the difference when you make your strain gage selection. Planar rosettes have some advantages over

stacked rosettes. Planar rosettes tend to be thinner and more flexible. They can be used on curved surfaces and conform better to the irregular surfaces. Reinforcement effects of planar gages are minimized. Planar rosettes have superior heat dissipation capability, and better stability. Stacked rosettes are

thicker and stiffer because you have the multiple layers stacked on top of one another. They do not disperse heat as well when voltage is applied to them.



| To Order                              |                       |                             |  |                 |                  |                  |                  |              |              |             |
|---------------------------------------|-----------------------|-----------------------------|--|-----------------|------------------|------------------|------------------|--------------|--------------|-------------|
| GAGE PATTERN<br>Leads not shown       | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch)†                                    |                 |                  |                  | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP | TERM<br>PAD |
|                                       |                       |                             | GRID   |                 | CARRIER          |                  |                  |              |              |             |
|                                       |                       |                             | A  | B               | C                | D                |                  |              |              |             |
| <b>0/45/90° RECTANGULAR 3 ELEMENT</b> |                       |                             |  |                 |                  |                  |                  |              |              |             |
| Shown actual size, 16 mm<br>          | SGD-3/120-RY11        | 120                         | 3.00<br>(0.118)  | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 5.5              | Ribbon Leads | ST           | BPT-3       |
|                                       | SGD-3/120-RY13        | 120                         | Three-element 45°<br>rectangular planar rosette<br>120 Ω |                 |                  |                  | 8                | Ribbon Leads | AL           |             |
|                                       | SGD-3/120-RY31        | 120                         |  |                 |                  |                  | 5.5              | Solder Pads  | ST           |             |
|                                       | SGD-3/120-RY33        | 120                         |  |                 |                  |                  | 8                | Solder Pads  | AL           |             |
| <b>0/60/120° DELTA 3-ELEMENT</b>      |                       |                             |  |                 |                  |                  |                  |              |              |             |
| Shown actual size, 16 mm<br>          | SGD-3/350-RY11        | 350                         | 3.00<br>(0.118)  | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 9.5              | Ribbon Leads | ST           | BPT-3       |
|                                       | SGD-3/350-RY13        | 350                         | Three-element 45°<br>rectangular planar rosette<br>350 Ω |                 |                  |                  | 13               | Ribbon Leads | AL           |             |
|                                       | SGD-3/350-RY31        | 350                         |  |                 |                  |                  | 9.5              | Solder Pads  | ST           |             |
|                                       | SGD-3/350-RY33        | 350                         |  |                 |                  |                  | 13               | Solder Pads  | AL           |             |

| To Order                         |                       |                             |  |                 |                  |                  |                  |                 |                  |                  |
|----------------------------------|-----------------------|-----------------------------|--|-----------------|------------------|------------------|------------------|-----------------|------------------|------------------|
| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch)†                              |                 |                  |                  | MAX V*<br>(Vrms) | TERMINATION     | TEMP<br>COMP     | TERM<br>PAD      |
|                                  |                       |                             | GRID   |                 | CARRIER          |                  |                  |                 |                  |                  |
|                                  |                       |                             | A  | B               | C                | D                |                  |                 |                  |                  |
| <b>0/60/120° DELTA 3-ELEMENT</b> |                       |                             |  |                 |                  |                  |                  |                 |                  |                  |
| Shown actual size, 16 mm<br>     | SGD-3/120-RY41        | 120                         | 3.00<br>(0.118)                                    | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) | 5.5              | Ribbon Leads    | ST               | BPT-3            |
|                                  | SGD-3/120-RY43        | 120                         | Three-element 60°<br>delta planar rosette<br>120 Ω |                 |                  |                  | 8                | Ribbon Leads    | AL               |                  |
|                                  | SGD-3/120-RY71        | 120                         |  |                 |                  |                  | 5.5              | Solder Pads     | ST               |                  |
|                                  | SGD-3/120-RY73        | 120                         |  |                 |                  |                  | 8                | Solder Pads     | AL               |                  |
| Shown actual size, 16 mm<br>     | SGD-3/350-RY41        | 350                         |  |                 |                  |                  | 3.00<br>(0.118)  | 2.90<br>(0.114) | 16.00<br>(0.630) | 16.00<br>(0.630) |
|                                  | SGD-3/350-RY43        | 350                         | Three-element 60°<br>delta planar rosette<br>350 Ω |                 |                  |                  | 13               | Ribbon Leads    | AL               |                  |
|                                  | SGD-3/350-RY71        | 350                         |  |                 |                  |                  | 9.5              | Solder Pads     | ST               |                  |
|                                  | SGD-3/350-RY73        | 350                         |  |                 |                  |                  | 13               | Solder Pads     | AL               |                  |



| DISCOUNT SCHEDULE   |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | 5%  |
| 25 to 49 pkgs. .... | 10% |

† For dimensions key, visit us online.  
 \* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories visit us online.  
**Ordering Example:** SGD-3/350-RY33, 350 Ω nominal-resistance strain gage.

**NOTE**  
 ST = Steel  
 AL = Aluminum

STRAIN GAGES



# PRECISION STRAIN GAGE







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## RECTANGULAR STACKED ROSETTE 0/45/90°

**Custom-Designed Strain Gages Available!**  
No Minimum Quantities. Consult Engineering.

Visit us online 

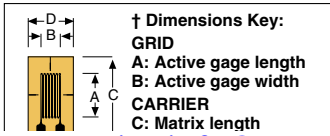
### To Order

| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch)†   |     |              |    | MAX V*<br>(Vrms) | TERMINATION | TEMP COMP    | TERM PAD     |    |
|--|-----------------------|------------------------|--|-----|--------------|----|------------------|-------------|--------------|--------------|----|
|  |                       |                        | GRID   |     | CARRIER      |    |                  |             |              |              |    |
|  |                       |                        | A  | B   | C            | D  |                  |             |              |              |    |
| Shown actual size 5.6 mm<br>    | SGD-2/120-RY51        | 120                    | 2.00 1.10 5.60 5.60<br>(0.079) (0.043) (0.220) (0.220)<br>Small 3-element rectangular stacked rosette<br>120 Ω   | 3   | Ribbon Leads | ST | BPT-1            |             |              |              |    |
|  | SGD-2/120-RY53        | 120                    |  |     |              |    |                  | 4           | Ribbon Leads | AL           |    |
|  | SGD-2/120-RY61        | 120                    |  |     |              |    |                  |             | 3            | Solder Pads  | ST |
|  | SGD-2/120-RY63        | 120                    |  |     |              |    |                  |             |              | Solder Pads  | AL |
| Shown actual size 5.6 mm<br>    | SGD-2/350-RY51        | 350                    | 2.00 1.10 5.60 5.60<br>(0.079) (0.043) (0.220) (0.220)<br>Small 3-element rectangular stacked rosette<br>350 Ω   | 5   | Ribbon Leads | ST | BPT-1            |             |              |              |    |
|  | SGD-2/350-RY53        | 350                    |  |     |              |    |                  | 7           |              | Ribbon Leads | AL |
|  | SGD-2/350-RY61        | 350                    |  |     |              |    |                  |             | 5            | Solder Pads  | ST |
|  | SGD-2/350-RY63        | 350                    |  |     |              |    |                  |             |              | Solder Pads  | AL |
| Shown actual size 7.1 mm<br>   | SGD-3/120-RY51        | 120                    | 3.00 1.70 7.10 7.10<br>(0.118) (0.067) (0.280) (0.280)<br>Medium 3-element rectangular stacked rosette<br>120 Ω  | 4.5 | Ribbon Leads | ST | BPT-2            |             |              |              |    |
|  | SGD-3/120-RY53        | 120                    |  |     |              |    |                  | 6           |              | Ribbon Leads | AL |
|  | SGD-3/120-RY61        | 120                    |  |     |              |    |                  |             | 4.5          | Solder Pads  | ST |
|  | SGD-3/120-RY63        | 120                    |  |     |              |    |                  |             |              | Solder Pads  | AL |
| Shown actual size 7.1 mm<br>  | SGD-3/350-RY51        | 350                    | 3.00 1.70 7.10 7.10<br>(0.118) (0.067) (0.280) (0.280)<br>Medium 3-element rectangular stacked rosette<br>350 Ω  | 7.5 | Ribbon Leads | ST | BPT-2            |             |              |              |    |
|  | SGD-3/350-RY53        | 350                    |  |     |              |    |                  | 10          |              | Ribbon Leads | AL |
|  | SGD-3/350-RY61        | 350                    |  |     |              |    |                  |             | 7.5          | Solder Pads  | ST |
|  | SGD-3/350-RY63        | 350                    |  |     |              |    |                  |             |              | Solder Pads  | AL |
| Shown actual size 11.4 mm<br> | SGD-7/120-RY51        | 120                    | 6.50 3.10 11.40 11.40<br>(0.256) (0.122) (0.449) (0.449)<br>Large 3-element rectangular stacked rosette<br>120 Ω | 9   | Ribbon Leads | ST | BPT-3            |             |              |              |    |
|  | SGD-7/120-RY53        | 120                    |  |     |              |    |                  | 12          |              | Ribbon Leads | AL |
|  | SGD-7/120-RY61        | 120                    |  |     |              |    |                  |             | 9            | Solder Pads  | ST |
|  | SGD-7/120-RY63        | 120                    |  |     |              |    |                  |             |              | Solder Pads  | AL |
| Shown actual size 11.4 mm<br> | SGD-7/350-RY51        | 350                    | 6.50 3.10 11.40 11.40<br>(0.256) (0.122) (0.449) (0.449)<br>Large 3-element rectangular stacked rosette<br>350 Ω | 15  | Ribbon Leads | ST | BPT-3            |             |              |              |    |
|  | SGD-7/350-RY53        | 350                    |  |     |              |    |                  | 20          |              | Ribbon Leads | AL |
|  | SGD-7/350-RY61        | 350                    |  |     |              |    |                  |             | 15           | Solder Pads  | ST |
|  | SGD-7/350-RY63        | 350                    |  |     |              |    |                  |             |              | Solder Pads  | AL |

| DISCOUNT SCHEDULE    |                 |
|----------------------|-----------------|
| 1 to 10 pkgs. ....   | Net             |
| 11 to 24 pkgs. ....  | .5%             |
| 25 to 49 pkgs. ....  | 10%             |
| 50 and up and OEM .. | Consult Factory |

† For dimensions key, visit us online  
 \* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories, visit us online  
**Ordering Example:** SGD-2/350-RY51,  
 350 Ω nominal-resistance strain gage.

**NOTE** ST = Steel

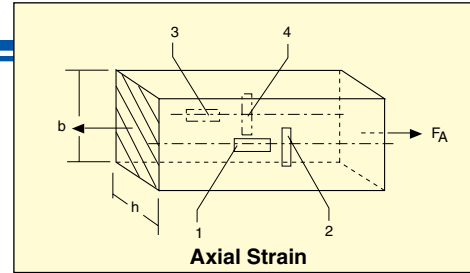


# KARMA STRAIN GAGES

## TEE ROSETTE GAGES

- K-Series, Transducers Quality
- Good Linearity Over Wide Temperature Range  
-75 to 200°C (-100 to 392°F)
- Good Fatigue Life
- Custom Gages Available—Fast Delivery

For Equations  
Visit us online



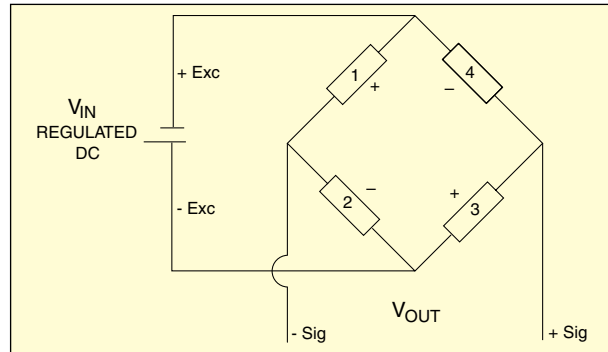
OMEGA® offers K-Series Tee Rosettes for Axial strain transducer designs.

### Three different Tee Rosette styles available:

**SGK-B3A-K350U -\*\*\*\*** has 2 separate strain gages with perpendicular grids on a single carrier.

**SGK-BH3A-K350U-\*\*\*\*** is a half-bridge design, with 2 strain gages, perpendicular grids with a common lead/pad on a single carrier.

**SGK-B5A-K350W-\*\*\*\*** is a half-bridge Tee Rosette design, often used for column load cell design where high accuracy is a requirement. The geometry for this strain gage is shown with the tabs along the top, and the center strain gage is vertical, and used for the principal stress direction in the column. The Perpendicular grid is split, half on each side. This may also be known as transverse grid. The transverse grid tends to correct for bending strain, or off-axis loading in the column.



\*\*\*\* PC11 or PC23

## To Order

| GAGE PATTERN<br>Shown actual size<br>Leads not shown | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE (Ω) | DIMENSIONS mm (inch)†                              |                |               |                | MAX V* (Vrms) | TERMINATION | TEMP COMP |
|--|-----------------------|---------------------|--|----------------|---------------|----------------|---------------|-------------|-----------|
|  |                       |                     | GRID   |                | CARRIER       |                |               |             |           |
|  |                       |                     | A  | B              | C             | D              |               |             |           |
|  | SGK-B3A-K350U-PC11-E  | 350                 | 3.2<br>(0.126)                                     | 4.0<br>(0.157) | 7.5<br>(0.3)  | 10.8<br>(0.43) | 12.5          | Solder Pads | ST        |
|  | SGK-B3A-K350U-PC23-E  | 350                 | 90° TEE rosette axial strain, separate gages 350 Ω |                |               |                | 17.5          | Solder Pads | AL        |
|  | SGK-BH3A-K350U-PC11-E | 350                 | 3.2<br>(0.126)                                     | 4.0<br>(0.157) | 7.5<br>(0.3)  | 10.8<br>(0.43) | 12.5          | Solder Pads | ST        |
|  | SGK-BH3A-K350U-PC23-E | 350                 | 90° TEE rosette half-bridge, common lead/pad 350 Ω |                |               |                | 17.5          | Solder Pads | AL        |
|  | SGK-B5A-K350W-PC11-E  | 350                 | 5.0<br>(0.197)                                     | 2.3<br>(0.091) | 9.8<br>(0.39) | 9.0<br>(0.35)  | 11            | Solder Pads | ST        |
|  | SGK-B5A-K350W-PC23-E  | 350                 | Used for high accuracy column load cells 350 Ω     |                |               |                | 15            | Solder Pads | AL        |

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories visit us online.

Ordering Example: SGK-BH3A-K350U-PC11-E, package of 5, Tee rosette for axial strain, half-bridge with a common solder pad, nominal resistance 350 Ω.

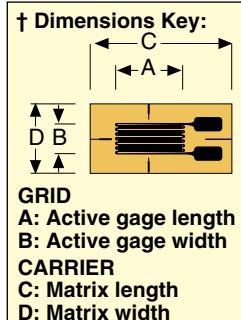
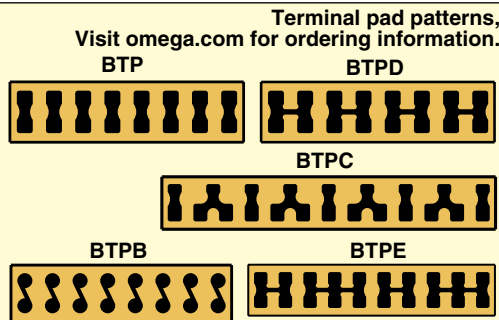
### BONDABLE TERMINAL PADS

When installing strain gages with ribbon leads or solder pads, use Bondable Terminal Pads (BTP) between the strain gage and the wires to your instrumentation.

The Bondable Terminal Pads provide a large easy to use soldering area and provide strain relief between the strain gage and the heavy instrument wires.

Using Bondable Terminal Pads is simple. Use the same adhesive and bonding procedure on the Bondable Terminal Pads as you use on the strain gage.

OMEGA offers BTPs in several sizes and wiring configurations to fit most all strain gage applications.



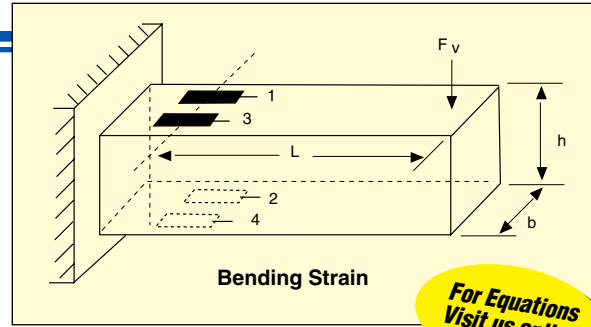
| DISCOUNT SCHEDULE    |                 |
|----------------------|-----------------|
| 1 to 10 pkgs. ....   | Net             |
| 11 to 24 pkgs. ....  | 5%              |
| 25 to 49 pkgs. ....  | 10%             |
| 50 and up and OEM .. | Consult Factory |

**NOTE**  
ST = Steel  
AL = Aluminum

# DUAL PARALLEL GRID STRAIN GAGES






- ✓ K-Series, Transducer-Quality
- ✓ Stock Delivery, Copper Plated Solder Pads
- ✓ Temperature Characteristics Matched to Steel or Aluminum
- ✓ Dual Parallel Grid for Bending Strain Applications
- ✓ Custom Gages Available—Fast Delivery

OMEGA® offers K-Series dual linear strain gage patterns. These strain gages can be used for bending beam transducer designs where you have access to both sides of the beam. Each carrier has 2 separate parallel linear strain gages.



**For Equations Visit us online**

## To Order

| GAGE PATTERN<br>Shown actual size<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE (Ω) | DIMENSIONS mm (inch)†   |                |                |               | MAX V* (Vrms) | TERMINATION | TEMP COMP |
|--|-----------------------|---------------------|---|----------------|----------------|---------------|---------------|-------------|-----------|
|  |                       |                     | GRID  |                | CARRIER        |               |               |             |           |
|  |                       |                     | A   | B              | C              | D             |               |             |           |
| <br>6 mm      | SGK-D2A-K350Q-PC11-E  | 350                 | 2.0<br>(0.079)  | 2.5<br>(0.098) | 6.0<br>(0.24)  | 6.2<br>(0.24) | 7.5           | Solder Pads | ST        |
|  | SGK-D2A-K350Q-PC23-E  | 350                 | Small dual parallel grid for bending strain 350 Ω   |                |                |               | 10.5          | Solder Pads | AL        |
| <br>7 mm     | SGK-D3A-K350U-PC11-E  | 350                 | 3.2<br>(0.126)  | 1.6<br>(0.63)  | 7.0<br>(0.28)  | 5.2<br>(0.2)  | 7.5           | Solder Pads | ST        |
|  | SGK-D3A-K350U-PC23-E  | 350                 | Medium, dual parallel grid pattern for bending strain 350 Ω   |                |                |               | 10.5          | Solder Pads | AL        |
| <br>7.2 mm  | SGK-D3B-K350Q-PC11-E  | 350                 | 3.2<br>(0.126)  | 2.5<br>(0.098) | 7.2<br>(0.29)  | 7.2<br>(0.28) | 9             | Solder Pads | ST        |
|  | SGK-D3B-K350Q-PC23-E  | 350                 | Medium, dual parallel grid pattern for bending strain 350 Ω   |                |                |               | 13            | Solder Pads | AL        |
| <br>10.6 mm | SGK-D6A-K350S-PC11-E  | 350                 | 6.3<br>(0.248)  | 2.5<br>(0.098) | 10.6<br>(0.42) | 7.0<br>(0.28) | 14            | Solder Pads | ST        |
|  | SGK-D6A-K350S-PC23-E  | 350                 | Large, dual parallel grid pattern for bending strain 350 Ω  |                |                |               | 19            | Solder Pads | AL        |
| <br>10.6 mm | SGK-D6A-K1000S-PC11-E | 1000                | 6.3<br>(0.248)  | 2.5<br>(0.098) | 10.6<br>(0.42) | 7.0<br>(0.28) | 22            | Solder Pads | ST        |
|  | SGK-D6A-K1000S-PC23-E | 1000                | Large, dual parallel grid pattern for bending strain, higher resistance, reduced heat generation 1000 Ω |                |                |               | 32            | Solder Pads | AL        |

### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).

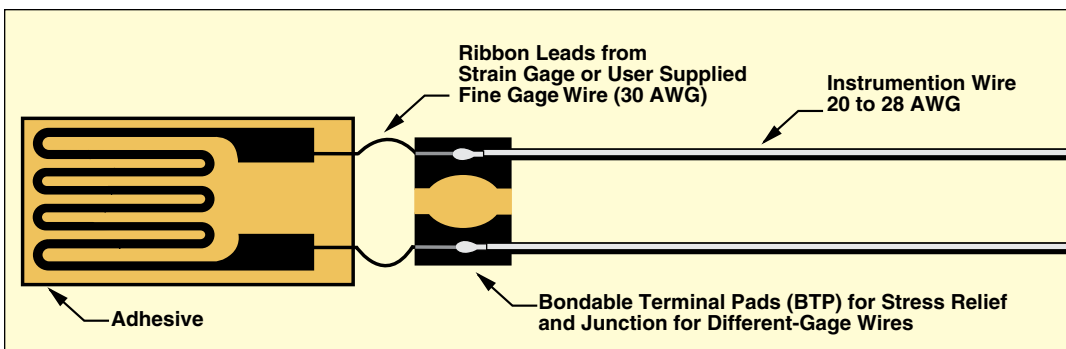
**Note:** For strain gage accessories visit us online.

**Ordering Example:** SGK-D3B-K350Q-PC11-E, package of 5, dual parallel grid for bending strain, with copper solder pads, nominal resistance 350 Ω.

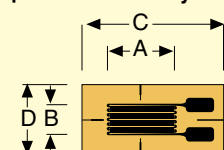
**NOTE**

ST = Steel  
AL = Aluminum

## TYPICAL STRAIN GAGE INSTALLATION



### † Dimensions Key:



**GRID**  
A: Active gage length  
B: Active gage width  
**CARRIER**  
C: Matrix length  
D: Matrix width

- ✓ K-Series, Transducer-Quality
- ✓ Stock Delivery with Solder Pads

The linear pattern strain gages are used to measure strain in a single direction. The strain gage pattern is shown on the left side of the table. Notice the "arrow" which indicates the principal stress direction.

The linear pattern strain gages are available in a variety of styles and sizes. OMEGA® offers miniature linear patterns for strain measurement of a

- ✓ Good Linearity Over Wide Temperature Range -75 to 200°C (-100 to 392°F)

stress concentration or high gradient areas. The terminations are offered both at one end of the grid, or with one at each end of the grid. Wide or narrow linear grid patterns are available.

To determine if the strain gages have temperature characteristics matched to steel or aluminum, see the column labeled "COMP" short for compensation, "ST" indicates steel, "AL" indicates

- ✓ Good Fatigue Life
- ✓ Custom Gages Available

aluminum. See the column labeled "BTP" for accessory bondable terminal pad model numbers.

Dimensions are listed for pattern gage grid length (A) and width (B), and the matrix or carrier length (C) and width (D). The patterns include alignment triangles and letter codes indicating creep code.



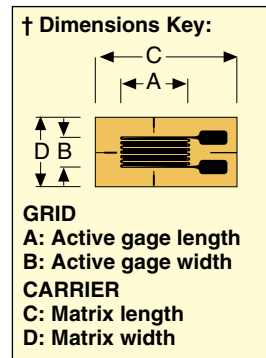
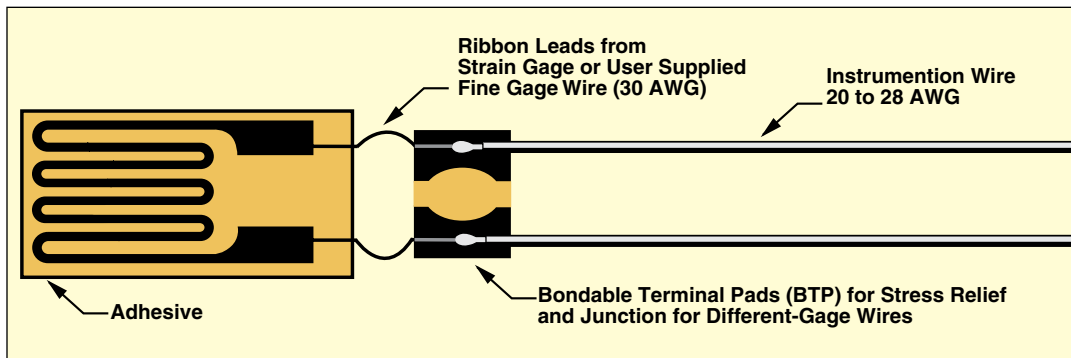
| GAGE PATTERN<br>Shown actual size<br>Leads not shown | MODEL NO.<br>Pkg of 5 | NOM. RESIS-TANCE (Ω) | DIMENSIONS mm (inch)†   |             |            |            | MAX V* (Vrms) | TERMINATION | TEMP COMP | TERM PAD |
|--|-----------------------|----------------------|---|-------------|------------|------------|---------------|-------------|-----------|----------|
|  |                       |                      | GRID  |             | CARRIER    |            |               |             |           |          |
|  |                       |                      | A   | B           | C          | D          |               |             |           |          |
| 5.5 mm<br>   | SGK-L1D-K350P-PC11-E  | 350                  | 1.5 (0.059)   | 2.5 (0.098) | 5.5 (0.22) | 4 (0.16)   | 6.5           | Solder Pads | ST        | BPT-1    |
|  | SGK-L1D-K350P-PC23-E  | 350                  | Miniature linear pattern, measurement of stress concentration 350 Ω |             |            |            | 9             | Solder Pads | AL        |          |
| 6 mm<br>   | SGK-L1E-K350T-PC11-E  | 350                  | 1.51 (0.059)  | 4.5 (0.177) | 6 (0.24)   | 6 (0.24)   | 8.5           | Solder Pads | ST        | BPT-1    |
|  | SGK-L1E-K350T-PC23-E  | 350                  | Miniature linear pattern, measurement of stress concentration 350 Ω |             |            |            | 12.5          | Solder Pads | AL        |          |
| 7.5 mm<br>   | SGK-L3A-K350U-PC11-E  | 350                  | 3.2 (0.126)   | 3.2 (0.126) | 7.5 (0.3)  | 4.6 (0.18) | 10.5          | Solder Pads | ST        | BPT-2    |
|  | SGK-L3A-K350U-PC23-E  | 350                  | Small linear pattern, lead/pads at one end of grid 350 Ω            |             |            |            | 14.5          | Solder Pads | AL        |          |
| 7.2 mm<br>   | SGK-L3B-K350S-PC11-E  | 350                  | 3.2 (0.126)   | 2.5 (0.098) | 7.2 (0.28) | 4 (0.16)   | 9             | Solder Pads | ST        | BPT-2    |
|  | SGK-L3B-K350S-PC23-E  | 350                  | Small linear pattern, lead/pads at one end of grid 350 Ω            |             |            |            | 13            | Solder Pads | AL        |          |

| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | 5%              |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
 Note: For strain gage accessories, visit us online.  
**Ordering Example:** SGK-L3A-K350U-PC11-E, package of 5, linear pattern strain gages with copper plated solder pads, nominal resistance 350 Ω.

**NOTE**  
 ST = Steel  
 AL = Aluminum

### TYPICAL STRAIN GAGE INSTALLATION



# KADMA STRAIN GAGE

## LINEAR PATTERN STRAIN GAGES

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)



### To Order

| GAGE PATTERN<br>Shown<br>actual size<br>Leads not shown | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch) <sup>†</sup>  |                |                |               | MAX V*<br>(Vrms) | TERMINATION | TEMP<br>COMP | TERM<br>PAD |
|---|-----------------------|-----------------------------|--|----------------|----------------|---------------|------------------|-------------|--------------|-------------|
|   |                       |                             | GRID   |                | CARRIER        |               |                  |             |              |             |
|   |                       |                             | A  | B              | C              | D             |                  |             |              |             |
| 8.3 mm<br>  | SGK-L3C-K350T-PC11-E  | 350                         | 3.2<br>(0.126)   | 3.1<br>(0.122) | 8.3<br>(0.33)  | 4.6<br>(0.18) | 10.5             | Solder Pads | ST           | BPT-3       |
|   | SGK-L3C-K350T-PC23-E  | 350                         | Linear pattern, medium size,<br>lead/pad at each side of grid 350 Ω              |                |                |               | 14.5             | Solder Pads | AL           |             |
| 8.5 mm<br>  | SGK-L3D-K350P-PC11-E  | 350                         | 2.8<br>(0.110)   | 2.1<br>(0.083) | 8.5<br>(0.34)  | 3.5<br>(0.14) | 8                | Solder Pads | ST           | BPT-3       |
|   | SGK-L3D-K350P-PC23-E  | 350                         | Linear pattern, medium size,<br>lead/pad at each side of grid 350 Ω              |                |                |               | 12               | Solder Pads | AL           |             |
| 7 mm<br>  | SGK-L3E-K350W-PC11-E  | 350                         | 3.2<br>(0.126)   | 1.5<br>(0.059) | 7<br>(0.28)    | 3<br>(0.12)   | 7.5              | Solder Pads | ST           | BPT-3       |
|   | SGK-L3E-K350W-PC23-E  | 350                         | Linear pattern, medium size,<br>grid width narrow 350 Ω                          |                |                |               | 10.5             | Solder Pads | AL           |             |
| 11 mm<br>   | SGK-L6A-K350U-PC11-E  | 350                         | 6.3<br>(0.248)   | 3.2<br>(0.126) | 11<br>(0.43)   | 4.7<br>(0.18) | 15               | Solder Pads | ST           | BPT-4       |
|   | SGK-L6A-K350U-PC23-E  | 350                         | Linear pattern, large size 350 Ω   |                |                |               | 20               | Solder Pads | AL           |             |
| 11 mm<br>   | SGK-L6A-K1000U-PC11-E | 1000                        | 6.3<br>(0.248)   | 3.2<br>(0.126) | 11<br>(0.43)   | 4.7<br>(0.18) | 25               | Solder Pads | ST           | BPT-4       |
|   | SGK-L6A-K1000U-PC23-E | 1000                        | Linear pattern, large size, higher<br>resistance, reduced heat generation 1000 Ω |                |                |               | 35               | Solder Pads | AL           |             |
| 11.3 mm<br>   | SGK-L6B-K350U-PC11-E  | 350                         | 6.3<br>(0.248)   | 4.4<br>(0.173) | 11.3<br>(0.44) | 6<br>(0.24)   | 17               | Solder Pads | ST           | BPT-4       |
|   | SGK-L6B-K350U-PC23-E  | 350                         | Linear pattern, large size 350 Ω   |                |                |               | 24               | Solder Pads | AL           |             |
| 11.3 mm<br>   | SGK-L6B-K1000U-PC11-E | 1000                        | 6.3<br>(0.248)   | 4.4<br>(0.173) | 11.3<br>(0.44) | 6<br>(0.24)   | 28               | Solder Pads | ST           | BPT-4       |
|   | SGK-L6B-K1000U-PC23-E | 1000                        | Linear pattern, large size, higher resistance,<br>reduced heat generation 1000 Ω |                |                |               | 28               | Solder Pads | AL           |             |

### DISCOUNT SCHEDULE

|                         |                 |
|-------------------------|-----------------|
| 1 to 10 pkgs. . . . .   | Net             |
| 11 to 24 pkgs. . . . .  | 5%              |
| 25 to 49 pkgs. . . . .  | 10%             |
| 50 and up and OEM . . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: **SGK-L6B-K1000U-PC11-E**, package of 5 linear pattern strain gages with copper plated solder pads, temperature characteristics matched to steel, nominal resistance 1000 Ω.

**NOTE**  
ST = Steel  
AL = Aluminum

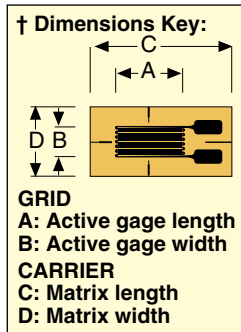
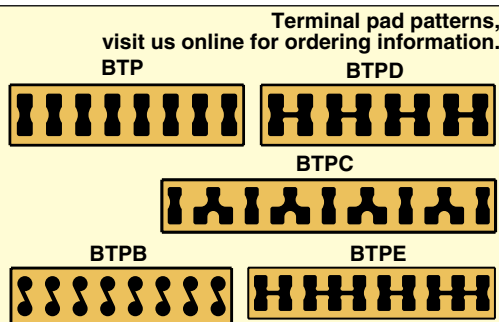
### BONDABLE TERMINAL PADS

When installing strain gages with ribbon leads or Solder Pads, use Bondable Terminal Pads (BTP) between the strain gage and the wires to your instrumentation.

The Bondable Terminal Pads provide a large easy to use soldering area and provide strain relief between the strain gage and the heavy instrument wires.

Using Bondable Terminal Pads is simple. Use the same adhesive and bonding procedure on the Bondable Terminal Pads as you use on the strain gage.

OMEGA offers BTPs in several sizes and wiring configurations to fit most all strain gage applications.



STRAIN GAGES E

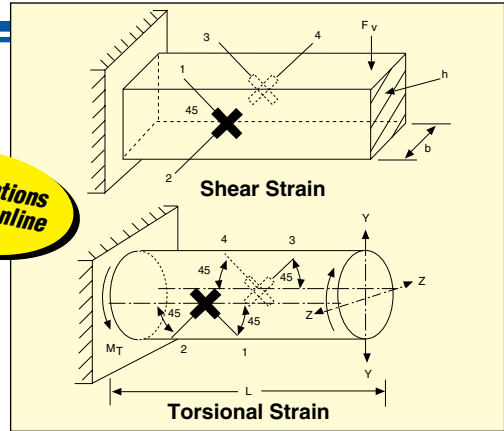
Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# KARMA STRAIN GAGES

## SHEAR AND TORQUE PATTERN GAGES

- ✓ **K-Series, Transducer Quality**
- ✓ **Available as Single ¼ Bridge, Single ¼ Matched Reversed Pattern, ½ Bridge with Separate Leads/ Tabs, or ½ Bridge with Common Lead/Tab**
- ✓ **Custom Gages Available—Fast Delivery**

**For Equations Visit us online**



OMEGA® offers K-Series strain gages for shear and torsional strain applications. These strain gages can be used in transducer design for shear beam load cells. They can also be used for reaction torque on a shaft. Single strain gages are available, SGK-SS3A-K350U-\*\*\*\* and matched, but with opposite grid angle is the SGK-SS3B-K350U-\*\*\*\*. The SGK-SD3A-K350U-\*\*\*\* and the SGK-SD3B-K350U-\*\*\*\* have 2 shear strain gages, with opposite grid angles, on one carrier, with separate leads/tabs (electrically independent). The SGK-SDH3B-K350U-\*\*\*\* has 2 shear strain gages, with opposite grid angles with a common lead/tab.

| To Order   |                        |                     |   |                 |               |               |               |             |           |
|--|------------------------|---------------------|---|-----------------|---------------|---------------|---------------|-------------|-----------|
| GAGE PATTERN<br>Shown actual size<br>Leads not shown | MODEL NO.<br>Pkg of 5  | NOM. RESISTANCE (Ω) | DIMENSIONS mm (inch)†                           |                 |               |               | MAX V* (Vrms) | TERMINATION | TEMP COMP |
|  |                        |                     | GRID  |                 | CARRIER       |               |               |             |           |
|  |                        |                     | A   | B               | C             | D             |               |             |           |
|  | SGK-SS3A-K350U-PC11-E  | 350                 | 3.2<br>(0.126)                                  | 3.38<br>(0.133) | 9.2<br>(0.36) | 4.7<br>(0.19) | 11            | Solder Pads | ST        |
|  | SGK-SS3A-K350U-PC23-E  | 350                 | Single shear gage 350Ω                          |                 |               |               | 15            | Solder Pads | AL        |
|  | SGK-SS3B-K350U-PC11-E  | 350                 | 3.2<br>(0.126)                                  | 3.38<br>(0.133) | 9.2<br>(0.36) | 4.7<br>(0.19) | 11            | Solder Pads | ST        |
|  | SGK-SS3B-K350U-PC23-E  | 350                 | Single shear gage with opposite grid angle 350Ω |                 |               |               | 15            | Solder Pads | AL        |
|  | SGK-SD3A-K350U-PC11-E  | 350                 | 3.2<br>(0.126)                                  | 3.38<br>(0.133) | 9.8<br>(0.39) | 8.5<br>(0.33) | 11            | Solder Pads | ST        |
|  | SGK-SD3A-K350U-PC23-E  | 350                 | Shear torque, 2 gages on one carrier 350Ω       |                 |               |               | 15            | Solder Pads | AL        |
|  | SGK-SD3B-K350U-PC11-E  | 350                 | 3.2<br>(0.126)                                  | 3.38<br>(0.133) | 10.2<br>(0.4) | 9.4<br>(0.37) | 11            | Solder Pads | ST        |
|  | SGK-SD3B-K350U-PC23-E  | 350                 | Shear torque, 2 gages on one carrier 350Ω       |                 |               |               | 15            | Solder Pads | AL        |
|  | SGK-SDH3B-K350U-PC11-E | 1000                | 3.2<br>(0.126)                                  | 3.38<br>(0.133) | 10.2<br>(0.4) | 9.4<br>(0.37) | 11            | Solder Pads | ST        |
|  | SGK-SDH3B-K350U-PC23-E | 1000                | Shear half bridge with common lead/pad 350Ω     |                 |               |               | 15            | Solder Pads | AL        |

\* Maximum permitted bridge energizing voltage (Vrms). \*\*\*\* PC11 or PC23.

Note: For strain gage accessories visit us online.

Ordering Example: SGK-SD3B-K350U-PC23-E, package of 5, Karma K-Series shear/torque pattern, with copper plated solder pads, half-bridge with 2 shear strain gages, with opposite grid angles on one carrier, electrically independent, nominal resistance 350 Ω.

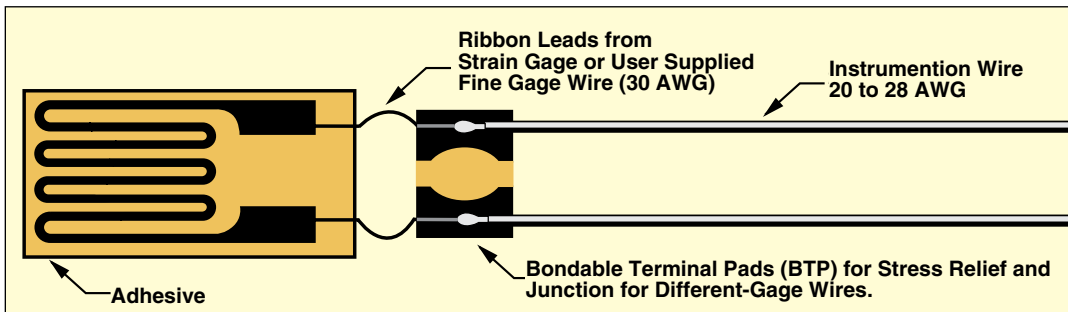
### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | 5%              |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

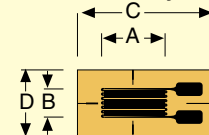
**NOTE**

ST = Steel  
AL = Aluminum

### TYPICAL STRAIN GAGE INSTALLATION



### † Dimensions Key:



**GRID**  
A: Active gage length  
B: Active gage width  
**CARRIER**  
C: Matrix length  
D: Matrix width

STRAIN GAGES

# RESISTOR

## SGN-2/20-E Pkg of 5

### SPECIFICATIONS

Foil Measuring Grid:

Nickel foil 5 microns thick

Carrier: Polyimide

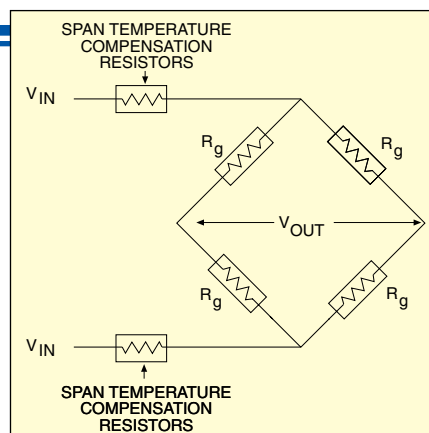
Substrate Thickness: 20 microns

Cover Thickness: 25 microns

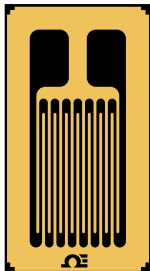
Tolerance in  $\Omega$ :  $\pm 1 \Omega$

Temp Coefficient of Resistance:  
0.6%/°C (0.34%/°F)

Temperature Range: 0 to 100°C (32 to 212°F)



### To Order

| TEMPERATURE COMPENSATED RESISTORS ENCAPSULATED                                     | MODEL NO.  | NOMINAL RESISTANCE ( $\Omega$ ) | DIMENSIONS mm (inch)* |                |                |                |
|--|------------|---------------------------------|-----------------------|----------------|----------------|----------------|
|  |            |                                 | GRID                  |                | CARRIER        |                |
|  |            |                                 | A                     | B              | C              | D              |
|  | SGN-2/20-E | 20                              | 1.9<br>(0.075)        | 3<br>(0.118)   | 4.8<br>(0.189) | 4<br>(0.157)   |
|  | SGN-2/25-E | 25                              | 1.9<br>(0.075)        | 3<br>(0.118)   | 4.8<br>(0.189) | 4<br>(0.157)   |
|  | SGN-2/30-E | 30                              | 1.9<br>(0.075)        | 3<br>(0.118)   | 4.8<br>(0.189) | 4<br>(0.157)   |
|  | SGN-3/10-E | 10                              | 3.2<br>(0.126)        | 3.2<br>(0.126) | 8.6<br>(0.339) | 5.2<br>(0.205) |
|  | SGN-3/12-E | 12                              | 3.2<br>(0.126)        | 3.2<br>(0.126) | 8.6<br>(0.339) | 5.2<br>(0.205) |
|  | SGN-3/34-E | 34                              | 3<br>(0.118)          | 3.2<br>(0.126) | 7.3<br>(0.287) | 4.8<br>(0.189) |
|  | SGN-3/36-E | 36                              | 3<br>(0.118)          | 3.2<br>(0.126) | 7.3<br>(0.287) | 4.8<br>(0.189) |
|  | SGN-4/14-E | 14                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/16-E | 16                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/20-E | 20                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/24-E | 24                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/28-E | 28                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/30-E | 30                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/32-E | 32                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/48-E | 48                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|  | SGN-4/60-E | 60                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |

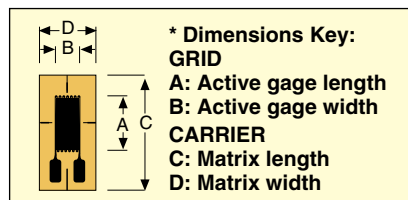
Typical resistor pattern.

### DISCOUNT SCHEDULE

|                             |                 |
|-----------------------------|-----------------|
| 1 to 10 pkgs . . . . .      | Net             |
| 11 to 24 pkgs . . . . .     | 5%              |
| 25 to 49 pkgs . . . . .     | 10%             |
| 50 and up and OEM . . . . . | Consult Factory |

Note: For strain gage accessories, visit us online.

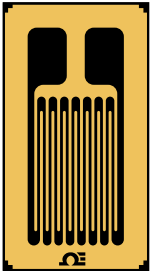
Ordering Example: SGN-4/28-E, 28  $\Omega$  nominal-resistance span temperature-compensation resistor.



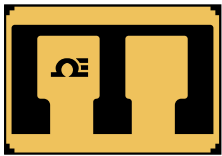
# SPAN TEMPERATURE COMPENSATION BRIDGE-BALANCING, AND ZERO TEMPERATURE-COMPENSATION RESISTORS

| SPECIFICATIONS                 | RES-C                           | RES-N                       |
|--------------------------------|---------------------------------|-----------------------------|
| Foil Measuring Grid            | Constantan foil 5 microns thick | Nickel foil 5 microns thick |
| Carrier                        | Polyimide                       | Polyimide                   |
| Substrate Thickness            | 20 microns                      | 20 microns                  |
| Tolerance in $\Omega$          | $\pm 1 \Omega$                  | $\pm 1 \Omega$              |
| Temp Coefficient of Resistance | —                               | 0.6%/°C (0.34%/°F)          |
| Temperature Range              | -75 to 200°C (-100 to 392°F)    | 0 to 100°C (32 to 212°F)    |

## To Order

| TEMPERATURE COMPENSATED RESISTORS OPEN FACE   | MODEL NO.   | NOMINAL RESISTANCE ( $\Omega$ ) | DIMENSIONS mm (inch)* |                |                |                |
|---|-------------|---------------------------------|-----------------------|----------------|----------------|----------------|
|   |             |                                 | GRID                  |                | CARRIER        |                |
|   |             |                                 | A                     | B              | C              | D              |
|  <p>Typical resistor pattern.</p> | SGN-2/20-PN | 20                              | 1.9<br>(0.075)        | 3<br>(0.118)   | 4.8<br>(0.189) | 4<br>(0.157)   |
|   | SGN-2/25-PN | 25                              | 1.9<br>(0.075)        | 3<br>(0.118)   | 4.8<br>(0.189) | 4<br>(0.157)   |
|   | SGN-2/30-PN | 30                              | 1.9<br>(0.075)        | 3<br>(0.118)   | 4.8<br>(0.189) | 4<br>(0.157)   |
|   | SGN-3/10-PN | 10                              | 3.2<br>(0.126)        | 3.2<br>(0.126) | 8.6<br>(0.339) | 5.2<br>(0.205) |
|   | SGN-3/12-PN | 12                              | 3.2<br>(0.126)        | 3.2<br>(0.126) | 8.6<br>(0.339) | 5.2<br>(0.205) |
|   | SGN-3/34-PN | 34                              | 3<br>(0.118)          | 3.2<br>(0.126) | 7.3<br>(0.287) | 4.8<br>(0.189) |
|   | SGN-3/36-PN | 36                              | 3<br>(0.118)          | 3.2<br>(0.126) | 7.3<br>(0.287) | 4.8<br>(0.189) |
|   | SGN-4/14-PN | 16                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/16-PN | 16                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/20-PN | 20                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/24-PN | 24                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/28-PN | 28                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/30-PN | 30                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/32-PN | 32                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
|   | SGN-4/48-PN | 48                              | 4<br>(0.157)          | 3.2<br>(0.126) | 8.8<br>(0.346) | 4.8<br>(0.189) |
| SGN-4/60-PN   | 60          | 4<br>(0.157)                    | 3.2<br>(0.126)        | 8.8<br>(0.346) | 4.8<br>(0.189) |                |

## BRIDGE-BALANCING AND ZERO TEMPERATURE-COMPENSATION RESISTORS

|   |        |   |                |                |                |                |
|---|--------|---|----------------|----------------|----------------|----------------|
|  | RES-2C | 2 | 3.4<br>(0.134) | 6.3<br>(0.248) | 4.6<br>(0.181) | 6.7<br>(0.264) |
|   | RES-5C | 5 | 3.4<br>(0.134) | 6.3<br>(0.248) | 4.6<br>(0.181) | 6.7<br>(0.264) |
|   | RES-2N | 2 | 3.4<br>(0.134) | 6.3<br>(0.248) | 4.6<br>(0.181) | 6.7<br>(0.264) |
|   | RES-5N | 5 | 3.4<br>(0.134) | 6.3<br>(0.248) | 4.6<br>(0.181) | 6.7<br>(0.264) |

### DISCOUNT SCHEDULE

|                   |                 |
|-------------------|-----------------|
| 1 to 10 pkgs      | Net             |
| 11 to 24 pkgs     | .5%             |
| 25 to 49 pkgs     | 10%             |
| 50 and up and OEM | Consult Factory |

\* For dimensions key, visit us online.

Note: For strain gage accessories, visit us online.

Ordering Example: SGN-4/28-PN, 28  $\Omega$  nominal-resistance span temperature-compensation resistor.







# BIAXIAL 90° X-Y "TEE" ROSETTE CAN BE USED TO MEASURE STRAIN IN THE X AND Y DIRECTIONS

OMEGA offers 0/90° TEE planar rosette patterns, with 2 separate strain gages on one carrier. The gage grids are perpendicular, and are electrically independent. These can

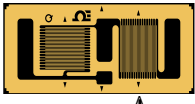
be used in transducer design for axial strain applications or can be wired separately to measure strain in the X and Y directions.

## To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch)†  |     |              |    | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP |     |             |    |
|---|-----------------------|-----------------------------|--|-----|--------------|----|------------------|--------------|--------------|-----|-------------|----|
|   |                       |                             | GRID   |     | CARRIER      |    |                  |              |              |     |             |    |
|   |                       |                             | A  | B   | C            | D  |                  |              |              |     |             |    |
| <br>Shown<br>actual size<br>4.9 mm   | SGT-2/350-XY11        | 350                         | 1.6 1.8 4.9 5.8<br>(0.063) (0.071) (0.193) (0.228)<br>Small TEE rosette, leads/pads,<br>electrically independent<br>350 Ω            | 5.5 | Ribbon Leads | ST |                  |              |              |     |             |    |
|   | SGT-2/350-XY13        | 350                         |  |     |              |    | 7.5              | Ribbon Leads | AL           |     |             |    |
|   | SGT-2/350-XY41        | 350                         |  |     |              |    |                  |              |              | 5.5 | Solder Pads | ST |
|   | SGT-2/350-XY41        | 350                         |  |     |              |    |                  |              |              |     |             |    |
| <br>Shown<br>actual size<br>6.9 mm   | SGT-3/350-XY11        | 350                         | 3.2 3.6 6.9 9.9<br>(0.126) (0.142) (0.272) (0.039)<br>Medium TEE rosette<br>350 Ω  | 11  | Ribbon Leads | ST |                  |              |              |     |             |    |
|   | SGT-3/350-XY13        | 350                         |  |     |              |    | 16               | Ribbon Leads | AL           |     |             |    |
|   | SGT-3/350-XY41        | 350                         |  |     |              |    |                  |              |              | 11  | Solder Pads | ST |
|   | SGT-3/350-XY43        | 350                         |  |     |              |    |                  |              |              |     |             |    |
| <br>Shown<br>actual size<br>7 mm   | SGT-3/1000-XY11       | 1000                        | 3.2 3.6 7.0 9.6<br>(0.126) (0.138) (0.276) (0.378)<br>Medium TEE rosette,<br>higher resistance,<br>reduced heat generation<br>1000 Ω | 18  | Ribbon Leads | ST |                  |              |              |     |             |    |
|   | SGT-3/1000-XY13       | 1000                        |  |     |              |    | 25               | Ribbon Leads | AL           |     |             |    |
|   | SGT-3/1000-XY41       | 1000                        |  |     |              |    |                  |              |              | 18  | Solder Pads | ST |
|   | SGT-3/1000-XY43       | 1000                        |  |     |              |    |                  |              |              |     |             |    |
| <br>Shown<br>actual size<br>8.6 mm | SGT-4/350-XY11        | 350                         | 4.0 4.6 8.6 12.3<br>(0.157) (0.181) (0.339) (0.484)<br>Large TEE rosette, leads/pads<br>electrically independent<br>350 Ω            | 14  | Ribbon Leads | ST |                  |              |              |     |             |    |
|   | SGT-4/350-XY13        | 350                         |  |     |              |    | 20               | Ribbon Leads | AL           |     |             |    |
|   | SGT-4/350-XY41        | 350                         |  |     |              |    |                  |              |              | 14  | Solder Pads | ST |
|   | SGT-4/350-XY43        | 350                         |  |     |              |    |                  |              |              |     |             |    |

OMEGA offers 0/90° TEE planar rosette patterns, in a half-bridge with a common lead/solder pad. These would typically be used in transducer design for axial strain applications. Each carrier piece has 2 strain gages, with perpendicular grids. SGT-3H/350-XY\*\* actually has 4 leads/solder pads.

Notice that one of the strain gages has 2 leads/solder pads on one side of the grid. If the factory has installed leads, all 4 leads are installed, and one lead will be cut away, as it will not be needed. This design is offered to give variety of options for wire routing.

|   |                 |     |  |   |              |    |    |              |    |   |             |    |
|---|-----------------|-----|--|---|--------------|----|----|--------------|----|---|-------------|----|
| <br>Shown larger than<br>actual size, 12 mm<br><br>Leads not shown | SGT-3H/350-XY11 | 350 | 2.5 2.5 12.0 4.8<br>(0.098) (0.098) (0.472) (0.189)<br>Small 90° TEE rosette,<br>with repositioned lead/tab<br>350 Ω | 9 | Ribbon Leads | ST |    |              |    |   |             |    |
|   | SGT-3H/350-XY13 | 350 |  |   |              |    | 12 | Ribbon Leads | AL |   |             |    |
|   | SGT-3H/350-XY41 | 350 |  |   |              |    |    |              |    | 9 | Solder Pads | ST |
|   | SGT-3H/350-XY43 | 350 |  |   |              |    |    |              |    |   |             |    |

### DISCOUNT SCHEDULE

1 to 10 pkgs. .... Net  
 11 to 24 pkgs. .... 5%  
 25 to 49 pkgs. .... 10%  
 50 and up and OEM .. Consult Factory

† For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

\*\* XY11, XY13, XY41 or XY43.

Note: For strain gage accessories, visit us online.

Ordering Example: SGT-3/350-XY11, 350 Ω nominal resistance, medium TEE rosette strain gage.

**NOTE**  
 ST = Steel  
 AL = Aluminum

# TRANSPIRED QUALITY STRAIN GAGE




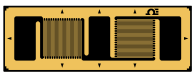


Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## 0/90° TEE ROSETTES

OMEGA® offers 0/90° TEE planar rosette patterns, in a half-bridge with a common lead/Solder Pads.

These would typically be used in transducer design for axial strain applications. Each carrier

piece has 2 strain gages, with perpendicular grids, and 3 leads/Solder Pads.

| To Order  |                       |                        |   |     |              |    |                  |              |           |     |             |    |
|---|-----------------------|------------------------|---|-----|--------------|----|------------------|--------------|-----------|-----|-------------|----|
| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)†   |     |              |    | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |     |             |    |
|   |                       |                        | GRID  |     | CARRIER      |    |                  |              |           |     |             |    |
|   |                       |                        | A   | B   | C            | D  |                  |              |           |     |             |    |
| <b>Shown actual size, 8.3 mm</b><br>               | SGT-1/175-XY11        | 175                    | 1.1 1.7 8.3 3.0<br>(0.043) (0.067) (0.327) (0.118)<br>Miniature 90° TEE rosette,<br>often used on small<br>column transducers<br>175 Ω    | 3   | Ribbon Leads | ST |                  |              |           |     |             |    |
|   | SGT-1/175-XY13        | 175                    |   |     |              |    | 5                | Ribbon Leads | AL        |     |             |    |
|   | SGT-1/175-XY41        | 175                    |   |     |              |    |                  |              |           | 3   | Solder Pads | ST |
|   | SGT-1/175-XY43        | 175                    |   |     |              |    |                  |              |           |     |             |    |
| <b>Shown actual size, 8.8 mm</b><br>               | SGT-1/350-XY11        | 350                    | 1.5 2.0 8.8 3.4<br>(0.059) (0.079) (0.346) (0.134)<br>Miniature 90° TEE rosette,<br>often used on small<br>column transducers<br>350 Ω    | 5.5 | Ribbon Leads | ST |                  |              |           |     |             |    |
|   | SGT-1/350-XY13        | 350                    |   |     |              |    | 5                | Ribbon Leads | AL        |     |             |    |
|   | SGT-1/350-XY41        | 350                    |   |     |              |    |                  |              |           | 5.5 | Solder Pads | ST |
|   | SGT-1/350-XY43        | 350                    |   |     |              |    |                  |              |           |     |             |    |
| <b>Shown actual size, 5.8 mm</b><br>             | SGT-2H/350-XY11       | 350                    | 2.0 2.8 5.8 7.4<br>(0.079) (0.11) (0.228) (0.291)<br>Small, general purpose<br>90° TEE rosette<br>350 Ω                                   | 7.5 | Ribbon Leads | ST |                  |              |           |     |             |    |
|   | SGT-2H/350-XY13       | 350                    |   |     |              |    | 11               | Ribbon Leads | AL        |     |             |    |
|   | SGT-2H/350-XY41       | 350                    |   |     |              |    |                  |              |           | 7.5 | Solder Pads | ST |
|   | SGT-2H/350-XY43       | 350                    |   |     |              |    |                  |              |           |     |             |    |
| <b>Shown smaller than actual size, 13 mm</b><br> | SGT-3BH/350-XY11      | 350                    | 2.5 3.1 13 4.5<br>(0.098) (0.122) (0.512) (0.177)<br>90° TEE rosette,<br>often used on<br>column transducers<br>350 Ω                     | 9   | Ribbon Leads | ST |                  |              |           |     |             |    |
|   | SGT-3BH/350-XY13      | 350                    |   |     |              |    | 13               | Ribbon Leads | AL        |     |             |    |
|   | SGT-3BH/350-XY41      | 350                    |   |     |              |    |                  |              |           | 9   | Solder Pads | ST |
|   | SGT-3BH/350-XY43      | 350                    |   |     |              |    |                  |              |           |     |             |    |
| <b>Shown actual size, 7.2 mm</b><br>             | SGT-3H/1000-XY11      | 1000                   | 3.2 3.5 7.2 10.0<br>(0.126) (0.138) (0.283) (0.394)<br>Medium 90° TEE rosette,<br>higher resistance,<br>reduced heat generation<br>1000 Ω | 18  | Ribbon Leads | ST |                  |              |           |     |             |    |
|   | SGT-3H/1000-XY13      | 1000                   |   |     |              |    | 25               | Ribbon Leads | AL        |     |             |    |
|   | SGT-3H/1000-XY41      | 1000                   |   |     |              |    |                  |              |           | 18  | Solder Pads | ST |
|   | SGT-3H/1000-XY43      | 1000                   |   |     |              |    |                  |              |           |     |             |    |
| <b>Shown actual size, 5.7 mm</b><br>             | SGT-3L/350-XY11       | 350                    | 2.6 1.8 5.7 5.2<br>(0.102) (0.071) (0.224) (0.205)<br>Small 90° TEE rosette,<br>half-bridge with<br>a common lead/tab<br>350 Ω            | 7   | Ribbon Leads | ST |                  |              |           |     |             |    |
|   | SGT-3L/350-XY13       | 350                    |   |     |              |    | 10               | Ribbon Leads | AL        |     |             |    |
|   | SGT-3L/350-XY41       | 350                    |   |     |              |    |                  |              |           | 7   | Solder Pads | ST |
|   | SGT-3L/350-XY43       | 350                    |   |     |              |    |                  |              |           |     |             |    |

### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

† For dimensions key, visit us online. \* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGT-3BH/350-XY41, 350 Ω transducer quality TEE planar rosette strain gage.





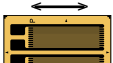
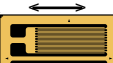

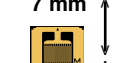
**NOTE**  
ST = Steel  
AL = Aluminum

# ROMETEC QUALITY STRAIN GAGE

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## DUAL GRID FOR BENDING APPLICATIONS

### To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM.<br>RESIS-<br>TANCE<br>( $\Omega$ ) | DIMENSIONS<br>mm (inch) <sup>†</sup>  |     |              |    | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP |
|---|-----------------------|---|---|-----|--------------|----|------------------|--------------|--------------|
|   |                       |   | GRID  |     | CARRIER      |    |                  |              |              |
|   |                       |   | A   | B   | C            | D  |                  |              |              |
| <b>Shown actual size<br/>5.5 mm</b><br>    | SGT-2/350-DY11        | 350                                     | 2.0    2.0    5.5    5.9<br>(0.079) (0.079) (0.217) (0.232)<br>Miniature, parallel dual<br>grid pattern, bending strain<br>350 $\Omega$   | 6.5 | Ribbon Leads | ST |                  |              |              |
|   | SGT-2/350-DY13        | 350                                     |   |     |              |    | 9.5              | Ribbon Leads | AL           |
|   | SGT-2/350-DY41        | 350                                     |   |     |              |    | 6.5              | Solder Pads  | ST           |
|   | SGT-2/350-DY43        | 350                                     |   |     |              |    | 9.5              | Solder Pads  | AL           |
| <b>Shown actual size<br/>6.1 mm</b><br>    | SGT-2C/350-DY11       | 350                                     | 1.9    2.5    6.1    6.4<br>(0.075) (0.098) (0.24) (0.252)<br>Small, parallel dual<br>grid pattern, bending strain<br>350 $\Omega$  | 7   | Ribbon Leads | ST |                  |              |              |
|   | SGT-2C/350-DY13       | 350                                     |   |     |              |    | 10               | Ribbon Leads | AL           |
|   | SGT-2C/350-DY41       | 350                                     |   |     |              |    | 7                | Solder Pads  | ST           |
|   | SGT-2C/350-DY43       | 350                                     |   |     |              |    | 10               | Solder Pads  | AL           |
| <b>Shown actual size<br/>7 mm</b><br>      | SGT-3N/350-DY11       | 350                                     | 3.2    2.5    7.0    6.9<br>(0.126) (0.098) (0.276) (0.272)<br>Medium, parallel dual grid<br>pattern, bending strain<br>350 $\Omega$  | 9   | Ribbon Leads | ST |                  |              |              |
|   | SGT-3N/350-DY13       | 350                                     |   |     |              |    | 13               | Ribbon Leads | AL           |
|   | SGT-3N/350-DY41       | 350                                     |   |     |              |    | 9                | Solder Pads  | ST           |
|   | SGT-3N/350-DY43       | 350                                     |   |     |              |    | 13               | Solder Pads  | AL           |
| <b>Shown actual size<br/>6 mm</b><br>    | SGT-3/350-DY11        | 350                                     | 3.0    1.6    6.0    4.1<br>(0.118) (0.063) (0.236) (0.161)<br>Medium, parallel dual grid<br>pattern, bending strain, grid narrow<br>350 $\Omega$                               | 7.5 | Ribbon Leads | ST |                  |              |              |
|   | SGT-3/350-DY13        | 350                                     |   |     |              |    | 10               | Ribbon Leads | AL           |
|   | SGT-3/350-DY41        | 350                                     |   |     |              |    | 7.5              | Solder Pads  | ST           |
|   | SGT-3/350-DY43        | 350                                     |   |     |              |    | 10               | Solder Pads  | AL           |
| <b>Shown actual size<br/>10 mm</b><br>   | SGT-6/350-DY11        | 350                                     | 6.3    2.5    10.0    7.0<br>(0.248) (0.098) (0.394) (0.276)<br>Medium, parallel dual<br>pattern, grid narrow<br>350 $\Omega$   | 13  | Ribbon Leads | ST |                  |              |              |
|   | SGT-6/350-DY13        | 350                                     |   |     |              |    | 18               | Ribbon Leads | AL           |
|   | SGT-6/350-DY41        | 350                                     |   |     |              |    | 13               | Solder Pads  | ST           |
|   | SGT-6/350-DY43        | 350                                     |   |     |              |    | 18               | Solder Pads  | AL           |
| <b>Shown actual size<br/>11.8 mm</b><br> | SGT-7/350-DY11        | 350                                     | 6.5    3.6    11.8    9.7<br>(0.256) (0.142) (0.465) (0.382)<br>Large, parallel dual pattern<br>350 $\Omega$  | 15  | Ribbon Leads | ST |                  |              |              |
|   | SGT-7/350-DY13        | 350                                     |   |     |              |    | 20               | Ribbon Leads | AL           |
|   | SGT-7/350-DY41        | 350                                     |   |     |              |    | 15               | Solder Pads  | ST           |
|   | SGT-7/350-DY43        | 350                                     |   |     |              |    | 20               | Solder Pads  | AL           |
| <b>Shown actual size<br/>11.8 mm</b><br> | SGT-7/1000-DY11       | 1000                                    | 6.5    3.6    11.8    9.7<br>(0.256) (0.142) (0.465) (0.382)<br>Large, parallel dual pattern,<br>bending strain, higher resistance,<br>reduced heat generation<br>1000 $\Omega$ | 27  | Ribbon Leads | ST |                  |              |              |
|   | SGT-7/1000-DY13       | 1000                                    |   |     |              |    | 40               | Ribbon Leads | AL           |
|   | SGT-7/1000-DY41       | 1000                                    |   |     |              |    | 27               | Solder Pads  | ST           |
|   | SGT-7/1000-DY43       | 1000                                    |   |     |              |    | 40               | Solder Pads  | AL           |
| <b>Shown actual size<br/>7 mm</b><br>    | SGT-2D/350-DY11       | 350                                     | 1.5    0.7    7.0    3.0<br>(0.059) (0.067) (0.276) (0.118)<br>Dual-element pattern<br>for narrow bending beams<br>Centerline spacing 2 mm (0.079")<br>350 $\Omega$             | 5.5 | Ribbon Leads | ST |                  |              |              |
|   | SGT-2D/350-DY13       | 350                                     |   |     |              |    | 7.5              | Ribbon Leads | AL           |
|   | SGT-2D/350-DY41       | 350                                     |   |     |              |    | 5.5              | Solder Pads  | ST           |
|   | SGT-2D/350-DY43       | 350                                     |   |     |              |    | 7.5              | Solder Pads  | AL           |

#### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | .5% |
| 25 to 49 pkgs. .... | 10% |

<sup>†</sup> For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

**Note:** For strain gage accessories, visit us online.

**Ordering Example:** SGT-3/350DY11, package of 5, dual grid pattern for bending strain, nominal resistance 350  $\Omega$ .

**NOTE**  
ST = Steel  
AL = Aluminum

STRAIN GAGES

# TRANSDUCED QUALITY STRAIN GAGE

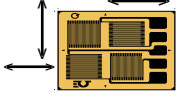
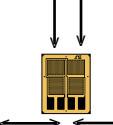

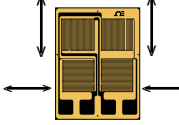
Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FULL WHEATSTONE BRIDGE, BENDING OR AXIAL TENSION OR COMPRESSION PERPENDICULAR GRIDS SINGLE SURFACE GAGING

Quickly and easily design and build your own transducer for bending or axial strain applications where only one side of the beam is available for strain gage installation. Look up the Modulus of Elasticity and the Yield Strength of your material, and design your spring element so that you will be working in the linear portion of the stress-strain curve. For best results use stainless steel or aluminum and match the material to the strain gage temperature characteristics. Install one full bridge, as the one carrier piece has all 4 strain

gages. Having one carrier with multiple strain gages offers several advantages. Alignment of the 4 strain gages with respect to each other has already done for you. Strain gages share common ribbon leads or solder pads which saves wiring steps and valuable time. Simply, position the bondable terminal pad close by, and connect your 4 leads (+Excitation, -Excitation, +Signal, -Signal) to the already completed full Wheatstone bridge. Power up your transducer, and calibrate it with a known applied load. The full bridge has 2 fully

active strain gages in the principal stress direction and 2 strain gages that will see the effect of Poisson's Ratio. The full Wheatstone bridge tends to cancel thermal and off-axis errors. SGT-3G/350-FB\*\* has 5 terminals, which means it has an open corner at the signal terminals, for addition of zero temperature compensation, and zero balance compensation resistors. All of the other full bridge gages on this page have 4 terminals.

| To Order  |                       |                                |  |         |         |         |                  |              |              |
|---|-----------------------|--------------------------------|--|---------|---------|---------|------------------|--------------|--------------|
| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM.<br>RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch) <sup>†</sup>  |         |         |         | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP |
|   |                       |                                | GRID   |         | CARRIER |         |                  |              |              |
|   |                       |                                | A  | B       | C       | D       |                  |              |              |
|  <p>Shown actual size, 10.5 mm</p> | SGT-3G/350-FB11       | 350                            | 2.5  | 2.9     | 10.5    | 9.3     | 9                | Ribbon Leads | ST           |
|   | SGT-3G/350-FB13       | 350                            | (0.098)  | (0.114) | (0.413) | (0.366) | 13               | Ribbon Leads | AL           |
|   | SGT-3G/350-FB41       | 350                            | Full bridge for bending or axial strain, single surface gaging, 5 leads/solder pads, open corner in bridge |         |         |         | 9                | Solder Pads  | ST           |
|   | SGT-3G/350-FB43       | 350                            | 350 Ω  |         |         |         | 13               | Solder Pads  | AL           |
|  <p>Shown actual size, 8 mm</p>    | SGT-2/1000-FB11       | 1000                           | 1.8  | 2.4     | 8.0     | 6.5     | 12               | Ribbon Leads | ST           |
|   | SGT-2/1000-FB13       | 1000                           | (0.071)  | (0.094) | (0.315) | (0.256) | 16               | Ribbon Leads | AL           |
|   | SGT-2/1000-FB41       | 1000                           | Full bridge for bending or axial strain, single surface gaging   |         |         |         | 12               | Solder Pads  | ST           |
|   | SGT-2/1000-FB43       | 1000                           | 1000 Ω   |         |         |         | 16               | Solder Pads  | AL           |
|  <p>Shown actual size, 10 mm</p>   | SGT-2/350-FB11        | 350                            | 1.8  | 2.0     | 10      | 9.0     | 6.5              | Ribbon Leads | ST           |
|   | SGT-2/350-FB13        | 350                            | (0.071)  | (0.079) | (0.394) | (0.354) | 9                | Ribbon Leads | AL           |
|   | SGT-2/350-FB41        | 350                            | Full bridge for bending or axial strain  |         |         |         | 6.5              | Solder Pads  | ST           |
|   | SGT-2/350-FB43        | 350                            | 350 Ω  |         |         |         | 9                | Solder Pads  | AL           |
|  <p>Shown actual size, 14.8 mm</p> | SGT-4/1000-FB11       | 1000                           | 4.0  | 4.3     | 14.8    | 11.1    | 23               | Ribbon Leads | ST           |
|   | SGT-4/1000-FB13       | 1000                           | (0.157)  | (0.169) | (0.583) | (0.437) | 33               | Ribbon Leads | AL           |
|   | SGT-4/1000-FB41       | 1000                           | Full bridge for bending or axial strain, single surface gaging   |         |         |         | 23               | Solder Pads  | ST           |
|   | SGT-4/1000-FB43       | 1000                           | 1000 Ω   |         |         |         | 33               | Solder Pads  | AL           |

| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

<sup>†</sup> For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

\*\* FB11, FB13, FB41 or FB43

**Note:** For strain gage accessories, visit us online.

**Ordering Example:** SGT-2/350-FB11, package of 5, full bridge for bending, nominal resistance 350 Ω.

|             |                             |
|-------------|-----------------------------|
| <b>NOTE</b> | ST = Steel<br>AL = Aluminum |
|-------------|-----------------------------|

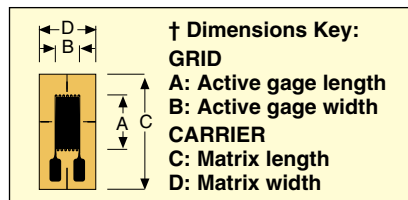
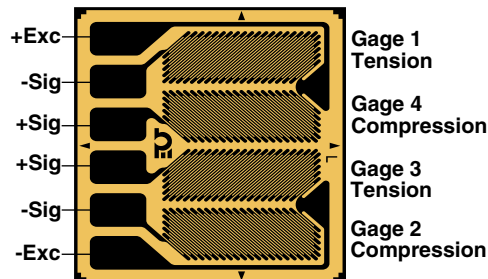
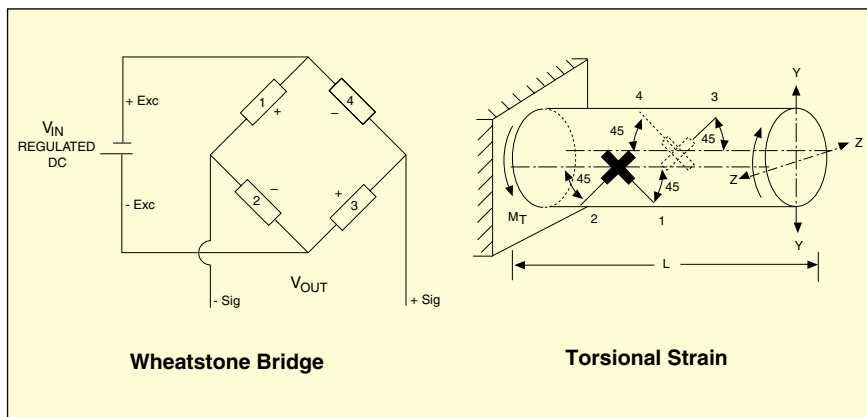
# STRAIN GAGE

## SHEAR GAGES—FULL BRIDGE SHEAR


OMEGA offers full bridge transducer quality strain gages for shear and torsional strain applications. These strain gages can be used in transducer design for shear beam load cells, or they can also be used for reaction torque on a shaft.

SGT-2DD/350-SY\*\* has 2 half bridges on one carrier piece. Each half bridge has a dual shear pattern, with opposite grids and a common lead/solder pad. SGT-3/700-FB\*\* has 4 independent shear strain gages, with opposite grid angles, on one carrier, with separate


leads/pads (electrically independent). Below we show one wiring example; SGT-2DD/350-SY\*\* used to measure a reaction torque on a shaft. The strain gages have been numbered, and the leads/solder pads labeled.



### 4 STRAIN GAGES ON ONE CARRIER PIECE, 2 HALF BRIDGES CAN BE USED AS 1 FULL WHEATSTONE BRIDGE

| To Order   |                       |                             |  |     |         |     |                  |              |              |
|--|-----------------------|-----------------------------|--|-----|---------|-----|------------------|--------------|--------------|
| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch)†  |     |         |     | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP |
|  |                       |                             | GRID   |     | CARRIER |     |                  |              |              |
|  |                       |                             | A  | B   | C       | D   |                  |              |              |
| Shown<br>actual size,<br>7.6 mm<br> | SGT-2DD/350-SY11      | 350                         | 1.6  | 1.7 | 7.6     | 8.9 | 9                | Ribbon Leads | ST           |
|  | SGT-2DD/350-SY13      | 350                         | (0.063) (0.067) (0.299) (0.350)  |     |         |     | 13               | Ribbon Leads | AL           |
|  | SGT-2DD/350-SY41      | 350                         | Full b rridge, shear pattern,<br>2 half bridge with common lead/<br>solder pad |     |         |     | 9                | Solder Pads  | ST           |
|  | SGT-2DD/350-SY43      | 350                         | 350 Ω  |     |         |     | 13               | Solder Pads  | AL           |

### 4 STRAIN GAGES ON ONE CARRIER PIECE CAN BE USED AS 1 FULL WHEATSTONE BRIDGE

| To Order   |                       |                             |   |     |         |     |                  |              |              |
|--|-----------------------|-----------------------------|---|-----|---------|-----|------------------|--------------|--------------|
| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch)†   |     |         |     | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP |
|  |                       |                             | GRID  |     | CARRIER |     |                  |              |              |
|  |                       |                             | A   | B   | C       | D   |                  |              |              |
| Shown<br>actual size,<br>9.8 mm<br> | SGT-3/700-FB11        | 700                         | 1.9   | 3.4 | 9.8     | 8.2 | 11               | Ribbon Leads | ST           |
|  | SGT-3/700-FB13        | 700                         | (0.075) (0.134) (0.386) (0.323)   |     |         |     | 16               | Ribbon Leads | AL           |
|  | SGT-3/700-FB41        | 700                         | Full bridge, 4 shear strain gages,<br>on one carrier with separate<br>leads/solder pads |     |         |     | 11               | Solder Pads  | ST           |
|  | SGT-3/700-FB43        | 700                         | 700 Ω   |     |         |     | 16               | Solder Pads  | AL           |

| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | .10%            |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
 \*\* SY11, SY13, SY41 or SY43; FB11, FB13, FB41 or FB43.  
**Note:** For strain gage accessories, visit us online.  
**Ordering Example:** SGT-2DD/350-SY11, package of 5,  
 full bridge shear, with ribbon leads, matched to steel.

**NOTE**  
 ST = Steel  
 AL = Aluminum

STRAIN GAGES  

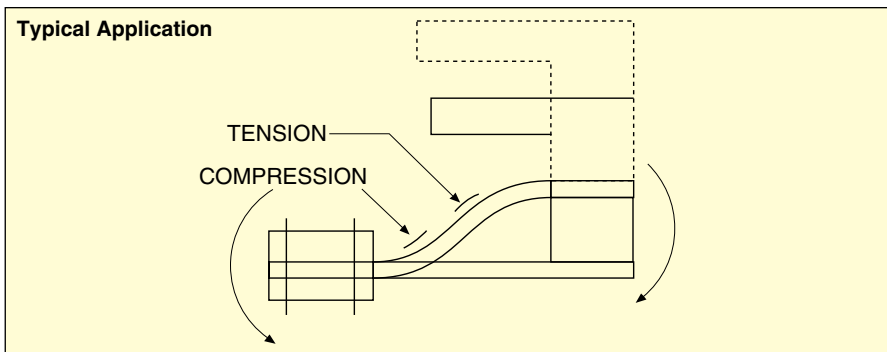

# TRANSDUCER QUALITY STRAIN GAGE

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## HALF BRIDGE UNIAXIAL STRAIN GAGES

- ✓ Available with Ribbon Leads or Solder Pads
- ✓ Temperature Characteristics Matched to Steel or Aluminum
- ✓ Dual Linear Half-Bridge for Double Bend Transducer Applications
- ✓ Custom Gages Available

OMEGA offers transducer quality strain gages in dual linear patterns in a half-bridge design with a common tab. These strain gages might be used for transducer design for beams that have a contraflexure point. Defined as a point in a structure where bending occurs in opposite directions. A transducer may also be described as a reversed bending beam. The grids are linear, both in the same direction, and are typically used for bending strain applications.

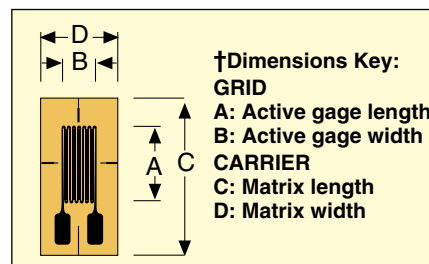





Three styles are available:

**Standard:** SGT-1LH/350-TY\*\*, with grid centerline to centerline spacing of 5.46 mm (0.215")

**Wide Grid:** SGT-1LH/1000-TY\*\*, with grid centerline to centerline spacing of 5.46 mm (0.215")

**Large:** SGT-2LH/350-TY\*\*, with grid centerline to centerline spacing of 10.50 mm (0.413")



| To Order  |                       |                        |  |         |         |         |                  |              |           |
|---|-----------------------|------------------------|--|---------|---------|---------|------------------|--------------|-----------|
| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)†  |         |         |         | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |
|   |                       |                        | GRID   |         | CARRIER |         |                  |              |           |
|   |                       |                        | A  | B       | C       | D       |                  |              |           |
| Shown larger than actual size<br>9.2 mm<br>  | SGT-1LH/350-TY11      | 350                    | 1.5  | 2.5     | 9.2     | 4.0     | 6.5              | Ribbon Leads | ST        |
|   | SGT-1LH/350-TY13      | 350                    | (0.059)  | (0.098) | (0.362) | (0.157) | 9                | Ribbon Leads | AL        |
|   | SGT-1LH/350-TY41      | 350                    | Linear pattern, dual grid, half-bridge, common-tab pattern       |         |         |         | 6.5              | Solder Pads  | ST        |
|   | SGT-1LH/350-TY43      | 350                    | 350 Ω  |         |         |         | 9                | Solder Pads  | AL        |
| Shown larger than actual size<br>9.2 mm<br>  | SGT-1LH/1000-TY11     | 1000                   | 1.5  | 4.8     | 9.2     | 6.0     | 15               | Ribbon Leads | ST        |
|   | SGT-1LH/1000-TY13     | 1000                   | (0.059)  | (0.198) | (0.362) | (0.236) | 20               | Ribbon Leads | AL        |
|   | SGT-1LH/1000-TY41     | 1000                   | Wide linear pattern, dual grid, half-bridge, common-tab pattern  |         |         |         | 15               | Solder Pads  | ST        |
|   | SGT-1LH/1000-TY43     | 1000                   | 1000 Ω   |         |         |         | 20               | Solder Pads  | AL        |
| Shown larger than actual size<br>14.3 mm<br> | SGT-2LH/350-TY11      | 350                    | 1.6  | 2.3     | 14.3    | 4.0     | 6.5              | Ribbon Leads | ST        |
|   | SGT-2LH/350-TY13      | 350                    | (0.063)  | (0.091) | (0.563) | (0.157) | 9                | Ribbon Leads | AL        |
|   | SGT-2LH/350-TY41      | 350                    | Large linear pattern, dual grid, half-bridge, common-tab pattern |         |         |         | 6.5              | Solder Pads  | ST        |
|   | SGT-2LH/350-TY43      | 350                    | 350 Ω  |         |         |         | 9                | Solder Pads  | AL        |

| DISCOUNT SCHEDULE                   |     |
|-------------------------------------|-----|
| 1 to 10 pkgs. ....                  | Net |
| 11 to 24 pkgs. ....                 | 5%  |
| 25 to 49 pkgs. ....                 | 10% |
| 50 and up and OEM / Consult Factory |     |

\* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories, visit us online.  
**Ordering Example:** SGT-2LH/350-TY11, package of 5, with ribbon leads nominal resistance 350 Ω.  
 \*\* TY11, TY13, TY41 or TY43

**NOTE**  
 ST = Steel  
 AL = Aluminum

# FULL BRIDGE LINEAR DIAPHRAGM PATTERN

OMEGA offers transducer quality, linear diaphragm pattern strain gages for use in pressure transducer designs. These patterns have 4 strain gages mounted onto a single carrier. The strain gages in the center will go into tension, and the outer 2 will go into compression. In the pressure transducer design, a diaphragm is clamped around the outer edge, and subjected to a uniform pressure. Near the center of the diaphragm the radial and tangential strains will be positive, and will be nearly equal. The radial strain decreases and becomes negative as you move away from the center toward the outer edge. Midway between the center and the outer edge the strain is at its lowest and the leads/Solder Pads are located in this low stress area. In these patterns, there are 2 half-bridges. Each half-bridge has a common lead/Solder Pads.

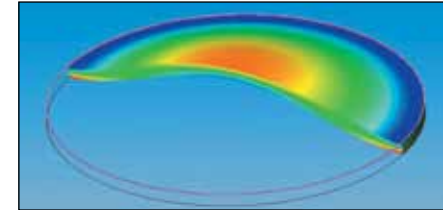
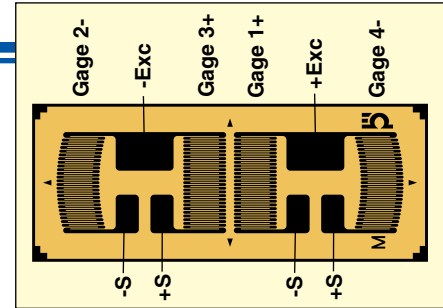
One of the patterns has been enlarged to show the detail. The strain gages and terminal pads have been numbered and labeled. The corners of the Wheatstone bridge have been left open for the addition of zero temperature compensation resistors, and zero balance compensation resistors if required. Several sizes are available.

SGT-9/350-LD\*\* can be used for a 0.4" diameter diaphragm.






SGT-12/350-LD\*\* can be used for a 0.5" diameter diaphragm.

SGT-18/350-LD\*\* and SGT-18/1000-LD\*\* can be used for 0.75 to 0.8" diameter diaphragms.

SGT-24/350-LD\*\* can be used for 1" diameter diaphragms.



## To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM.<br>RESIS-<br>TANCE<br>(Ω) | DIMENSIONS mm (inch)†  |                |                 |                | MAX V*<br>(Vrms) | TERMINATION  | TEMP<br>COMP |
|---|-----------------------|--------------------------------|--|----------------|-----------------|----------------|------------------|--------------|--------------|
|   |                       |                                | GRID   |                | CARRIER         |                |                  |              |              |
|   |                       |                                | A  | B              | C               | D              |                  |              |              |
| Shown<br>actual size,<br>10.2 mm<br> | SGT-9/350-LD11        | 350                            | 0.8<br>(0.031)   | 2.6<br>(0.102) | 10.2<br>(0.402) | 4.0<br>(0.157) | 4.5              | Ribbon Leads | ST           |
|   | SGT-9/350-LD13        | 350                            | Full-bridge, 10.2 mm (0.4")<br>diameter diaphragm  |                |                 |                | 6.5              | Ribbon Leads | AL           |
|   | SGT-9/350-LD41        | 350                            | 350 Ω  |                |                 |                | 4.5              | Solder Pads  | ST           |
|   | SGT-9/350-LD43        | 350                            |  |                |                 |                | 6.5              | Solder Pads  | AL           |
| Shown<br>actual size,<br>13.5 mm<br> | SGT-12/350-LD11       | 350                            | 1.0<br>(0.039)   | 2.6<br>(0.102) | 13.5<br>(0.534) | 4.0<br>(0.157) | 5.5              | Ribbon Leads | ST           |
|   | SGT-12/350-LD13       | 350                            | Full-bridge, 13.5 mm (0.5")<br>diameter diaphragm  |                |                 |                | 7.5              | Ribbon Leads | AL           |
|   | SGT-12/350-LD41       | 350                            | 350 Ω  |                |                 |                | 5.5              | Solder Pads  | ST           |
|   | SGT-12/350-LD43       | 350                            |  |                |                 |                | 7.5              | Solder Pads  | AL           |
| Shown<br>actual size,<br>19.2 mm<br> | SGT-18/350-LD11       | 350                            | 1.8<br>(0.071)   | 5.0<br>(0.197) | 19.2<br>(0.756) | 6.4<br>(0.252) | 10               | Ribbon Leads | ST           |
|   | SGT-18/350-LD13       | 350                            | Full-bridge, 19.2 mm (0.75 to 0.8")<br>diameter diaphragm  |                |                 |                | 14               | Ribbon Leads | AL           |
|   | SGT-18/350-LD41       | 350                            | 350 Ω  |                |                 |                | 10               | Solder Pads  | ST           |
|   | SGT-18/350-LD43       | 350                            |  |                |                 |                | 14               | Solder Pads  | AL           |
| Shown<br>actual size,<br>19.2 mm<br> | SGT-18/1000-LD11      | 1000                           | 1.8<br>(0.071)   | 4.0<br>(0.157) | 19.2<br>(0.756) | 5.5<br>(0.217) | 9                | Ribbon Leads | ST           |
|   | SGT-18/1000-LD13      | 1000                           | Full-bridge, 19.2 mm (0.75 to 0.8")<br>diameter diaphragm, higher<br>resistance, reduced heat generation |                |                 |                | 13               | Ribbon Leads | AL           |
|   | SGT-18/1000-LD41      | 1000                           | 1000 Ω   |                |                 |                | 9                | Solder Pads  | ST           |
|   | SGT-18/1000-LD43      | 1000                           |  |                |                 |                | 13               | Solder Pads  | AL           |
| Shown<br>actual size,<br>25.4 mm<br> | SGT-24/350-LD11       | 350                            | 1.8<br>(0.071)   | 5.0<br>(0.197) | 25.4<br>(1)     | 6.4<br>(0.252) | 10               | Ribbon Leads | ST           |
|   | SGT-24/350-LD13       | 350                            | Full-bridge, 25.4 mm (1")<br>diameter diaphragm  |                |                 |                | 14               | Ribbon Leads | AL           |
|   | SGT-24/350-LD41       | 350                            | 350 Ω  |                |                 |                | 10               | Solder Pads  | ST           |
|   | SGT-24/350-LD43       | 350                            |  |                |                 |                | 14               | Solder Pads  | AL           |

### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | 5%  |
| 25 to 49 pkgs. .... | 10% |

† For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms). \*\* LD11, LD13, LD41 or LD43.

Note: For strain gage accessories, visit us online.

Ordering Example: SGT-9/350-LD11, package of 5, full bridge linear diaphragm pattern

**NOTE**

ST = Steel

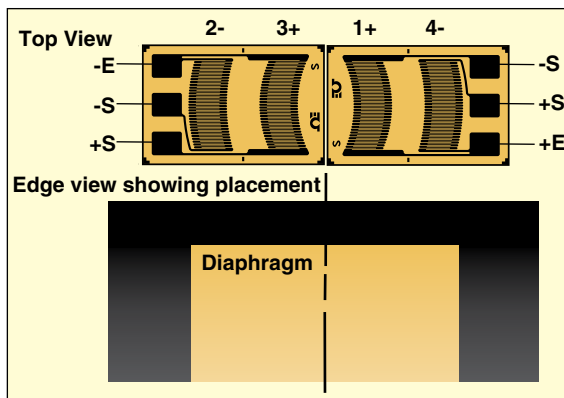
# STRAIN GAGE

## 1/2 BRIDGE LINEAR DIAPHRAGM



The following types of linear diaphragm strain gages can be used when the bonding area is larger than the diaphragm diameter. For example, if a body has a flat surface with a diameter of 1" onto which the strain gage is to be bonded, but a 0.5" diameter hole is drilled through the body leaving just a thin layer of material, then this thin 0.5" diameter is the diaphragm. So the strain gage grids are located above the thin high stress area and the leads/solder pads are over the solid part of the body in the low stress area. This linear diaphragm pattern has 2 strain gages mounted onto a single carrier. These types are used in pairs on a 0.5" diameter diaphragm. The strain gage closer to center will go into tension, and the outer gage will go into compression. Near the center of the diaphragm the radial and tangential strains will be positive, and will be nearly equal. The radial strain decreases and becomes negative as you move away

from the center toward the outer edge of the diaphragm. The leads/solder pads are in the low stress area over thicker material. In this pattern, each carrier piece has one half-bridge with a common lead/solder pad. The corners of the Wheatstone bridge have been left open for the addition of zero temperature compensation resistors, and zero balance compensation resistors, if required. SGT-8/350-LD\*\* and SGT/500-LD\*\* are used in pairs on a 0.5" diameter diaphragm. Below we show a diagram with 2 pieces of the SGT-8/350-LD\*\*, shown as they might be positioned on a 0.5" diameter diaphragm. The strain gages have been numbered and labeled. Also available is the SGT-7/350-LD\*\* which offers

2 half-bridges mounted onto one carrier piece, which can be used on a 0.28" diameter diaphragm again where the bonding area is larger. The grids are placed, centered over the diaphragm, and the leads/solder pads are over solid material in a low stress area.




### To Order

| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)†                                       |                |                |                | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |
|--|-----------------------|------------------------|---|----------------|----------------|----------------|------------------|--------------|-----------|
|  |                       |                        | GRID  |                | CARRIER        |                |                  |              |           |
|  |                       |                        | A   | B              | C              | D              |                  |              |           |
| Shown actual size, 8.4 mm<br> | SGT-8/350-LD11        | 350                    | 1.1<br>(0.043)  | 4.3<br>(0.169) | 8.4<br>(0.331) | 5.5<br>(0.217) | 7                | Ribbon Leads | ST        |
|  | SGT-8/350-LD13        | 350                    | Half-bridge, used in pairs, 13 mm (0.5") diameter diaphragm |                |                |                | 10               | Ribbon Leads | AL        |
|  | SGT-8/350-LD41        | 350                    | 350 Ω   |                |                |                | 7                | Solder Pads  | ST        |
|  | SGT-8/350-LD43        | 350                    |   |                |                |                | 10               | Solder Pads  | AL        |
| Shown actual size, 8.4 mm<br> | SGT-8/500-LD11        | 500                    | 1.2<br>(0.047)  | 4.3<br>(0.169) | 8.4<br>(0.331) | 5.5<br>(0.217) | 7.5              | Ribbon Leads | ST        |
|  | SGT-8/500-LD13        | 500                    | Half-bridge, used in pairs, 13 mm (0.5") diameter diaphragm |                |                |                | 11               | Ribbon Leads | AL        |
|  | SGT-8/500-LD41        | 500                    | nominal resistance  |                |                |                | 75               | Solder Pads  | ST        |
|  | SGT-8/500-LD43        | 500                    | 500 Ω   |                |                |                | 11               | Solder Pads  | AL        |

### FULL BRIDGE LINEAR DIAPHRAGM

### To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)†                        |                |                 |                | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |
|---|-----------------------|------------------------|--|----------------|-----------------|----------------|------------------|--------------|-----------|
|   |                       |                        | GRID   |                | CARRIER         |                |                  |              |           |
|   |                       |                        | A  | B              | C               | D              |                  |              |           |
| Shown actual size, 12.3 mm<br> | SGT-7/350-LD11        | 350                    | 0.5<br>(0.02)                                | 2.5<br>(0.098) | 12.3<br>(0.484) | 5.8<br>(0.228) | 3.5              | Ribbon Leads | ST        |
|   | SGT-7/350-LD13        | 350                    | Full-bridge, 7 mm (0.28") diameter diaphragm |                |                 |                | 5                | Ribbon Leads | AL        |
|   | SGT-7/350-LD41        | 350                    | 350 Ω  |                |                 |                | 3.5              | Solder Pads  | ST        |
|   | SGT-7/350-LD43        | 350                    |  |                |                 |                | 5                | Solder Pads  | AL        |

### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | 5%  |
| 25 to 49 pkgs. .... | 10% |

† For dimensions key, visit us online.  
 \* Maximum permitted bridge energizing voltage (Vrms). \*\* LD11, LD13, LD41 or LD43.  
 Note: For strain gage accessories, visit us online.  
 Ordering Example: SGT-8/350-LD11, package of 5, half bridge linear diaphragm pattern

**NOTE** ST = Steel



# TDANSCRIPTION QUALITY STRAIN GAGE

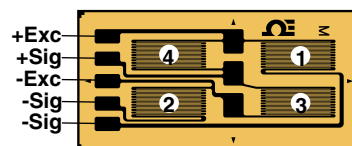
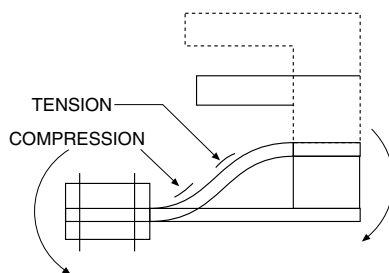
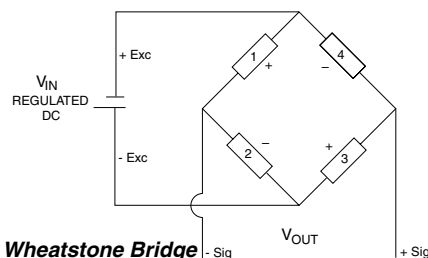
Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FULL WHEATSTONE BRIDGE, REVERSED-BENDING BEAM OR CONTRAFLEXURE BEAM ALL GRIDS IN THE SAME DIRECTION

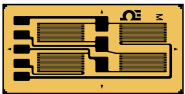
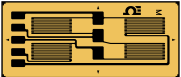

Design and build your own transducers. These full bridge strain gages might be used to design transducers for beams that have a contraflexure point. Contraflexure is defined as a point in a structure where bending occurs in opposite directions. This may also be described as a reversed bending beam, or a double bending beam. The 4 grids are linear, all in the same direction. Look up the modulus of elasticity and the yield strength of your material, and design the spring element so that you will be working in the linear portion of the stress-strain curve. For best results use stainless steel or aluminum and match the strain gage temperature

characteristics. You may use these full bridge strain gages for bending strain applications where only one side of the beam is available for strain gage installation. These gages are easy to work with as the carrier piece has all 4 strain gages for fast and easy installation. Having one carrier with multiple strain gages offers several advantages. Alignment of the 4 strain gages with respect to each other is already done. Some of the strain gages share common ribbon leads or Solder Pads which saves wiring steps and valuable time. The corners of the Wheatstone bridge at the signal output have been left open so that

sensor performance can be tested and improved. Zero temperature compensation resistors and zero balance compensation resistors can be easily added into the open corners of the Wheatstone bridge circuit. An extra bondable terminal pad can be placed at the open corner so that the appropriate resistors can be wired in. Or you can simply connect your 4 leads (+Excitation, -Excitation, +Signal, -Signal) and jumper the signal leads together as needed to complete the Wheatstone bridge. Power up your transducer, and calibrate it with a known applied load.



### To Order

| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS mm (inch)†  |                |                 |                | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |
|--|-----------------------|------------------------|--|----------------|-----------------|----------------|------------------|--------------|-----------|
|  |                       |                        | GRID   |                | CARRIER         |                |                  |              |           |
|  |                       |                        | A  | B              | C               | D              |                  |              |           |
| Shown smaller than actual size, 13.8 mm<br> | SGT-3E/350-FB11       | 350                    | 3.2<br>(0.126)   | 1.5<br>(0.059) | 13.8<br>(0.543) | 6.8<br>(0.268) | 7.5              | Ribbon Leads | ST        |
|  | SGT-3E/350-FB13       | 350                    | Full bridge pattern for double bending beam, center line spacing 6.35 mm (0.25")<br>350 Ω  |                |                 |                | 11               | Ribbon Leads | AL        |
|  | SGT-3E/350-FB41       | 350                    |  |                |                 |                | 7.5              | Solder Pads  | ST        |
|  | SGT-3E/350-FB43       | 350                    |  |                |                 |                | 11               | Solder Pads  | AL        |
| Shown smaller than actual size, 15.9 mm<br> | SGT-3F/350-FB11       | 350                    | 3.2<br>(0.126)   | 1.5<br>(0.059) | 15.9<br>(0.626) | 6.8<br>(0.268) | 7.5              | Ribbon Leads | ST        |
|  | SGT-3F/350-FB13       | 350                    | Full bridge pattern for double bending beam, center line spacing 8.38 mm (0.33")<br>350 Ω  |                |                 |                | 11               | Ribbon Leads | AL        |
|  | SGT-3F/350-FB41       | 350                    |  |                |                 |                | 7.5              | Solder Pads  | ST        |
|  | SGT-3F/350-FB43       | 350                    |  |                |                 |                | 11               | Solder Pads  | AL        |
| Shown smaller than actual size, 28 mm<br>   | SGT-3/1000-FB11       | 1000                   | 3.0<br>(0.118)   | 1.6<br>(0.063) | 28.0<br>(1.102) | 4.9<br>(0.193) | 13               | Ribbon Leads | ST        |
|  | SGT-3/1000-FB13       | 1000                   | Full bridge pattern for double bending beam, higher resistance, reduced heat generation, center line spacing 15 mm (0.59")<br>1000 Ω |                |                 |                | 17               | Ribbon Leads | AL        |
|  | SGT-3/1000-FB41       | 1000                   |  |                |                 |                | 13               | Solder Pads  | ST        |
|  | SGT-3/1000-FB43       | 1000                   |  |                |                 |                | 17               | Solder Pads  | AL        |

### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

† For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGT-3/1000-FB11, package of 5 full bridge pattern for double bending beam, nominal resistance 1000 Ω.



**NOTE**  
ST = Steel  
AL = Aluminum

STRAIN GAGES

# TRANSDUCED QUALITY STRAIN GAGE

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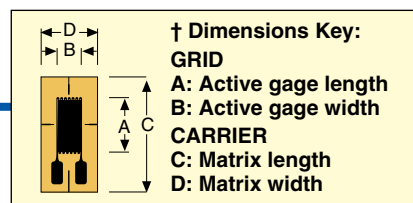
## SHEAR GAGES FOR SHEAR BEAM AND TORQUE APPLICATIONS SINGLE STRAIN GAGES

| To Order  |                       |                                      |   |    |              |    |                  |             |              |
|---|-----------------------|--------------------------------------|---|----|--------------|----|------------------|-------------|--------------|
| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch) <sup>†</sup>   |    |              |    | MAX V*<br>(Vrms) | TERMINATION | TEMP<br>COMP |
|   |                       |                                      | GRID  |    | CARRIER      |    |                  |             |              |
|   |                       |                                      | A   | B  | C            | D  |                  |             |              |
| Shown actual size,<br>7 mm<br>   | SGT-1/350-SY11        | 350                                  | 1.4    1.5    7.0    3.4<br>(0.055) (0.059) (0.276) (0.134)<br>Single element miniature shear<br>350 $\Omega$ | 6  | Ribbon Leads | ST |                  |             |              |
|   | SGT-1/350-SY13        | 350                                  |   | 8  | Ribbon Leads | AL |                  |             |              |
|   | SGT-1/350-SY41        | 350                                  |   | 6  | Solder Pads  | ST |                  |             |              |
|   | SGT-1/350-SY43        | 350                                  |   | 8  | Solder Pads  | AL |                  |             |              |
| Shown actual size,<br>8.6 mm<br> | SGT-2/350-SY11        | 350                                  | 2.3    1.8    8.6    3.4<br>(0.091) (0.071) (0.339) (0.134)<br>Single element small shear<br>350 $\Omega$     | 8  | Ribbon Leads | ST |                  |             |              |
|   | SGT-2/350-SY13        | 350                                  |   | 12 | Ribbon Leads | AL |                  |             |              |
|   | SGT-2/350-SY41        | 350                                  |   | 8  | Solder Pads  | ST |                  |             |              |
|   | SGT-2/350-SY43        | 350                                  |   | 12 | Solder Pads  | AL |                  |             |              |

\*\* Maximum permitted bridge energizing voltage (Vrms).



Note: For strain gage accessories, visit us online.

Ordering Example: SGT-2/350-SY43, package of 5, single element, small shear, nominal resistance 350  $\Omega$ .



### MATCHED SHEAR/TORSION PAIRS AVAILABLE

Single strain gages are available in matched shear/torsion pairs. Purchase one package of each; SGT-3D/350-SY\*\* and matched, but with reversed grid angle is the SGT-3ES/350-SY\*\*. Use these in pairs, back to back in the transducer design, along the centerline of the shaft or beam.

| To Order  |                       |                                      |  |    |              |    |                  |             |              |
|---|-----------------------|--------------------------------------|--|----|--------------|----|------------------|-------------|--------------|
| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESIS-<br>TANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch) <sup>†</sup>  |    |              |    | MAX V*<br>(Vrms) | TERMINATION | TEMP<br>COMP |
|   |                       |                                      | GRID   |    | CARRIER      |    |                  |             |              |
|   |                       |                                      | A  | B  | C            | D  |                  |             |              |
| Shown actual size,<br>9.7 mm<br> | SGT-3ES/350-SY11      | 350                                  | 3.0    2.5    9.7    5.1<br>(0.118) (0.098) (0.382) (0.201)<br>Single element reverse grid<br>pattern of SGT-3D/350<br>350 $\Omega$                | 9  | Ribbon Leads | ST |                  |             |              |
|   | SGT-3ES/350-SY13      | 350                                  |  | 12 | Ribbon Leads | AL |                  |             |              |
|   | SGT-3ES/350-SY41      | 350                                  |  | 9  | Solder Pads  | ST |                  |             |              |
|   | SGT-3ES/350-SY43      | 350                                  |  | 12 | Solder Pads  | AL |                  |             |              |
| Shown actual size,<br>9.7 mm<br> | SGT-3D/350-SY11       | 350                                  | 3.0    2.5    9.7    5.1<br>(0.118) (0.098) (0.382) (0.201)<br>Single element right hand<br>version grid of pattern<br>SGT-3ES/350<br>350 $\Omega$ | 8  | Ribbon Leads | ST |                  |             |              |
|   | SGT-3D/350-SY13       | 350                                  |  | 12 | Ribbon Leads | AL |                  |             |              |
|   | SGT-3D/350-SY41       | 350                                  |  | 8  | Solder Pads  | ST |                  |             |              |
|   | SGT-3D/350-SY43       | 350                                  |  | 12 | Solder Pads  | AL |                  |             |              |

#### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).

\*\* SY11, SY13, SY41 or SY43.

Note: For strain gage accessories, visit us online.

Ordering Example: Purchase one package of each, SGT-3ES/350-SY11, and SGT-3D/350-SY11, for matched shear/torsion pairs, 5 per package.








**NOTE**  
 ST = Steel  
 AL = Aluminum

# TO ORDER

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## DUAL SHEAR GAGES 2 SEPARATE GAGES WITH REVERSED GRIDS ON ONE CARRIER

### To Order

| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>( $\Omega$ ) | DIMENSIONS<br>mm (inch) <sup>†</sup>   |                |                 |                | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |
|---|-----------------------|---------------------------------|--|----------------|-----------------|----------------|------------------|--------------|-----------|
|   |                       |                                 | GRID   |                | CARRIER         |                |                  |              |           |
|   |                       |                                 | A  | B              | C               | D              |                  |              |           |
|    | SGT-1D/350-SY11       | 350                             | 1.4<br>(0.055)   | 1.5<br>(0.059) | 7.0<br>(0.276)  | 5.1<br>(0.201) | 5.5              | Ribbon Leads | ST        |
|   | SGT-1D/350-SY13       | 350                             | Dual grid, miniature rectangular shear   |                |                 |                | 7.5              | Ribbon Leads | AL        |
|   | SGT-1D/350-SY41       | 350                             | 350 $\Omega$   |                |                 |                | 5.5              | Solder Pads  | ST        |
|   | SGT-1D/350-SY43       | 350                             |  |                |                 |                | 7.5              | Solder Pads  | AL        |
|    | SGT-2DC/350-SY11      | 350                             | 1.9<br>(0.075)   | 1.6<br>(0.063) | 7.0<br>(0.276)  | 6.3<br>(0.248) | 5.5              | Ribbon Leads | ST        |
|   | SGT-2DC/350-SY13      | 350                             | Dual grid, miniature shear all leads/Solder Pads at one end of grid              |                |                 |                | 8                | Ribbon Leads | AL        |
|   | SGT-2DC/350-SY41      | 350                             | 350 $\Omega$   |                |                 |                | 5.5              | Solder Pads  | ST        |
|   | SGT-2DC/350-SY43      | 350                             |  |                |                 |                | 8                | Solder Pads  | AL        |
|    | SGT-2D/350M-SY11      | 350                             | 1.8<br>(0.071)   | 1.6<br>(0.063) | 7.0<br>(0.276)  | 5.7<br>(0.224) | 5.5              | Ribbon Leads | ST        |
|   | SGT-2D/350M-SY13      | 350                             | Dual grid shear, leads/Solder Pads one at each end of grid                       |                |                 |                | 7.5              | Ribbon Leads | AL        |
|   | SGT-2D/350M-SY41      | 350                             | 350 $\Omega$   |                |                 |                | 5.5              | Solder Pads  | ST        |
|   | SGT-2D/350M-SY43      | 350                             |  |                |                 |                | 7.5              | Solder Pads  | AL        |
|  | SGT-2D/1000-SY11      | 1000                            | 1.6<br>(0.063)   | 2.0<br>(0.079) | 7.2<br>(0.283)  | 6.4<br>(0.252) | 14               | Ribbon Leads | ST        |
|   | SGT-2D/1000-SY13      | 1000                            | Dual grid, rectangular shear pattern, higher resistance, reduced heat generation |                |                 |                | 19               | Ribbon Leads | AL        |
|   | SGT-2D/1000-SY41      | 1000                            | 1000 $\Omega$  |                |                 |                | 14               | Solder Pads  | ST        |
|   | SGT-2D/1000-SY43      | 1000                            |  |                |                 |                | 19               | Solder Pads  | AL        |
|  | SGT-3FS/350-SY11      | 350                             | 3.0<br>(0.118)   | 2.6<br>(0.102) | 10.0<br>(0.394) | 8.4<br>(0.331) | 8                | Ribbon Leads | ST        |
|   | SGT-3FS/350-SY13      | 350                             | Dual grid shear, all leads/Solder Pads one at each end of grid                   |                |                 |                | 12               | Ribbon Leads | AL        |
|   | SGT-3FS/350-SY41      | 350                             | 350 $\Omega$   |                |                 |                | 8                | Solder Pads  | ST        |
|   | SGT-3FS/350-SY43      | 350                             |  |                |                 |                | 12               | Solder Pads  | AL        |
|  | SGT-3D/1000-SY11      | 1000                            | 3.3<br>(0.13)  | 2.4<br>(0.094) | 9.6<br>(0.378)  | 7.0<br>(0.276) | 17               | Ribbon Leads | ST        |
|   | SGT-3D/1000-SY13      | 1000                            | Dual grid shear, leads/Solder Pads, one at each end of grid, higher resistance   |                |                 |                | 23               | Ribbon Leads | AL        |
|   | SGT-3D/1000-SY41      | 1000                            | reduced heat generation  |                |                 |                | 17               | Solder Pads  | ST        |
|   | SGT-3D/1000-SY43      | 1000                            | 1000 $\Omega$  |                |                 |                | 23               | Solder Pads  | AL        |
|  | SGT-3GS/350-SY11      | 350                             | 3.0<br>(0.118)   | 2.6<br>(0.102) | 9.9<br>(0.390)  | 8.1<br>(0.319) | 9                | Ribbon Leads | ST        |
|   | SGT-3GS/350-SY13      | 350                             | Dual grid, shear pattern leads/Solder Pads, one at each end of grid              |                |                 |                | 13               | Ribbon Leads | AL        |
|   | SGT-3GS/350-SY41      | 350                             | 350 $\Omega$   |                |                 |                | 9                | Solder Pads  | ST        |
|   | SGT-3GS/350-SY43      | 350                             |  |                |                 |                | 13               | Solder Pads  | AL        |

#### DISCOUNT SCHEDULE

|                     |     |
|---------------------|-----|
| 1 to 10 pkgs. ....  | Net |
| 11 to 24 pkgs. .... | 5%  |
| 25 to 49 pkgs. .... | 10% |

<sup>†</sup> For dimensions key, visit us online.

\* Maximum permitted bridge energizing voltage (Vrms).

Note: For strain gage accessories, visit us online.

Ordering Example: SGT-1D/350-SY11, package of 5, dual grid miniature.

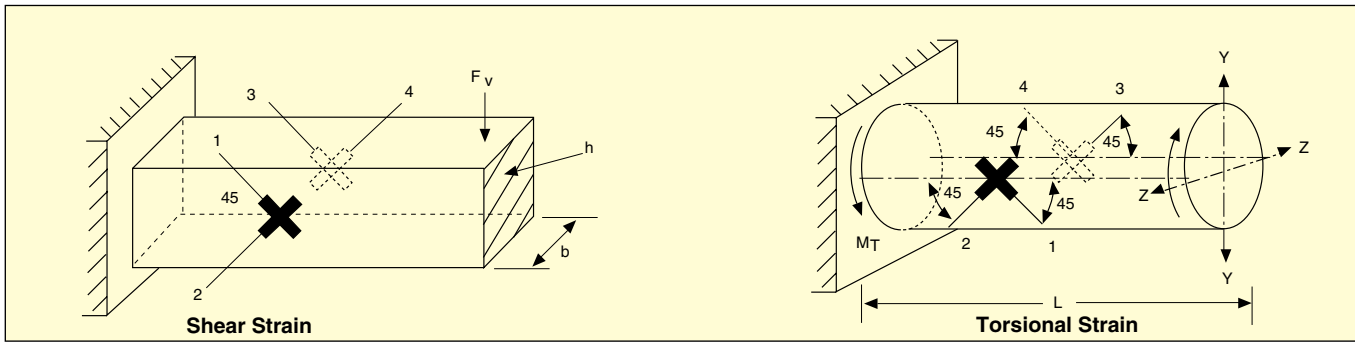
**NOTE**  
ST = Steel  
AL = Aluminum

STRAIN GAGES






# DANCIPIED QUALITY STRAIN GAGE

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## HALF BRIDGE SHEAR GAGES—2 REVERSED GRIDS ON ONE CARRIER WITH A COMMON BRIDGE CONNECTION



### To Order

| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>( $\Omega$ ) | DIMENSIONS mm (inch) <sup>†</sup>                          |         |         |         | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP |
|--|-----------------------|---------------------------------|--|---------|---------|---------|------------------|--------------|-----------|
|  |                       |                                 | GRID   |         | CARRIER |         |                  |              |           |
|  |                       |                                 | A  | B       | C       | D       |                  |              |           |
| <b>Shown actual size, 8.6 mm</b><br>    | SGT-2DH/350-SY11      | 350                             | 2.3  | 1.8     | 8.6     | 5.5     | 9                | Ribbon Leads | ST        |
|  | SGT-2DH/350-SY13      | 350                             | (0.091)  | (0.071) | (0.339) | (0.217) | 11               | Ribbon Leads | AL        |
|  | SGT-2DH/350-SY41      | 350                             | Dual grid shear, half bridge with common lead/Solder Pads  |         |         |         | 9                | Solder Pads  | ST        |
|  | SGT-2DH/350-SY43      | 350                             | 350 $\Omega$   |         |         |         | 11               | Solder Pads  | AL        |
| <b>Shown actual size, 10.9 mm</b><br> | SGT-3JS/350-SY11      | 350                             | 3.0  | 2.4     | 10.9    | 6.8     | 10               | Ribbon Leads | ST        |
|  | SGT-3JS/350-SY13      | 350                             | (0.118)  | (0.094) | (0.429) | (0.268) | 14               | Ribbon Leads | AL        |
|  | SGT-3JS/350-SY41      | 350                             | Dual grid shear, half bridge with common lead/Solder Pads  |         |         |         | 10               | Solder Pads  | ST        |
|  | SGT-3JS/350-SY43      | 350                             | 350 $\Omega$   |         |         |         | 14               | Solder Pads  | AL        |
| <b>Shown actual size, 10 mm</b><br>   | SGT-3H/350K-SY11      | 350                             | 3.2  | 2.6     | 10      | 7.4     | 9.5              | Ribbon Leads | ST        |
|  | SGT-3H/350K-SY13      | 350                             | (0.126)  | (0.102) | (0.394) | (0.291) | 13.5             | Ribbon Leads | AL        |
|  | SGT-3H/350K-SY41      | 350                             | Dual grid shear, half bridge all leads on one side of grid |         |         |         | 9.5              | Solder Pads  | ST        |
|  | SGT-3H/350K-SY43      | 350                             | 350 $\Omega$   |         |         |         | 13.5             | Solder Pads  | AL        |
| <b>Shown actual size, 10 mm</b><br>   | SGT-3HB/350K-SY11     | 350                             | 3.2  | 2.7     | 10      | 8.4     | 9.5              | Ribbon Leads | ST        |
|  | SGT-3HB/350K-SY13     | 350                             | (0.126)  | (0.106) | (0.394) | (0.331) | 9.5              | Ribbon Leads | AL        |
|  | SGT-3HB/350K-SY41     | 350                             | Dual grid shear, half bridge all leads on one side of grid |         |         |         | 9.5              | Solder Pads  | ST        |
|  | SGT-3HB/350K-SY43     | 350                             | 350 $\Omega$   |         |         |         | 9.5              | Solder Pads  | AL        |
| <b>Shown actual size, 14.6 mm</b><br> | SGT-2H/350-SY11       | 350                             | 2.3  | 1.8     | 14.6    | 3.4     | 8                | Ribbon Leads | ST        |
|  | SGT-2H/350-SY13       | 350                             | (0.091)  | (0.071) | (0.575) | (0.134) | 12               | Ribbon Leads | AL        |
|  | SGT-2H/350-SY41       | 350                             | Dual grid shear, half bridge for narrow beam               |         |         |         | 8                | Solder Pads  | ST        |
|  | SGT-2H/350-SY43       | 350                             | 350 $\Omega$   |         |         |         | 12               | Solder Pads  | AL        |

#### DISCOUNT SCHEDULE

|                       |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | .5%             |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

<sup>†</sup> For dimensions key, visit us online  
 \* Maximum permitted bridge energizing voltage (Vrms)  
**Note:** For strain gage accessories, visit us online  
**Ordering Example:** SGT-3H/350K-SY41, package of 5, half bridge shear, with Solder Pads, matched to steel, nominal resistance 350  $\Omega$ .

**NOTE**  
 ST = Steel  
 AL = Aluminum

# TRANSDUCER QUALITY STRAIN GAGE

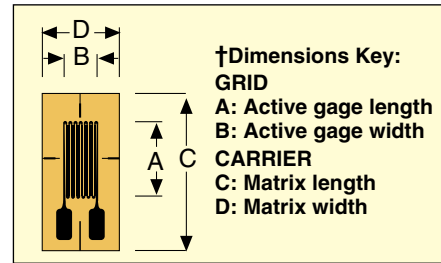
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## LINEAR PATTERN STRAIN GAGES

The linear pattern strain gages are used to measure strain in a single direction. They are used for experimental stress analysis, and transducer applications. The strain gage pattern is shown on the left side of the table. The "arrows" indicate the principal stress direction of the gage. OMEGA offers miniature linear patterns for strain measurement of a stress concentration or high gradient areas, and larger sizes. The solder pads/ribbon leads are offered both at one end of the grid, or with one at each end of the grid. Wide or narrow linear grid patterns are available.

Dimensions are listed for pattern gage grid length (A) and width (B), and the matrix or carrier length (C) and width (D). The patterns include alignment triangles.

**Note:** To determine if the strain gages have temperature characteristics matched to steel or aluminum, see the column labeled "COMP" short for compensation, "ST" indicates steel, "AL" indicates aluminum. See the column labeled "BTP" for accessory bondable terminal pad model numbers.



| To Order                          |                       |                        |  |     |         |     |                  |              |           |          |
|-----------------------------------|-----------------------|------------------------|--|-----|---------|-----|------------------|--------------|-----------|----------|
| GAGE PATTERN<br>Leads not shown   | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch)†   |     |         |     | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|                                   |                       |                        | GRID   |     | CARRIER |     |                  |              |           |          |
|                                   |                       |                        | A  | B   | C       | D   |                  |              |           |          |
| <br>Shown actual size 4 mm<br>    | SGT-1/350-TY11        | 350                    | 1.0  | 1.8 | 4.0     | 3.0 | 4.5              | Ribbon Leads | ST        | BPT-1    |
|                                   | SGT-1/350-TY13        | 350                    | 0.039 (0.039) 0.071 (0.071) 0.157 (0.157) 0.118 (0.118)                                |     |         |     | 6                | Ribbon Leads | AL        |          |
|                                   | SGT-1/350-TY41        | 350                    | Miniature linear pattern, measurement of stress concentration                          |     |         |     | 4.5              | Solder Pads  | ST        |          |
|                                   | SGT-1/350-TY43        | 350                    | 350 Ω  |     |         |     | 6                | Solder Pads  | AL        |          |
| <br>Shown actual size, 5.6 mm<br> | SGT-1A/1000-TY11      | 1000                   | 1.5  | 2.9 | 5.6     | 4.1 | 11               | Ribbon Leads | ST        | BPT-1    |
|                                   | SGT-1A/1000-TY13      | 1000                   | 0.059 (0.059) 0.114 (0.114) 0.22 (0.22) 0.161 (0.161)                                  |     |         |     | 15               | Ribbon Leads | AL        |          |
|                                   | SGT-1A/1000-TY41      | 1000                   | Miniature linear pattern, grid width, wide, higher resistance, reduced heat generation |     |         |     | 11               | Solder Pads  | ST        |          |
|                                   | SGT-1A/1000-TY43      | 1000                   | 1000 Ω   |     |         |     | 15               | Solder Pads  | AL        |          |
| <br>Shown actual size, 6.4 mm<br> | SGT-2C/350-TY11       | 350                    | 1.5  | 4.6 | 6.4     | 6.4 | 9                | Ribbon Leads | ST        | BPT-2    |
|                                   | SGT-2C/350-TY13       | 350                    | 0.059 (0.059) 0.181 (0.181) 0.252 (0.252) 0.252 (0.252)                                |     |         |     | 12               | Ribbon Leads | AL        |          |
|                                   | SGT-2C/350-TY41       | 350                    | Miniature linear pattern, grid width, extra wide                                       |     |         |     | 9                | Solder Pads  | ST        |          |
|                                   | SGT-2C/350-TY43       | 350                    | 350 Ω  |     |         |     | 12               | Solder Pads  | AL        |          |
| <br>Shown actual size, 8.8 mm<br> | SGT-3E/350-TY11       | 350                    | 3.0  | 3.1 | 8.8     | 5.5 | 10               | Ribbon Leads | ST        | BPT-2    |
|                                   | SGT-3E/350-TY13       | 350                    | 0.118 (0.118) 0.122 (0.122) 0.346 (0.346) 0.217 (0.217)                                |     |         |     | 14               | Ribbon Leads | AL        |          |
|                                   | SGT-3E/350-TY41       | 350                    | Small linear pattern, lead/pad at each side of grid                                    |     |         |     | 10               | Solder Pads  | ST        |          |
|                                   | SGT-3E/350-TY43       | 350                    | 350 Ω  |     |         |     | 14               | Solder Pads  | AL        |          |



| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | 5%              |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories, visit us online.  
**Ordering Example:** SGT-3E/350-TY41, 350 Ω transducer quality uniaxial strain gage.

**NOTE**  
 ST = Steel  
 AL = Aluminum

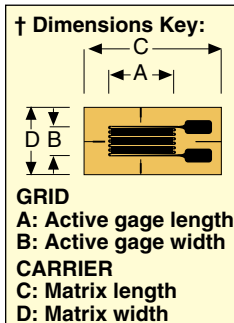
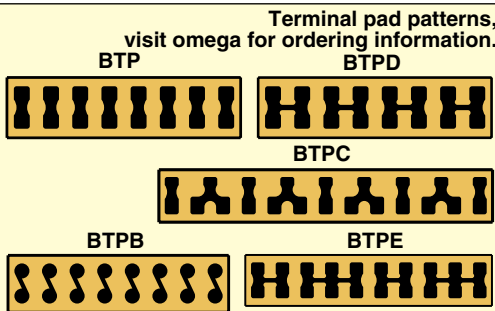
**BONDABLE TERMINAL PADS**

When installing strain gages with ribbon leads or solder pads, use Bondable Terminal Pads (BTP) between the strain gage and the wires to your instrumentation.

The Bondable Terminal Pads provide a large easy to use soldering area and provide strain relief between the strain gage and the heavy instrument wires.

Using Bondable Terminal Pads is simple. Use the same adhesive and bonding procedure on the Bondable Terminal Pads as you use on the strain gage.

OMEGA offers BTPs in several sizes and wiring configurations to fit most all strain gage applications.



**To Order**



| GAGE PATTERN<br>Leads not shown  | MODEL NO.<br>Pkg of 5 | NOM. RESISTANCE<br>(Ω) | DIMENSIONS<br>mm (inch)†   |                |                |                | MAX V*<br>(Vrms) | TERMINATION  | TEMP COMP | TERM PAD |
|----------------------------------|-----------------------|------------------------|--|----------------|----------------|----------------|------------------|--------------|-----------|----------|
|                                  |                       |                        | GRID   |                | CARRIER        |                |                  |              |           |          |
|                                  |                       |                        | A  | B              | C              | D              |                  |              |           |          |
| <br>Shown actual size 7.5 mm<br> | SGT-3F/350-TY11       | 350                    |  |                |                |                | 4.5              | Ribbon Leads | ST        | BPT-3    |
|                                  | SGT-3F/350-TY13       | 350                    | 3.2<br>(0.126)   | 3.2<br>(0.126) | 7.5<br>(0.295) | 4.6<br>(0.181) | 6                | Ribbon Leads | AL        |          |
|                                  | SGT-3F/350-TY41       | 350                    | Medium linear pattern<br>350 Ω   |                |                |                | 10               | Solder Pads  | ST        |          |
|                                  | SGT-3F/350-TY43       | 350                    |  |                |                |                | 14               | Solder Pads  | AL        |          |
| <br>Shown actual size 8.6 mm<br> | SGT-3J/350-TY11       | 350                    |  |                |                |                | 8                | Ribbon Leads | ST        | BPT-3    |
|                                  | SGT-3J/350-TY13       | 350                    | 3.0<br>(0.118)   | 2.1<br>(0.083) | 8.6<br>(0.339) | 3.5<br>(0.138) | 12               | Ribbon Leads | AL        |          |
|                                  | SGT-3J/350-TY41       | 350                    | Medium linear pattern,<br>lead/pad at each end of grid<br>350 Ω          |                |                |                | 8                | Solder Pads  | ST        |          |
|                                  | SGT-3J/350-TY43       | 350                    |  |                |                |                | 12               | Solder Pads  | AL        |          |
| <br>Shown actual size 6.6 mm<br> | SGT-3S/350-TY11       | 350                    |  |                |                |                | 7.5              | Ribbon Leads | ST        | BPT-3    |
|                                  | SGT-3S/350-TY13       | 350                    | 3.0<br>(0.118)   | 1.7<br>(0.067) | 6.6<br>(0.26)  | 3.3<br>(0.13)  | 10.5             | Ribbon Leads | AL        |          |
|                                  | SGT-3S/350-TY41       | 350                    | Medium linear pattern,<br>grid width, narrow<br>350 Ω                    |                |                |                | 7.5              | Solder Pads  | ST        |          |
|                                  | SGT-3S/350-TY43       | 350                    |  |                |                |                | 10.5             | Solder Pads  | AL        |          |
| <br>Shown actual size 7 mm<br>   | SGT-3N/350-TY11       | 350                    |  |                |                |                | 8                | Ribbon Leads | ST        | BPT-3    |
|                                  | SGT-3N/350-TY13       | 350                    | 3.2<br>(0.118)   | 2.5<br>(0.067) | 7.0<br>(0.28)  | 4.0<br>(0.157) | 13               | Ribbon Leads | AL        |          |
|                                  | SGT-3N/350-TY41       | 350                    | Medium linear pattern,<br>both leads/pads<br>at one end of grid<br>350 Ω |                |                |                | 8                | Solder Pads  | ST        |          |
|                                  | SGT-3N/350-TY43       | 350                    |  |                |                |                | 13               | Solder Pads  | AL        |          |

STRAIN GAGES

| DISCOUNT SCHEDULE     |                 |
|-----------------------|-----------------|
| 1 to 10 pkgs. ....    | Net             |
| 11 to 24 pkgs. ....   | 5%              |
| 25 to 49 pkgs. ....   | 10%             |
| 50 and up and OEM . . | Consult Factory |

\* Maximum permitted bridge energizing voltage (Vrms).  
**Note:** For strain gage accessories, visit us online.  
**Ordering Example:** SGT-3J/350-TY41, 350 Ω transducer quality uniaxial strain gage.

**NOTE**  
 ST = Steel  
 AL = Aluminum

# Omega Link Load Cell Smart Probe

- Provides excitation for 250 ohm - 15000 ohm strain bridges
- Auto-adjusted activation current
- Hardware and software TARE function
- 2-point Linearization
- 2x Digital I/O (Input or Output)
- Software configurable through SYNC configuration software
- Modular M12 construction
- 10,000+ Sample data/event logging
- Integrated alarm and control
- Secure authentication and password protection



## SP-010: Introduction

The Omega Link SP-010 Load Cell Smart Probe provides an easy way to integrate your bridge devices to the Omega Link Ecosystem. The SP-010 accepts 4-wire load cell sensors through its M12 4-pin connector and Omega Link Smart Interfaces through its M12 8-pin connector. The SP-010 determines the bridge impedance and applies an optimized pulsed bridge excitation current during measurements to minimize self-heating effects. The bridge voltage is then used to determine the applied force using bridge characteristics provided by the user.

A 2-point linearization correction may be applied with the ability to capture the measured values. TARE weight adjustment can be triggered through software or external switch closures.

## Smart Core Enabled

Smart Core is integral to all Omega Link Smart Sensing Devices. In addition to allowing for modular integration to the Omega Link Ecosystem using any Omega Link Smart Interface, this powerful suite of advanced features enable plug-and-play connectivity, alarm and notifications, data logging, SYNC configuration, and storage of 10,000 data points and events.

## Modularity

Customize your Omega Link Ecosystem by taking advantage of discrete I/O features accessible through the modular addition of an M12.8-T-SPLIT and M12.8-S-M-FM terminal.

## Edge Control and Built in I/O

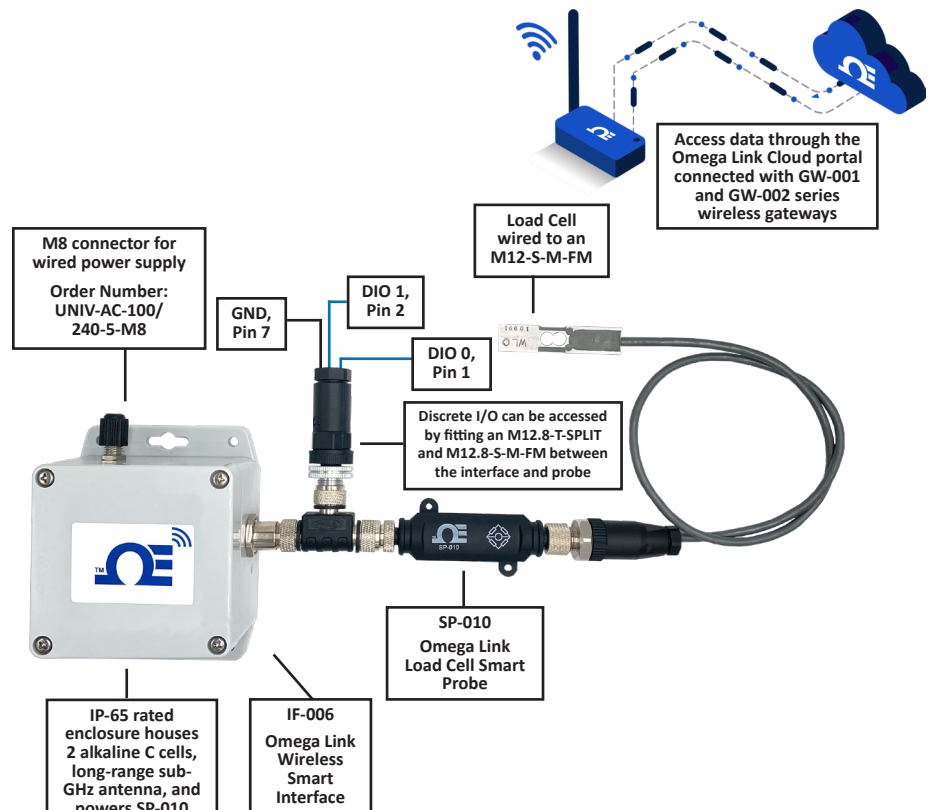
The Omega Link SP-010 features 2 discrete I/O pins. These can be used for a myriad of applications including driving relays, physical alarms, or sensing dry contacts like door switches. The SP-010 can also be utilized as an edge controller, with autonomous independent decision-making capabilities to generate local alarms or provide control outputs based on sensor inputs.

## Long-Range Wireless Solution

Pairing the SP-010 with the IF-006 Series interface produces a self-contained, long-range, wireless solution. This setup can also be externally powered by adding the UNIV-AC100/240-M8 power adaptor.

*\*Note: IF-006 must be paired with an Omega Link wireless gateway*

## Wireless Configuration for Smart Probe with Optional DIO



## Specifications

### INPUT POWER

**Voltage:** 2.8 V<sub>DC</sub> - 3.3 V<sub>DC</sub>

### DIO DIGITAL INPUTS

$V_{inHighThreshold} = 2.2 V_{MAX}$

$V_{inLowThreshold} = 0.3 V_{MIN}$

$V_{inMAX} = 30 V_{DC}$

### DIO DIGITAL INPUTS

2x Open Drain 100 mA max

$V_{MAX} = 30 V_{DC}$

### MEASUREMENTS

**Reading Rate:** 1 sample per second max

#### Supported Strain Gauges

**Bridge Sensitivity:** 1 to 15 mV/V

**Bridge Resistance:** 250 to 15000 Ohm

#### Accuracy

**Linearity Error:** ±0.03% FSO @ 25°C

**Thermal Error:** ±0.005% FSO/C

### ENVIRONMENTAL

**Operating Temperature:** -40 to 85°C (-40 to 185°F)

**Rating:** IP67 when mated

### MECHANICAL

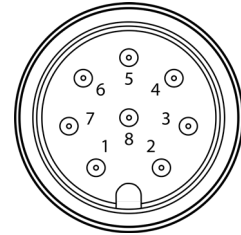
**Dimensions:** 22.1 mm W x 96.7 mm L (0.87" x 3.80") not including mounting tabs

### GENERAL

**Agency Approvals:** CE, UKCA

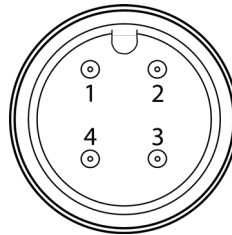
**Compatibility:** Compatible with OEG, SYNC configuration software, Omega Link Cloud, and Modbus Networks

## M12 8-Pin Male Connector



| Pin   | Name    | Function              |
|-------|---------|-----------------------|
| Pin 1 | DIO 0   | Discrete I/O Signal 0 |
| Pin 2 | INTR    | Interrupt Signal      |
| Pin 3 | SCL     | I2C Clock Signal      |
| Pin 4 | SDA     | I2C Data Signal       |
| Pin 5 | Shield  | Shield Ground         |
| Pin 6 | DIO 1   | Discrete I/O Signal 1 |
| Pin 7 | GND     | Power Ground          |
| Pin 8 | 3.3 VDD | Power Supply          |

## M12 4-Pin Male Connector



| Pin   | Name    | Function          |
|-------|---------|-------------------|
| Pin 1 | Exc -   | Excitation return |
| Pin 2 | Sense + | Bridge Output     |
| Pin 3 | Sense - | Bridge Output     |
| Pin 4 | Exc +   | Bridge Excitation |

## Omega Link SP-010 Ordering Guide

| Model Number | Description                             |
|--------------|---|
| SP-010-1     | Load Cell Smart Probe with discrete I/O |

## Omega Link Smart Interface

Omega Link Smart Sensing devices require an Omega Link Smart Interface to operate and connect to your Omega Link Ecosystem. There are both wired and wireless options.

| Model Number | Description                                  |
|--------------|--|
| IF-001       | Wired USB Smart Interface                    |
| IF-002       | Wired RS485/Modbus Smart Interface           |
| IF-006-1-NA  | Wireless Sub GHz Wireless Interface -915 MHz |
| IF-006-1-EU  | Wireless Sub GHz Wireless Interface -868 MHz |



## Omega Link Gateways

An Omega Link Gateway is **required** to connect your Smart Probe to the Omega Link Cloud or Omega Enterprise Gateway.

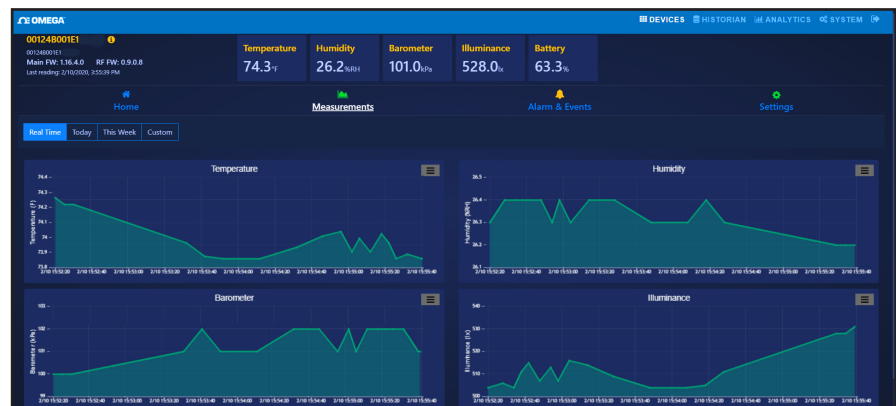
| Model Number | Description  |
|--------------|--|
| GW-001-0     | Wired IIoT Gateway Standard, Ethernet connectivity, Modbus RTU RS232/RS485 and Modbus TCP  |
| GW-001-2-NA  | Wireless IIoT Gateway Standard, Ethernet connectivity, connects up to 100 Omega Link Smart Sensors- 915 MHz  |
| GW-001-2-EU  | Wireless IIoT Gateway Standard, Ethernet connectivity, connects up to 100 Omega Link Smart Sensors- 868 MHz  |
| GW-001-3-NA  | Wireless IIoT Gateway Pro, Ethernet connectivity, power over Ethernet, connects up to 100 Omega Link Smart Sensors, Modbus RTU RS232/RS485 and Modbus TCP, 2x USB ports- 915 MHz |
| GW-001-3-EU  | Wireless IIoT Gateway Pro, Ethernet connectivity, power over Ethernet, connects up to 100 Omega Link Smart Sensors, Modbus RTU RS232/RS485 and Modbus TCP, 2x USB ports- 868 MHz |
| GW-002-1-LTE | Wireless LTE IIoT Gateway Pro connects up to 40 Omega Link Smart Sensors, Modbus RTU RS232/RS485 and Modbus TCP, 1x RJ45 port, 1x USB port - 915 MHz                             |

## Accessories

| Model Number   | Description  |
|----------------|--|
| M12.8-T-SPLIT  | Smart Probe M12-8 pin shielded T-Splitter - enables access to I/O pins |
| M12.8-S-M-FM   | M12-8 pin Straight Plug Field install connector with screw terminals   |
| DM12CAB-8-1-RA | 1m (3.3') cable dual M12-8 connector, right angle terminator           |
| DM12CAB-8-3-RA | 3m (9.8') cable dual M12-8 connector, right angle terminator           |
| DM12CAB-8-5-RA | 5m (16.4') cable dual M12-8 connector, right angle terminator          |
| DM12CAB-8-1    | 1m (3.3') cable dual M12-8 straight connector                          |
| DM12CAB-8-3    | 3m (9.8') cable dual M12-8 straight connector                          |
| DM12CAB-8-5    | 5m (16.4') cable dual M12-8 straight connector                         |

### Your Data at a Glance with the Omega Link Cloud

The Omega Link Cloud consolidates and brings your data to you when you need it, wherever you are. The intuitive cloud interface allows you to monitor and store your data, set alarms and alerts, and provides insights on device activity. Visit the OMEGA website for more details.



# TORQUE SENSORS

10 in-lb to 100K inch-lb

## TQ101 Series



- ✓ Ideal for Monitoring Torque in Motor Pump and Machine Mounts
- ✓ Flange Mounted for Easy Installation
- ✓ Measures Torque in Clockwise and Counterclockwise Directions

TQ101 Series reaction torque sensors are ideal for measuring reaction or restraining torques found in motor mounts, pump mounts, and machine mounts. They can also be used in limited rotation applications, such as measuring the torque required to turn a nut or an actuator shaft. The TQ101 is designed with flanges, enabling easy installation or adaptation. It is rugged enough for factory use, yet accurate enough for the laboratory.

### SPECIFICATIONS

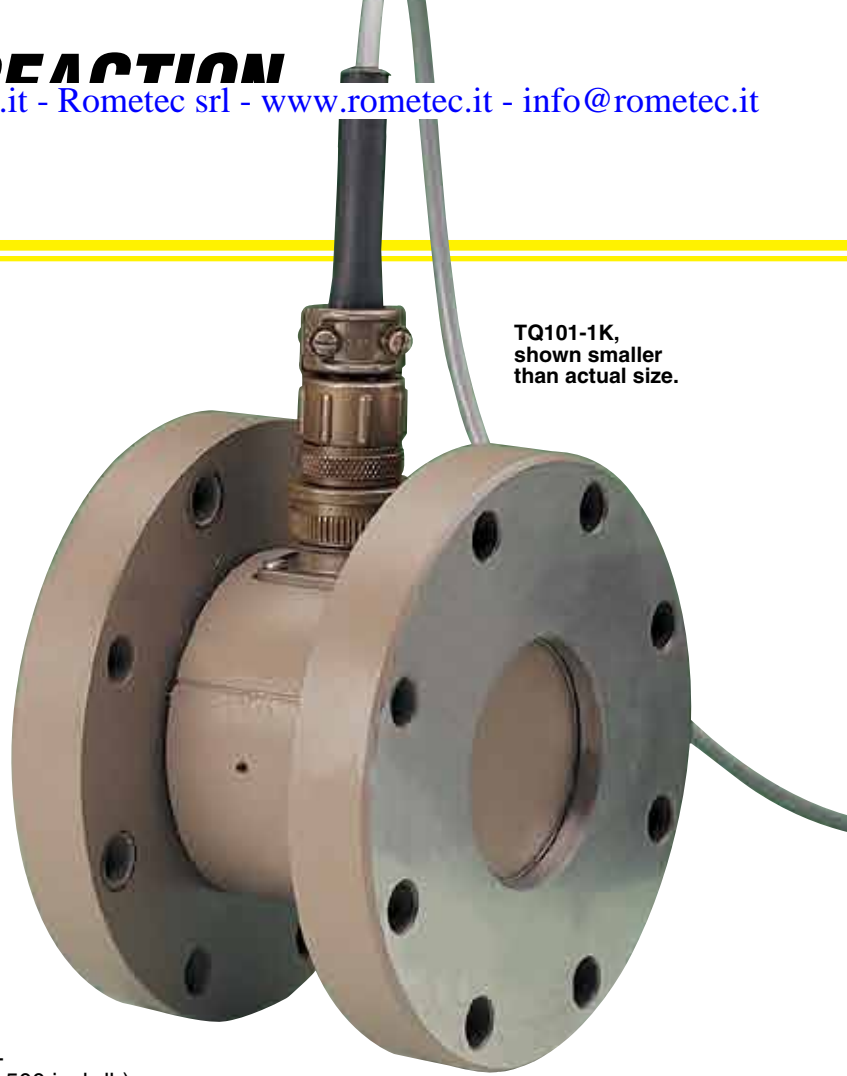
**Rated Output:** 2 mV/V nominal  
**Excitation:** 10 Vdc, 20 Vdc max  
**Accuracy:** ±0.18% FS  
**Linearity:** ±0.10% FS  
**Hysteresis:** ±0.10% FS  
**Repeatability:** ±0.10% FS  
**Zero Balance:** ±1.0% FS  
**Operating Temp Range:**  
 -53 to 120°C (-65 to 250°F)  
**Compensated Temp Range:**  
 0 to 76°C (32 to 170°F)  
**Thermal Effects:**  
**Zero:** ±0.002% FS/°F  
**Span:** ±0.002% rdg/°F  
**Max Load:**  
**Safe:** 150% FS  
**Ultimate:** 300% FS  
**Bridge Resistance:** 350 Ω nominal  
**Full Scale Angular Deflection:** 1.2°  
**Construction:** Nickel-plated steel

### Sensing Element:

Aluminum (up to 500 inch-lb), nickel-plated steel (above 500 inch-lb)

**Cover:** Aluminum (100, 200 and 500 inch-lb) and nickel-plated steel (all other ranges)

**Electrical:** Mating connector supplied



TQ101-1K, shown smaller than actual size.

**To Order Visit [omega.com/tq101](http://omega.com/tq101) for Pricing and Details**

| RANGE              | MODEL NO.         | WT (lb) | COMPATIBLE METERS          |
|--------------------|-------------------|---------|----------------------------|
| 0 to 10 in-lb      | <b>TQ101-10</b>   | 3       | DP41-S, DP302-S, DP2000-S4 |
| 0 to 20 in-lb      | <b>TQ101-20</b>   | 3       | DP41-S, DP302-S, DP2000-S5 |
| 0 to 50 in-lb      | <b>TQ101-50</b>   | 3       | DP41-S, DP3002-S, DP87     |
| 0 to 100 in-lb     | <b>TQ101-100</b>  | 5       | DP41-S, DP302-S, DP2000-S4 |
| 0 to 200 in-lb     | <b>TQ101-200</b>  | 5       | DP41-S, DP302-S, DP2000-S5 |
| 0 to 500 in-lb     | <b>TQ101-500</b>  | 5       | DP41-S, DP3002-S, DP87     |
| 0 to 1000 in-lb    | <b>TQ101-1K</b>   | 8       | DP41-S, DP302-S, DP2000-S4 |
| 0 to 2000 in-lb    | <b>TQ101-2K</b>   | 8       | DP41-S, DP302-S, DP2000-S5 |
| 0 to 5000 in-lb    | <b>TQ101-5K</b>   | 10      | DP41-S, DP3002-S, DP87     |
| 0 to 10,000 in-lb  | <b>TQ101-10K</b>  | 10      | DP41-S, DP3002-S, DP87     |
| 0 to 15,000 in-lb  | <b>TQ101-15K</b>  | 20      | DP41-S, DP3002-S, DP87     |
| 0 to 20,000 in-lb  | <b>TQ101-20K</b>  | 20      | DP41-S, DP3002-S, DP87     |
| 0 to 50,000 in-lb  | <b>TQ101-50K</b>  | 20      | DP41-S, DP87, DP-760       |
| 0 to 100,000 in-lb | <b>TQ101-100K</b> | 30      | DP41-S, DP87, DP-760       |

Comes complete with operator's manual and 5-point calibration.

**Ordering Example:** TQ101-100, flange-mounted reaction torque sensor with 0 to 100 in-lb range.

# SOCKET EXTENSION DEACTION

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# TORQUE SENSORS

## WITH 1/4", 3/8", 1/2", AND 3/4" SQUARE DRIVES

### TQ103 Series



- ✓ Ideal for Use with Drive/Socket Systems to Monitor or Verify Bolt Torque
- ✓ Measures Torque in Clockwise and Counterclockwise Directions
- ✓ Compact, Low Cost, and Accurate
- ✓ Easily Inserted Between Socket and Drive
- ✓ Rugged Construction for Industrial Applications

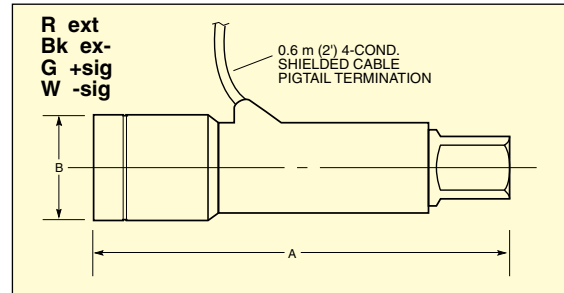
The OMEGA® TQ103 Series socket extension torque sensors are installed between a socket and drive to measure or verify bolt torque. These sensors can measure torque in both clockwise and counterclockwise directions. Their accuracy, cost, and size make them ideal for a variety of industrial and laboratory applications.

### SPECIFICATIONS

**Rated Output:** 1 to 3 mV/V (see chart)  
**Excitation:** 10 Vdc, 20 Vdc maximum  
**Accuracy:** ±0.37% FS  
**Linearity:** ±0.25% FS  
**Hysteresis:** ±0.25% FS  
**Repeatability:** ±0.1% FS  
**Zero Balance:** ±0.1% FS  
**Operating Temperature Range:** -54 to 121°C (-65 to 250°F)  
**Compensated Temperature Range:** 21 to 76°C (70 to 170°F)  
**Thermal Effects:**  
**Zero:** 0.002% FS/°F  
**Span:** 0.002% rdg/°F  
**Maximum Load:** 150% FS, safe; 300% FS, ultimate  
**Bridge Resistance:** 1000 Ω  
**Angular Deflection at FS:** 3°  
**Construction:** Alloy steel  
**Electrical:** 0.6 m (2') of 4-conductor, shielded, color-coded cable with pigtail termination

#### Dimensions: inches

| MODEL NO.  | A   | B          |
|------------|-----|------------|
| TQ103-25   | 3.0 | 1/2 Dia.   |
| TQ103-50   | 3.0 | 1/2 Dia.   |
| TQ103-125  | 3.0 | 1/2 Dia.   |
| TQ103-200  | 3.0 | 11/16 Dia. |
| TQ103-600  | 3.0 | 11/16 Dia. |
| TQ103-1.5K | 3.5 | 7/8 Dia.   |
| TQ103-2.4K | 3.5 | 7/8 Dia.   |
| TQ103-6K   | 5.0 | 1 1/2 Dia. |



### To Order

| MODEL NO.  | RANGE (inch-lb) | DRIVE | RANGE OUTPUT (mV/V) | COMPATIBLE METERS*      |
|------------|-----------------|-------|---------------------|-------------------------|
| TQ103-25   | 0 to 25         | 1/4"  | 1.0                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-50   | 0 to 50         | 1/4"  | 2.0                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-125  | 0 to 125        | 1/4"  | 2.0                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-200  | 0 to 200        | 3/8"  | 1.5                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-600  | 0 to 600        | 3/8"  | 3.0                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-1.5K | 0 to 1500       | 1/2"  | 3.0                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-2.4K | 0 to 2400       | 1/2"  | 3.0                 | HHP-SG, DP25B-S, DP41-S |
| TQ103-6K   | 0 to 6000       | 3/4"  | 3.0                 | HHP-SG, DP25B-S, DP41-S |

\* The HHP-SG is a standard handheld meter; DP25B-S and DP41-S are panel meters.  
**Ordering Example:** TQ103-125, socket extension torque sensor for 1/4" drive ratchet, with 0 to 125 in-lb range, HHP-SG, handheld strain gage indicator.

# REACTION TORQUE CELLS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## SHAFT MOUNT LOW TORQUE RANGE

### STANDARD AND METRIC MODELS

**Reaction Torque**  
**0-25 oz-inch to 0-1000 inch-lb**  
**0-0.18 N-m to 0-110 N-m**

## TQ201/TQM201 Series



TQ201-100  
shown actual size.

- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Shielded Cable for Precise Low-Noise Measurements
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

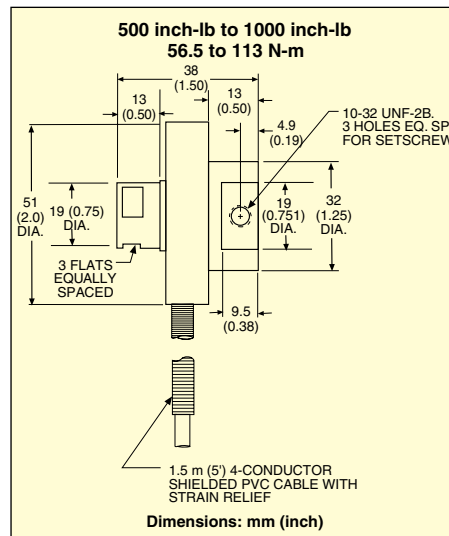
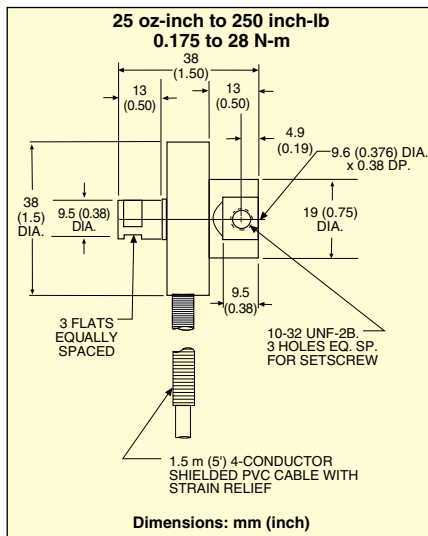
OMEGA's TQ201/TQM201 Series comprises in-line mount reaction torque sensors. They are designed to be mounted to the torque-producing element for measuring the starting torque of motors.

### SPECIFICATIONS

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 350 minimum  
**Output Resistance:** 350 minimum  
**Accuracy Class:** ±0.2% FSO  
**Linearity:** ±0.15% FSO  
**Hysteresis:** ±0.10% FSO  
**Repeatability:** ±0.03% FSO  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:**  
 -54 to 107°C (-65 to 225°F)  
**Compensated Temp Range:**  
 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
**Zero:** ±0.005% FSO/°F  
**Span:** ±0.005% rdg/°F

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Construction:** Stainless steel  
**Protection Class:** IP65

**Electrical:** 1.5 m (5') 4-conductor shielded PVC cable with strain relief



| To Order        |                    |                |                  |                    |
|-----------------|--------------------|----------------|------------------|--------------------|
| STANDARD RANGE  | STANDARD MODEL NO. | METRIC RANGE   | METRIC MODEL NO. | COMPATIBLE METERS* |
| 0 to 25 oz-in   | TQ201-25Z          | 0 to 0.175 N-m | TQM201-0.175     | DP41-S, DP25B-S    |
| 0 to 30 oz-in   | TQ201-30Z          | 0 to 0.20 N-m  | TQM201-0.2       | DP41-S, DP25B-S    |
| 0 to 100 oz-in  | TQ201-100Z         | 0 to 0.70 N-m  | TQM201-0.7       | DP41-S, DP25B-S    |
| 0 to 120 oz-in  | TQ201-120Z         | 0 to 0.85 N-m  | TQM201-0.85      | DP41-S, DP25B-S    |
| 0 to 150 oz-in  | TQ201-150Z         | 0 to 1.0 N-m   | TQM201-1         | DP41-S, DP25B-S    |
| 0 to 200 oz-in  | TQ201-200Z         | 0 to 1.4 N-m   | TQM201-1.4       | DP41-S, DP25B-S    |
| 0 to 25 in-lb   | TQ201-25           | 0 to 2.8 N-m   | TQM201-2.8       | DP41-S, DP25B-S    |
| 0 to 50 in-lb   | TQ201-50           | 0 to 5.6 N-m   | TQM201-5.6       | DP41-S, DP25B-S    |
| 0 to 100 in-lb  | TQ201-100          | 0 to 11 N-m    | TQM201-11        | DP41-S, DP25B-S    |
| 0 to 250 in-lb  | TQ201-250          | 0 to 28 N-m    | TQM201-28        | DP41-S, DP25B-S    |
| 0 to 500 in-lb  | TQ201-500          | 0 to 56.5 N-m  | TQM201-56.5      | DP41-S, DP25B-S    |
| 0 to 1000 in-lb | TQ201-1K           | 0 to 113 N-m   | TQM201-113       | DP41-S, DP25B-S    |

Comes complete with 5-point calibration.

\* Visit us online for compatible meters.

**Ordering Examples:** TQ201-30Z, 30 oz-in range reaction torque sensor.

TQ201-250, 250 in-lb range reaction torque sensor.

# REACTION TORQUE SENSORS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FLANGE-TO-SHAFT MOUNT LOW TORQUE RANGE

### STANDARD AND METRIC MODELS

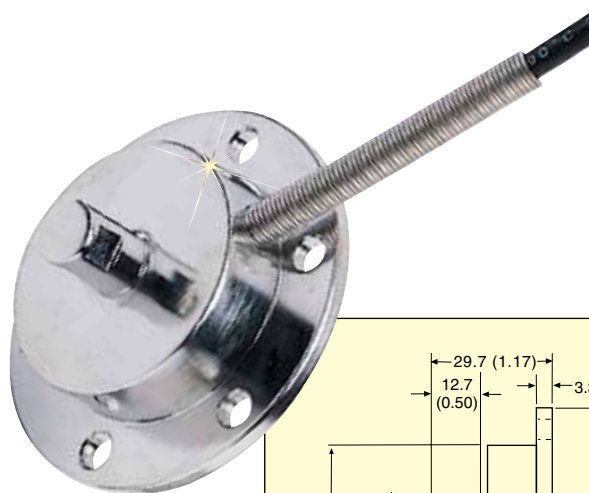
**Reaction Torque**  
**0-25 oz-inch to 0-250 inch-lb**  
**0-0.18 N-m to 0-30 N-m**

## TQ202/TQM202 Series



- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Shielded Cable for Precise Low-Noise Measurements
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

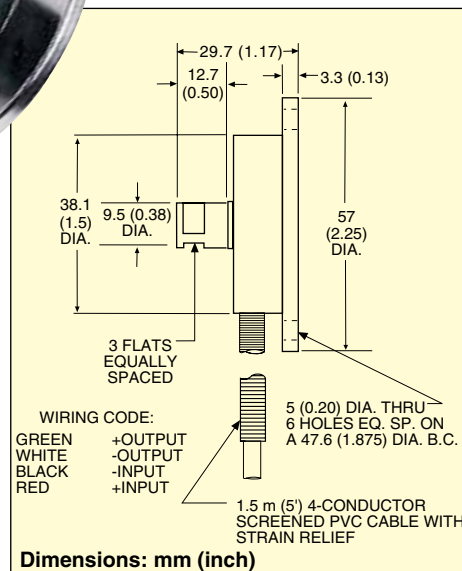
OMEGA's TQ202/TQM202 Series torque sensors are small, high-accuracy flange- or surface-mount devices designed for measuring reaction torque forces up to 250 inch-lb. The shaft attachment has 3 equally spaced flat surfaces to ensure non-slip mounting without the use of a key. The all stainless steel construction ensures long life in industrial environments, as well as long-term accuracy.



TQ202-100Z shown actual size.

### SPECIFICATIONS

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±5 Ω  
**Accuracy:** ±0.2% FSO (combined linearity, hysteresis and repeatability)  
**Zero Balance:** ±2% FSO  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Thermal Effects:**  
**Zero:** 0.005% FSO/°F  
**Span:** 0.005% rdg/°F



**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor shielded PVC cable with strain relief  
**Protection Class:** IP65

### To Order

| STANDARD RANGE   | STANDARD MODEL NO. | METRIC RANGE   | METRIC MODEL NO. | COMPATIBLE METERS* |
|------------------|--------------------|----------------|------------------|--------------------|
| 0 to 25 oz-inch  | TQ202-25Z          | 0 to 0.175 N-m | TQM202-0.175     | DP41-S, DP25B-S    |
| 0 to 30 oz-inch  | TQ202-30Z          | 0 to 0.20 N-m  | TQM202-0.2       | DP41-S, DP25B-S    |
| 0 to 100 oz-inch | TQ202-100Z         | 0 to 0.70 N-m  | TQM202-0.7       | DP41-S, DP25B-S    |
| 0 to 120 oz-inch | TQ202-120Z         | 0 to 0.85 N-m  | TQM202-0.85      | DP41-S, DP25B-S    |
| 0 to 150 oz-inch | TQ202-150Z         | 0 to 1.0 N-m   | TQM202-1         | DP41-S, DP25B-S    |
| 0 to 200 oz-inch | TQ202-200Z         | 0 to 1.4 N-m   | TQM202-1.4       | DP41-S, DP25B-S    |
| 0 to 25 inch-lb  | TQ202-25           | 0 to 2.8 N-m   | TQM202-2.8       | DP41-S, DP25B-S    |
| 0 to 50 inch-lb  | TQ202-50           | 0 to 5.6 N-m   | TQM202-5.6       | DP41-S, DP25B-S    |
| 0 to 100 inch-lb | TQ202-100          | 0 to 11 N-m    | TQM202-11        | DP41-S, DP25B-S    |
| 0 to 250 inch-lb | TQ202-250          | 0 to 28 N-m    | TQM202-28        | DP41-S, DP25B-S    |

Comes complete with 5-point calibration.

\* Visit us online for compatible meters.

Ordering Examples: TQ202-25Z, 25 oz-in range reaction torque sensor.

# REACTION TORQUE CELLS

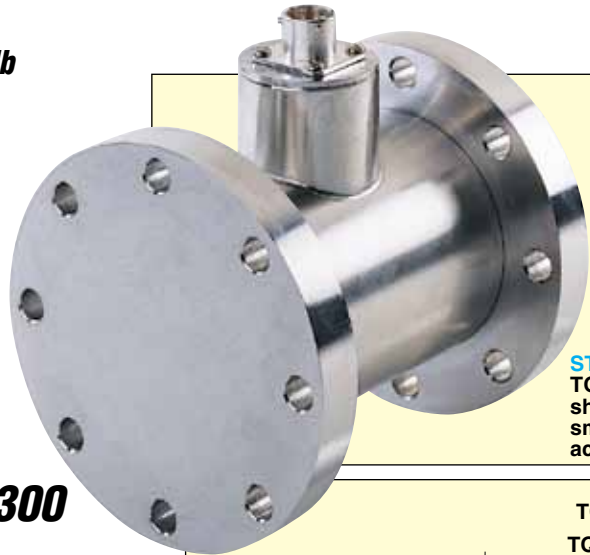
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## FLANGE-TO-FLANGE MOUNT

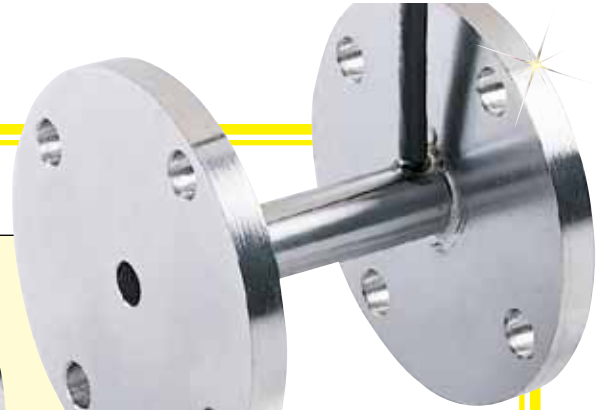
### STANDARD AND METRIC MODELS

**Reaction Torque**  
**400 in-lb to 2000 in-lb**  
**45 N-m to 225 N-m**

1 N-m = 0.7375 ft-lb  
 1 ft-lb = 1.356 N-m  
 1 N-m = 8.85 in-lb  
 1 ft-lb = 12 in-lb



**STANDARD**  
**TQ302-2K**  
 shown much smaller than actual size.



**METRIC**  
**TQM301-45N** shown actual size.

## TQ300/TQM300 Series



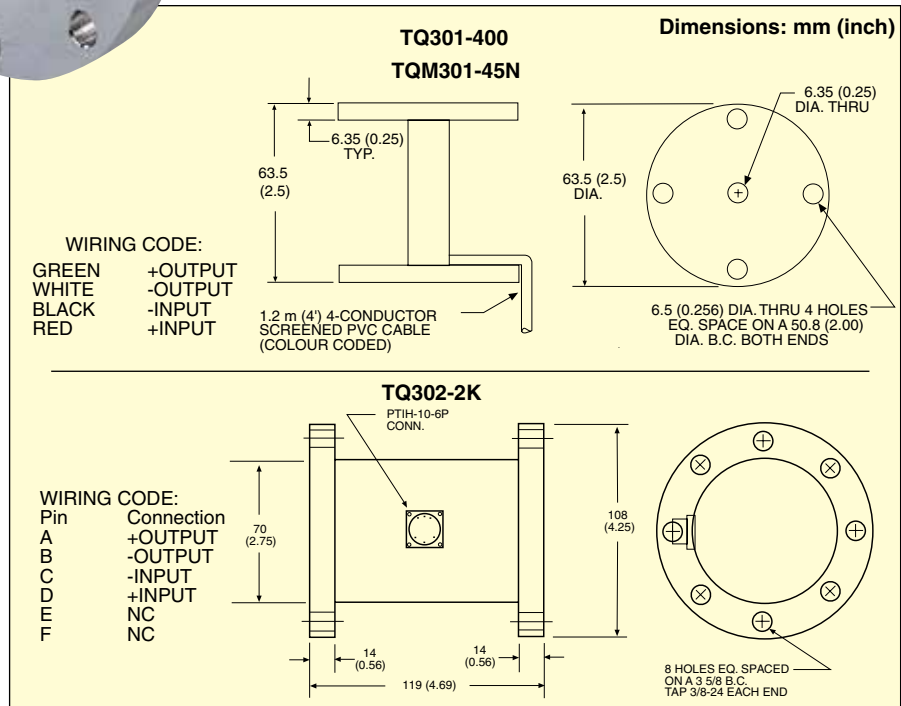
- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

### SPECIFICATIONS

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ± 5 Ω  
**Accuracy Class:** ±0.2% FSO  
**Linearity, Hysteresis and Repeatability:** ±0.2% FSO combined  
**Zero Balance:** ±2% FSO  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Thermal Effects:**  
 Zero: ±0.005% FSO/°F  
 Span: ±0.005% rdg/°F

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Construction:** Stainless steel  
**Electrical:**

**TQ301:** 1.2 m (4') 4-conductor, shielded, color-coded PVC cable  
**TQ302:** PTIH-10-6P connection; PT06F10-6S mating connector sold separately



### To Order

| RANGE                  | MODEL NO.         | COMPATIBLE METERS* |
|------------------------|-------------------|--------------------|
| <b>STANDARD MODELS</b> |                   |                    |
| 0 to 400 in-lb         | <b>TQ301-400</b>  | DP41-S, DP25B-S    |
| 0 to 2000 in-lb        | <b>TQ302-2K</b>   | DP41-S, DP25B-S    |
| <b>METRIC MODEL</b>    |                   |                    |
| 0 to 45 N-m            | <b>TQM301-45N</b> | DP41-S, DP25B-S    |

### ACCESSORY

| MODEL NO.         | DESCRIPTION                               |
|-------------------|---|
| <b>PT06F10-6S</b> | Mating connector for TQ302-2K torque cell |

Comes complete with 5-point calibration.

\* Visit us online for compatible meters.

Ordering Example: TQ301-400, 400 in-lb range reaction torque sensor.

# REACTION TORQUE CELLS

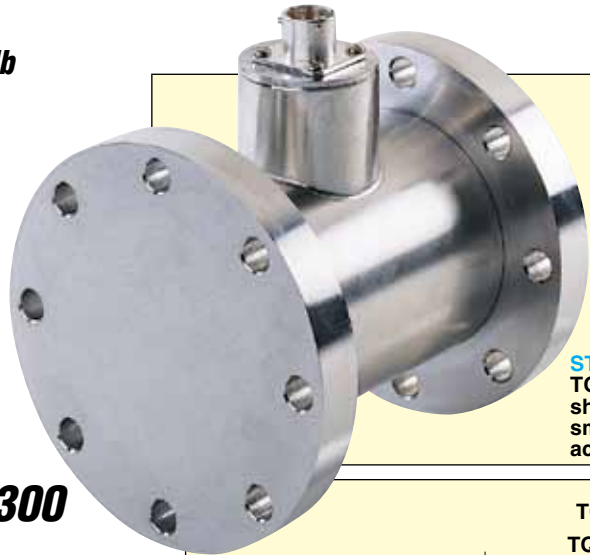
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## FLANGE-TO-FLANGE MOUNT

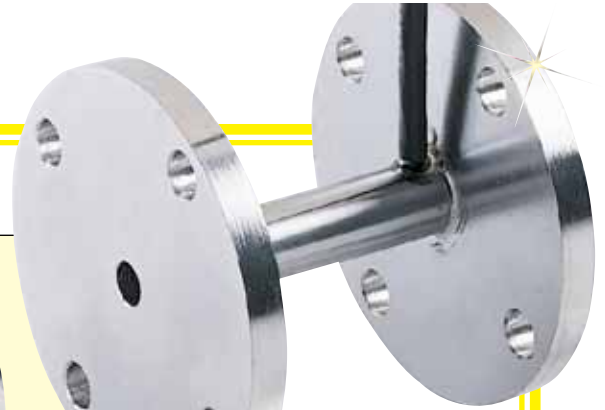
### STANDARD AND METRIC MODELS

**Reaction Torque**  
**400 in-lb to 2000 in-lb**  
**45 N-m to 225 N-m**

1 N-m = 0.7375 ft-lb  
 1 ft-lb = 1.356 N-m  
 1 N-m = 8.85 in-lb  
 1 ft-lb = 12 in-lb



**STANDARD**  
**TQ302-2K**  
 shown much smaller than actual size.



**METRIC**  
**TQM301-45N** shown actual size.

## TQ300/TQM300 Series



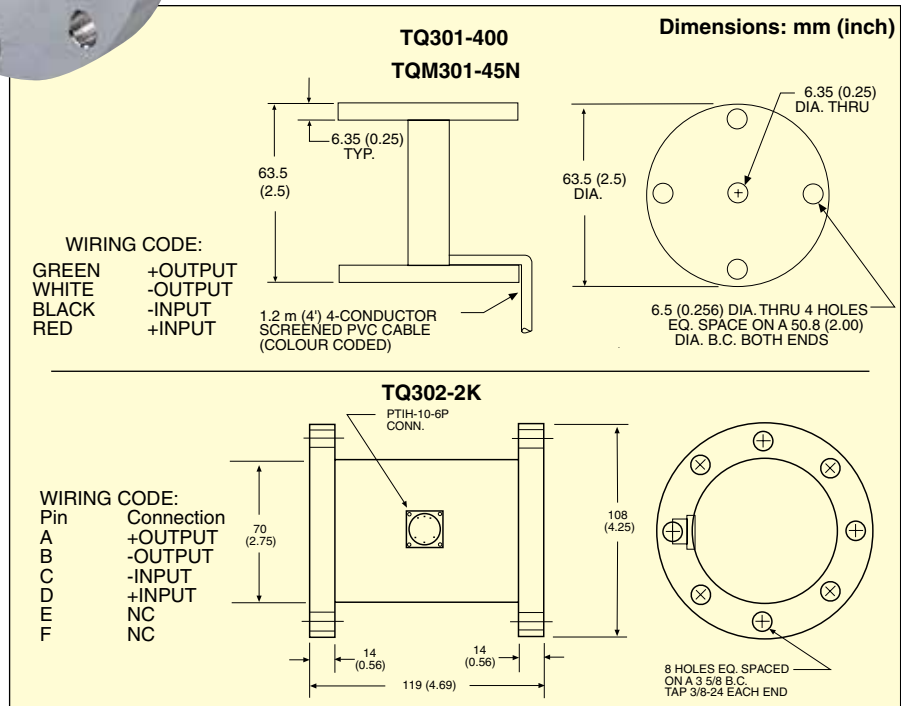
- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

### SPECIFICATIONS

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ± 5 Ω  
**Accuracy Class:** ±0.2% FSO  
**Linearity, Hysteresis and Repeatability:** ±0.2% FSO combined  
**Zero Balance:** ±2% FSO  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Thermal Effects:**  
 Zero: ±0.005% FSO/°F  
 Span: ±0.005% rdg/°F

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Construction:** Stainless steel  
**Electrical:**

**TQ301:** 1.2 m (4') 4-conductor, shielded, color-coded PVC cable  
**TQ302:** PTIH-10-6P connection; PT06F10-6S mating connector sold separately



### To Order

| RANGE                  | MODEL NO.         | COMPATIBLE METERS* |
|------------------------|-------------------|--------------------|
| <b>STANDARD MODELS</b> |                   |                    |
| 0 to 400 in-lb         | <b>TQ301-400</b>  | DP41-S, DP25B-S    |
| 0 to 2000 in-lb        | <b>TQ302-2K</b>   | DP41-S, DP25B-S    |
| <b>METRIC MODEL</b>    |                   |                    |
| 0 to 45 N-m            | <b>TQM301-45N</b> | DP41-S, DP25B-S    |

### ACCESSORY

| MODEL NO.         | DESCRIPTION                               |
|-------------------|---|
| <b>PT06F10-6S</b> | Mating connector for TQ302-2K torque cell |

Comes complete with 5-point calibration.

\* Visit us online for compatible meters.

Ordering Example: TQ301-400, 400 in-lb range reaction torque sensor.

# REACTION TORQUE CELLS

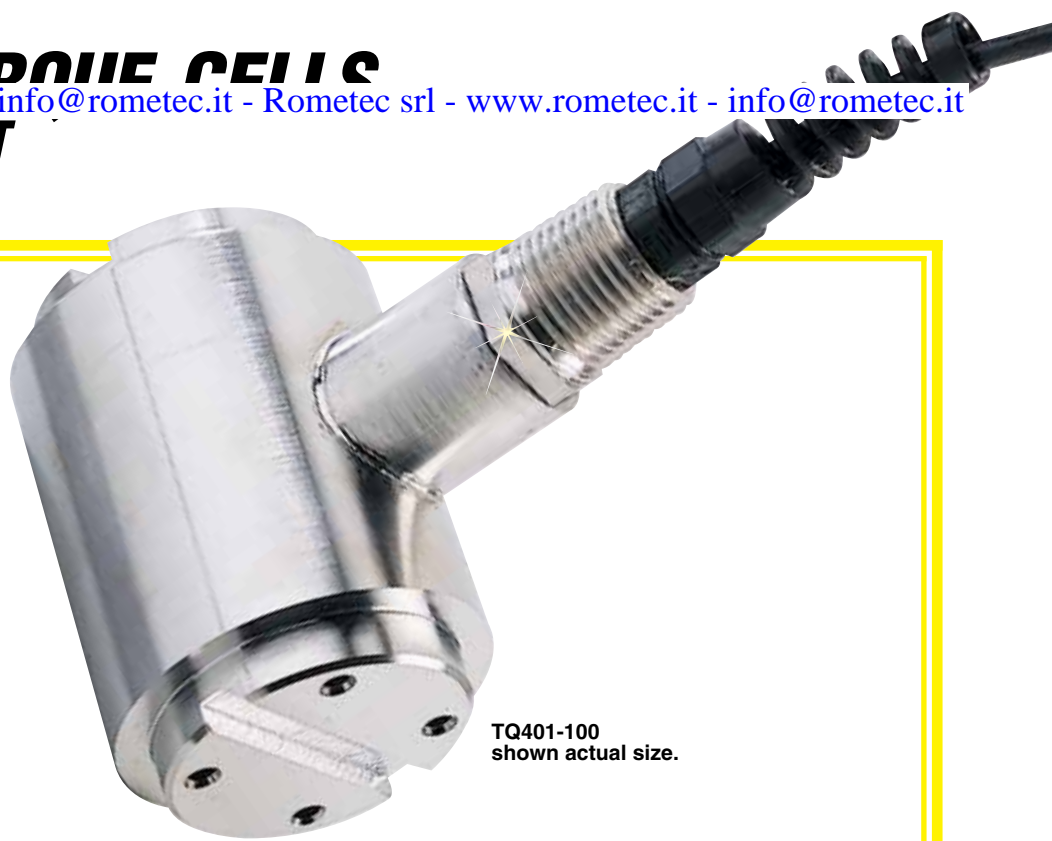
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## SURFACE KEY MOUNT

**Reaction Torque**  
**0-30 ft-lb to 0-250 ft-lb**  
**0-40 N-m to 0-340 N-m**

1 N-m = 0.7375 ft-lb  
 1 ft-lb = 1.356 N-m  
 1 N-m = 8.85 in-lb  
 1 ft-lb = 12 in-lb

### TQ401 Series



TQ401-100 shown actual size.

- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Shielded Cable for Precise Low-Noise Measurements
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

### SPECIFICATIONS

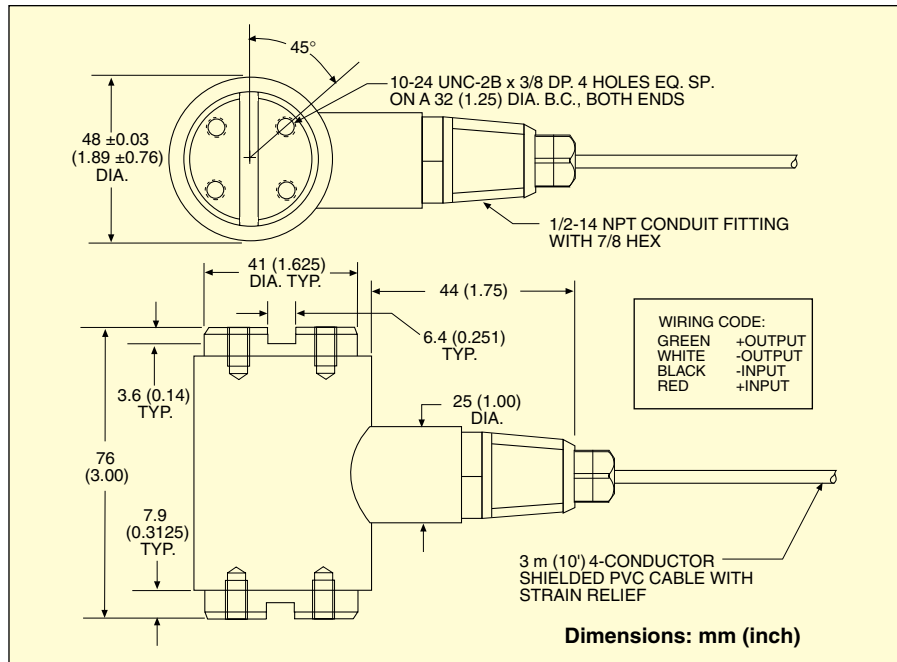
**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ± 5 Ω  
**Accuracy Class:** ±0.2% FSO  
**Linearity:** ±0.2% FSO  
**Hysteresis:** ±0.1% FSO  
**Repeatability:** ±0.05% FSO  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)

#### Thermal Effects:

**Zero:** ±0.005% FSO/°F  
**Span:** ±0.005% rdg/°F

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Construction:** Stainless steel  
**Protection Class:** IP65

**Electrical:** 3 m (10') 4-conductor, shielded, color-coded PVC cable with



### To Order

| RANGE (ft-lb) | MODEL NO.        | COMPATIBLE METERS* |
|---------------|------------------|--------------------|
| 0 to 30       | <b>TQ401-30</b>  | DP41-S, DP25B-S    |
| 0 to 100      | <b>TQ401-100</b> | DP41-S, DP25B-S    |
| 0 to 250      | <b>TQ401-250</b> | DP41-S, DP25B-S    |

Comes complete with 5-point calibration.

\* Visit us online for compatible meters. Metric ranges available – consult Engineering.

**Ordering Examples:** TQ401-30, 30 ft-lb range reaction torque sensor.

TQ401-250, 250 ft-lb range reaction torque sensor.



# REACTION TORQUE CELL

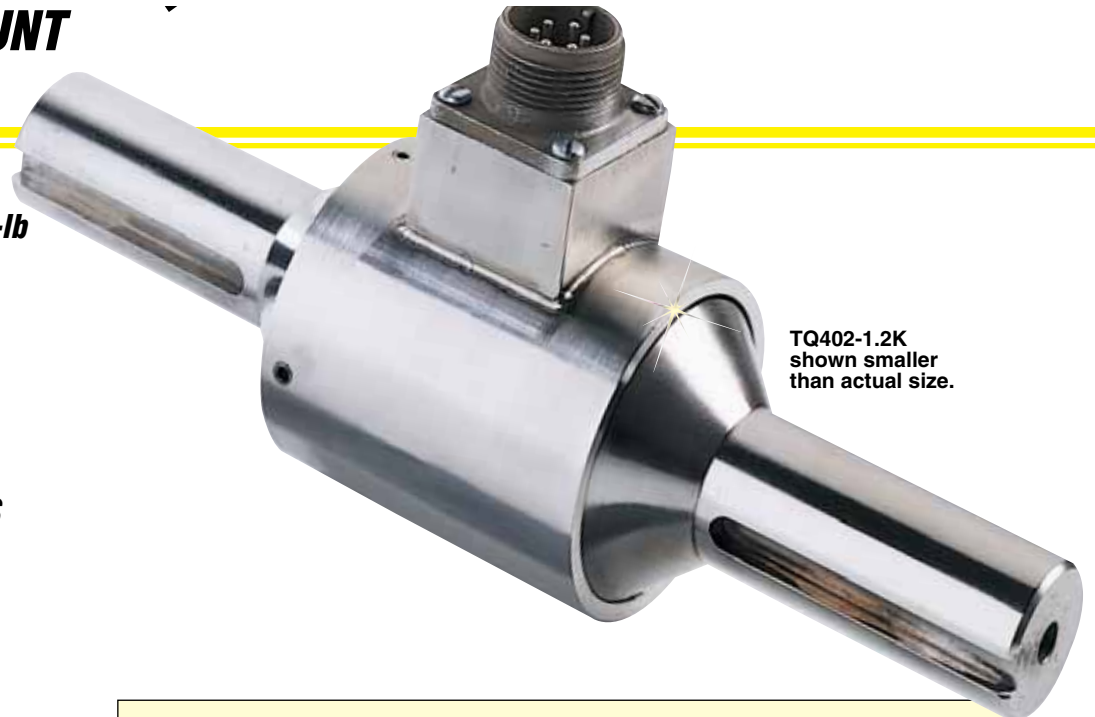
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## SHAFT KEY MOUNT

**Reaction Torque**  
**0-600 in-lb to 0-12,000 in-lb**  
**0-68 N-m to 0-1350 N-m**

1 N-m = 0.7375 ft-lb  
 1 ft-lb = 1.356 N-m  
 1 N-m = 8.85 in-lb  
 1 ft-lb = 12 in-lb

### TQ402 Series

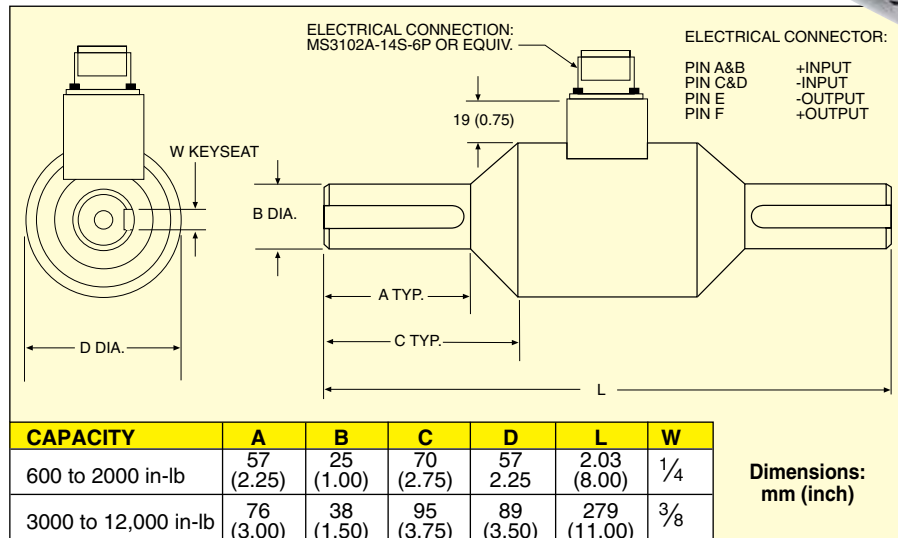


TQ402-1.2K shown smaller than actual size.

- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

### SPECIFICATIONS

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±5 Ω  
**Accuracy Class:** ±0.2% FSO  
**Linearity:** ±0.2% FSO  
**Hysteresis:** ±0.1% FSO  
**Repeatability:** ±0.05% FSO  
**Zero Balance:** ±2% FSO  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Thermal Effects:**  
 Zero: ±0.005% FSO/°F  
 Span: ±0.005% rdg/°F  
**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Protection Class:** IP67  
**Electrical:** MS3102A-14S-6P (or equiv.)  
**Mating Connector:** MS3106E-14S-6S, (sold separately)



### To Order

| RANGE (in-lb) | MODEL NO.         | COMPATIBLE METERS* |
|---------------|-------------------|--------------------|
| 0 to 600      | <b>TQ402-600</b>  | DP41-S, DP25B-S    |
| 0 to 1200     | <b>TQ402-1.2K</b> | DP41-S, DP25B-S    |
| 0 to 2000     | <b>TQ402-2K</b>   | DP41-S, DP25B-S    |
| 0 to 3000     | <b>TQ402-3K</b>   | DP41-S, DP25B-S    |
| 0 to 6000     | <b>TQ402-6K</b>   | DP41-S, DP25B-S    |
| 0 to 12,000   | <b>TQ402-12K</b>  | DP41-S, DP25B-S    |

Comes complete with 5-point calibration.

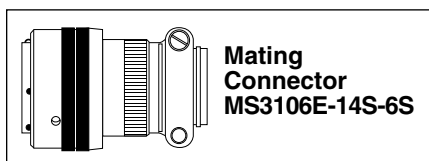
\* Visit us online for compatible meters. Metric ranges available – consult Engineering.

**Ordering Examples:** TQ402-600, 600 in-lb range reaction torque sensor with MS3106E-14S-6S, mating connector.

TQ402-1.2K, 1200 in-lb range reaction torque sensor.

### ACCESSORY

| MODEL NO.             | DESCRIPTION                                    |
|-----------------------|--|
| <b>MS3106E-14S-6S</b> | Mating connector for TQ402 series torque cells |



# DIPPER IN LINE ROTARY TORQUE SENSORS WITH INTEGRAL SLIP-RING ASSEMBLY

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TQ501-1K, with DP41-S, shown smaller than actual size



## TQ501 Series

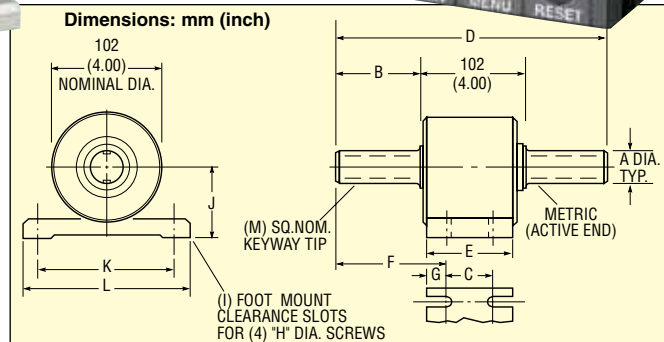


- Ideal for Measuring Torque in Rotating Shafts
- Uses Proven Slip Ring Technology
- Both Ends Double-Keyed for Easy Installation
- Replaceable Slip-Ring Brushes Available
- Mating Connector Included

The TQ501 rotary torque sensor is ideal for measuring torque in rotating shafts. An integral slip-ring assembly is used to transfer the electrical signal from rotating to stationary electronics. The slip ring consists of silver graphite brushes that rub on the rotating ring, providing an electrical path for the incoming excitation and the outgoing signal voltage.

### SPECIFICATIONS

**Rated Output:** 2 mV/V nominal  
**Excitation:** 10 Vdc, 20 Vdc maximum  
**Accuracy:** ±0.18% full scale  
**Linearity:** ±0.10% full scale  
**Hysteresis:** ±0.10% full scale  
**Repeatability:** ±0.10% full scale  
**Zero Balance:** ±1.0% full scale  
**Operating Temp Range:** -53 to 120°C (-65 to 250°F)  
**Compensated Temp Range:** 0 to 77°C (32 to 170°F)  
**Thermal Effects:** Zero ±0.002% FS/°F; span ±0.002% rdg/°F  
**Max Load:** Safe: 150% full scale; ultimate: 300% full scale  
**Bridge Resistance:** 350 Ω nominal  
**Brush Life:** 1.4 x 10<sup>7</sup>/rpm  
**Full Scale Angular Deflection:** 1.2°  
**rpm:** 6000 maximum  
**Construction:** Nickel-plated steel  
**Electrical:** Mating connector supplied  
**Weight:** 3.6 kg (8 lb)



### Dimensions: mm (inch)

| Model No. | A +0.000<br>-0.003 | B            | C            | D             | E            | F            | G            | H           | J +0.000<br>-0.010 | K              | L             | M           |
|-----------|--------------------|--------------|--------------|---------------|--------------|--------------|--------------|-------------|--------------------|----------------|---------------|-------------|
| TQ501-100 | 19<br>(0.750)      |              |              |               |              |              |              |             |                    |                |               | 5<br>(5/16) |
| TQ501-200 |                    | 57<br>(2.25) | 40<br>(1.56) | 216<br>(8.50) | 83<br>(3.26) | 83<br>(3.26) | 22<br>(0.86) | 6<br>(1/4)  | 54<br>(2.125)      | 102<br>(4.000) | 121<br>(4.75) |             |
| TQ501-500 |                    |              |              |               |              |              |              |             |                    |                |               | 6<br>(1/4)  |
| TQ501-1K  | 25<br>(1.000)      |              |              |               |              |              |              |             |                    |                |               |             |
| TQ501-2K  |                    |              |              |               |              |              |              |             |                    |                |               |             |
| TQ501-5K  |                    |              |              |               |              |              |              |             |                    |                |               |             |
| TQ501-10K | 38<br>(1.500)      | 70<br>(2.75) | 51<br>(2.02) | 241<br>(9.50) | 89<br>(3.50) | 92<br>(3.64) | 19<br>(0.74) | 10<br>(3/8) | 64<br>(2.500)      | 133<br>(5.250) | 159<br>(6.25) | 10<br>(3/8) |

### To Order

| MODEL     | RANGE          | COMPATIBLE METERS*         |
|-----------|----------------|----------------------------|
| TQ501-100 | 0-100 in-lb    | DP41-S, DP302-S, DP2000-S4 |
| TQ501-200 | 0-200 in-lb    | DP41-S, DP302-S, DP2000-S5 |
| TQ501-500 | 0-500 in-lb    | DP41-S, DP3002-S, DP87     |
| TQ501-1K  | 0-1000 in-lb   | DP41-S, DP302-S, DP2000-S4 |
| TQ501-2K  | 0-2000 in-lb   | DP41-S, DP302-S, DP2000-S5 |
| TQ501-5K  | 0-5000 in-lb   | DP41-S, DP3002-S, DP87     |
| TQ501-10K | 0-10,000 in-lb | DP41-S, DP3002-S, DP87     |

### OPTION

| ORDER SUFFIX | DESCRIPTION                       |
|--------------|-----------------------------------|
| -RPM         | rpm speed sensor (60 pulses/rev.) |

### ACCESSORY

| MODEL   | DESCRIPTION                      |
|---------|----------------------------------|
| TX4-100 | 100' of 4-con. PVC shielded wire |

Comes complete with operator's manual.

\* Visit us online for compatible meters.

Ordering Example: TQ501-200, rotary torque sensor with integral slip-ring assembly and 0 to 200 in-lb range.

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# TORQUE SENSORS

## WITH 1/4", 3/8", AND 1/2" DRIVES

### TQ502A Series



Front view



Back view

TQ502A-600, shown smaller than actual size.

- ✓ Ideal for Use with Production Fastening Applications
- ✓ Bi-directional Measurement
- ✓ Ideal for Use with Drive/Socket Systems
- ✓ Used for Static or Dynamic Torque Measurement

Dimensions: mm (inch)

| X          | Y          | Z        |
|------------|------------|----------|
| 95 (3.75)  | 9.7 (0.38) | 89 (3.5) |
| 95 (3.75)  | 9.7 (0.38) | 89 (3.5) |
| 101 (3.97) | 12 (0.48)  | 91 (3.6) |
| 101 (3.97) | 12 (0.48)  | 91 (3.6) |
| 108 (4.26) | 15 (0.58)  | 94 (3.7) |
| 108 (4.26) | 15 (0.58)  | 94 (3.7) |

### SPECIFICATIONS

**Rated Output:** 1.5 to 3 mV/V nominal (calibration sheet provided)  
**Excitation:** 20 Vdc maximum  
**Linearity:** ±0.10% FS  
**Hysteresis:** ±0.10% FS  
**Repeatability:** ±0.1% FS  
**Zero Balance:** ±1.0% FS  
**Operating Temp Range:** -55 to 120°C (-65 to 250°F)  
**Compensated Temp Range:** 21 to 75°C (70 to 167°F)

#### Thermal Effects:

**Zero:** ±0.002% FS/°F  
**Span:** ±0.002% rdg/°F

**Overload Capacity:** 150% FS

**Bridge Resistance:** 1000 Ω

**Maximum rpm:** 5000

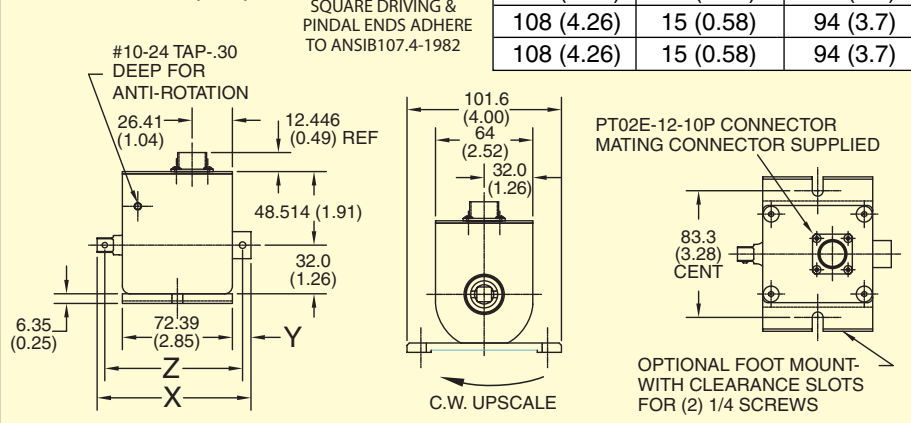
#### Construction:

**Sensor:** Alloy steel  
**Housing:** Alloy aluminum  
**Electrical:** Mating connector supplied

#### OPTIONS

| ORDER SUFFIX | DESCRIPTION            |
|--------------|------------------------|
| -MB          | Mounting foot          |
| -EN1024      | 1024 ppr angle encoder |

Dimensions: mm (inch)



### To Order Visit [omega.com/tq502a](http://omega.com/tq502a) for Pricing and Details

| MODEL NO.   | CAPACITY |       |     | DRIVE (SQUARE) | OUTPUT   | COMPATIBLE METERS*       |
|-------------|----------|-------|-----|----------------|----------|--------------------------|
|             | in lb    | ft lb | NM  |                |          |                          |
| TQ502A-50   | 50       | 4     | 6   | 1/4"           | 2.0 mV/V | DP41-S, DP25B-S, MDS-41S |
| TQ502A-125  | 125      | 10    | 14  | 1/4"           | 2.0 mV/V | DP41-S, DP25B-S, MDS-41S |
| TQ502A-200  | 200      | 16    | 23  | 3/8"           | 1.5 mV/V | DP41-S, DP25B-S, MDS-41S |
| TQ502A-600  | 600      | 50    | 68  | 3/8"           | 3.0 mV/V | DP41-S, DP25B-S, MDS-41S |
| TQ502A-1.5K | 1500     | 125   | 170 | 1/2"           | 3.0 mV/V | DP41-S, DP25B-S, MDS-41S |
| TQ502A-2.4K | 2400     | 200   | 271 | 1/2"           | 3.0 mV/V | DP41-S, DP25B-S, MDS-41S |

Comes complete with operator's manual and calibration data sheet.

\* Visit [omega.com](http://omega.com) for complete details.

**Ordering Examples:** TQ502A-600, socket extension rotary torque sensor with 3/8" square drive, 0 to 600 in-lb range.

TQ502A-125, socket extension rotary torque sensor with 1/4" square drive, 0 to 125 in-lb range.

# ROTATING TORQUE SENSORS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## SHAFT-TO-SHAFT CONFIGURATION



**0-3 in-lb to 0-2000 in-lb**  
**0-0.35 to 0-226 N-M**  
**5000 RPM Max**

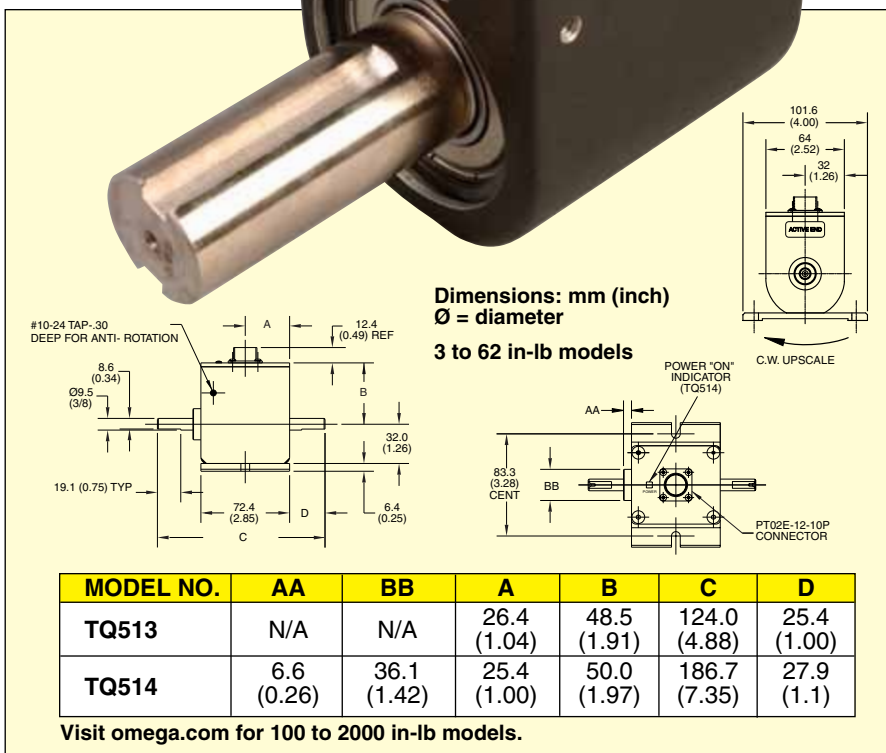
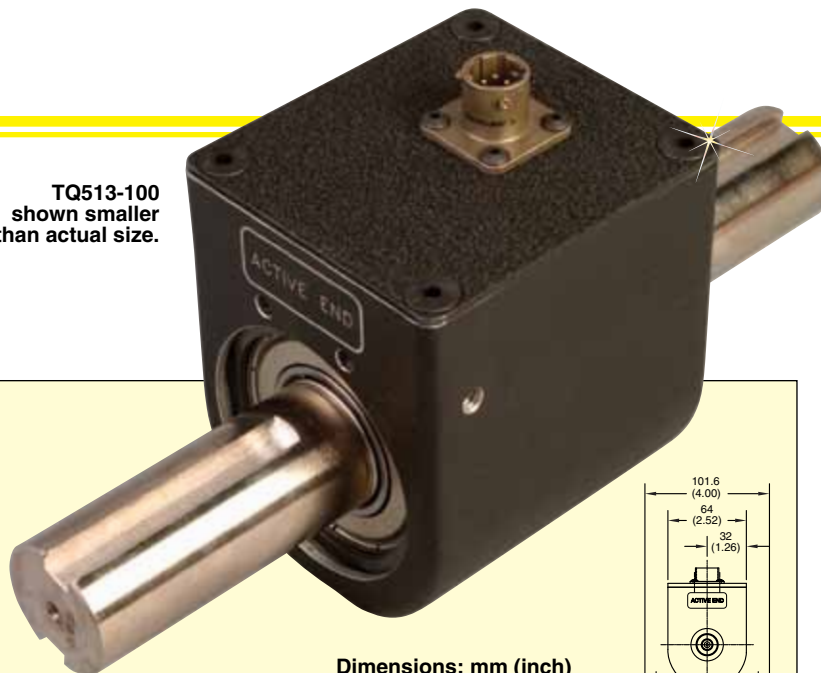
TQ513-100  
 shown smaller  
 than actual size.

### TQ513 Series

- ✓ Silver Slip Rings for Secure Connections
- ✓ Operating Speed Up to 5000 RPM
- ✓ Optional Optical Encoder for Angle or Speed Measurement

The TQ513 Series are designed to measure the rotating torque using shaft-to-shaft in-line placement.

Heavy-duty silver slip rings provide secure transmission of power and signal from the rotating shaft to your instrumentation. An optional 1024 ppr optical encoder is available to measure angle or speed.



### SPECIFICATIONS:

- Excitation Voltage:** 20 Vdc maximum
- Bridge Resistance:** 1000 Ω
- Output at Full Scale:** 2.0 mV/V nominal
- Linearity:** 0.10% FS
- Hysteresis:** 0.10% FS
- Zero Balance:** 1.0% FS
- Operating Temperature:** -40 to 85°C (-40 to 185°F)
- Compensated Temperature:** 21 to 76°C (70 to 170°F)
- Thermal Effects**
  - Zero:** 0.0036% FS/°C
  - Span:** 0.0036% FS/°C
- Overload Capacity:** 150% FS

#### Material:

- <100 in-lb: SS shafts, aluminum sensor
- ≥100 in-lb: Steel shaft and sensor
- Maximum Shaft Speed:** 5000 RPM
- Electrical Connection:** 4-pin twist lock connector (mating connector supplier); 10-pin twist lock connector with optional optical encoder (mating connector supplied)

### To Order

| MODEL NO. | CAPACITY |       |      | SHAFT | KEY        |
|-----------|----------|-------|------|-------|------------|
|           | in-oz    | in-lb | N-M  |       |            |
| TQ513-003 | 50       | 3.125 | 0.35 | 3/8"  | 1/32" flat |
| TQ513-006 | 100      | 6.25  | 0.71 |       |            |
| TQ513-012 | 200      | 12.5  | 1.41 |       |            |
| TQ513-030 | 500      | 31.25 | 3.53 |       |            |
| TQ513-062 | 1000     | 62.5  | 7.06 |       |            |
| TQ513-100 | -        | 100   | 12   | 0.749 | 3/16"      |
| TQ513-200 | -        | 200   | 23   |       |            |
| TQ513-500 | -        | 500   | 56   |       |            |
| TQ513-1K  | -        | 1000  | 113  | 0.999 | 1/4"       |
| TQ513-2K  | -        | 2000  | 226  |       |            |

### OPTIONS (Additional Cost)

| ORDER SUFFIX | DESCRIPTION                       |
|--------------|-----------------------------------|
| -EN1024      | Integral 1024 ppr optical encoder |
| -MB          | Foot mounting bracket             |

Comes complete with operator's manual.

**Ordering Examples:** TQ513-012, 12 in-lb range rotating torque sensor.

TQ513-500-EN1024, 500 in-lb rotation torque sensor with 1024 ppr optical encoder.

# DIGITAL ROTATING TORQUE SENSORS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

# SHAFT-TO-SHAFT CONFIGURATION



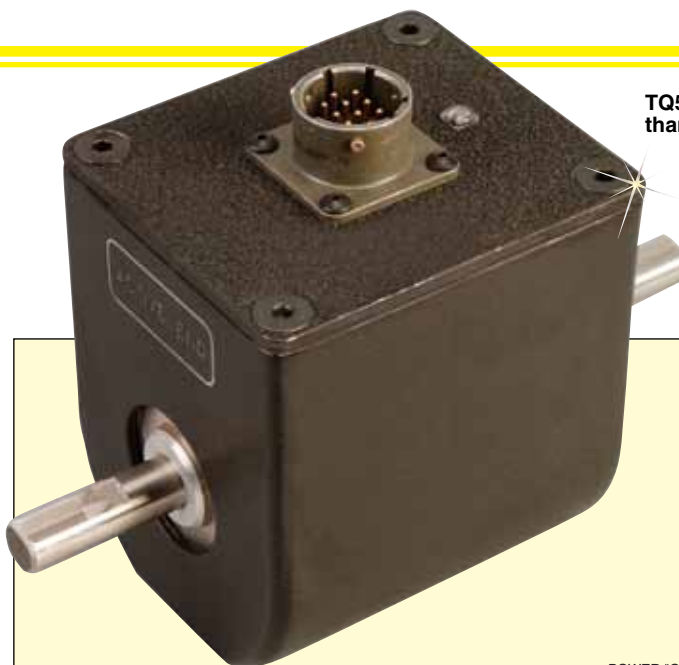
**0-3 in-lb to 0-2000 in-lb**  
**0-0.35 to 0-226 N-M**  
**10,000 RPM Max**

## TQ514 Series

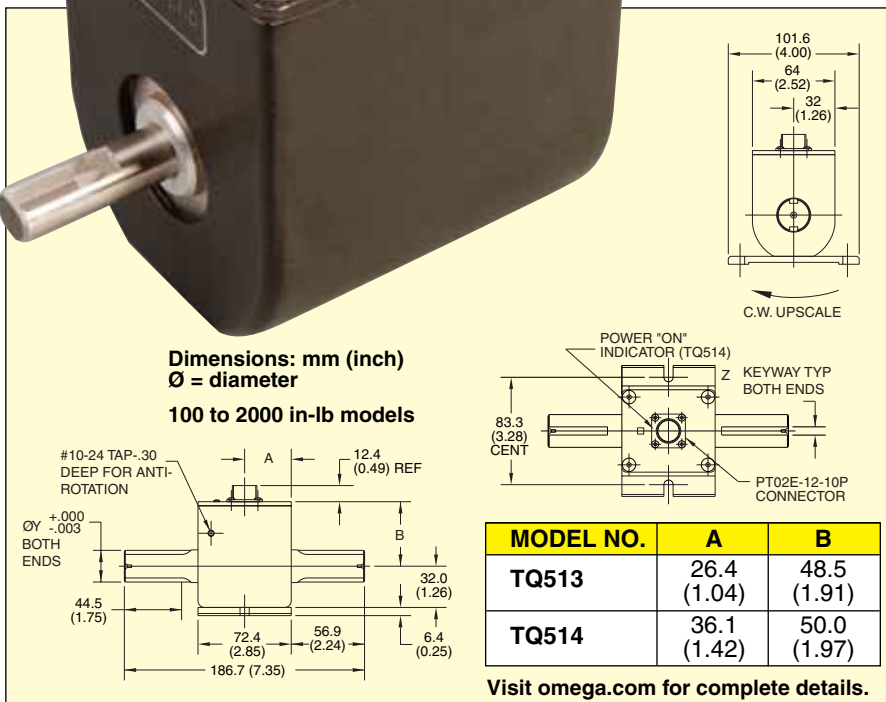


- ✓ No Slip Rings for Quiet, High Speed Operation Up to 10,000 RPM
- ✓ Amplified  $\pm 5$  Vdc Output for Easy Computer Interface
- ✓ Optional Optical Encoder for Angle or Speed Measurement

The TQ514 Series use a unique digital, non-contact wireless system to supply power to and transmit the signal from the rotating sensor. The digital torque signal is then converted and amplified to a  $\pm 5$  Vdc analog signal. This system reduces noise and allows for higher operating speeds. An optional 512 ppr optical encoder is available to measure angle or speed.



TQ514-003, shown smaller than actual size.



| MODEL NO. | A           | B           |
|-----------|-------------|-------------|
| TQ513     | 26.4 (1.04) | 48.5 (1.91) |
| TQ514     | 36.1 (1.42) | 50.0 (1.97) |

Visit [omega.com](http://omega.com) for complete details.

### SPECIFICATIONS:

- Excitation Voltage:** 12 to 15 Vdc
- Supply Current:** 350 mA
- Output at Full Scale:** Isolated  $\pm 5$  Vdc
- Sample Rate:** 20,000 samples per second
- Bandwidth:** dc to 1 kHz
- Linearity:** 0.10% FS
- Hysteresis:** 0.10% FS
- Zero Balance:** 1.0% FS
- Operating Temperature:** -40 to 85°C (-40 to 185°F)
- Compensated Temperature:** 21 to 76°C (70 to 170°F)

### Thermal Effects

- Zero:** 0.0036% FS/°C
- Span:** 0.0036% FS/°C

- Material:** <100 in-lb SS shafts, aluminum sensor  $\geq 100$  in-lb steel shaft and sensor
- Overload Capacity:** 150% FS
- Maximum Shaft Speed:** 10,000 RPM
- Electrical Connection:** 10-pin twist lock connector (mating connector supplier)

### To Order Visit [omega.com/tq514](http://omega.com/tq514) for Pricing and Details

| MODEL NO. | CAPACITY |       |      | SHAFT | KEY        |
|-----------|----------|-------|------|-------|------------|
|           | in-oz    | in-lb | N-M  |       |            |
| TQ514-003 | 50       | 3.125 | 0.35 | 3/8"  | 1/32" flat |
| TQ514-006 | 100      | 6.25  | 0.71 |       |            |
| TQ514-012 | 200      | 12.5  | 1.41 |       |            |
| TQ514-030 | 500      | 31.25 | 3.53 |       |            |
| TQ514-062 | 1000     | 62.5  | 7.06 | 0.749 | 3/16"      |
| TQ514-100 | -        | 100   | 12   |       |            |
| TQ514-200 | -        | 200   | 23   |       |            |
| TQ514-500 | -        | 500   | 56   | 0.999 | 1/4"       |
| TQ514-1K  | -        | 1000  | 113  |       |            |
| TQ514-2K  | -        | 2000  | 226  |       |            |

### OPTIONS

| ORDER SUFFIX | DESCRIPTION                      |
|--------------|----------------------------------|
| -EN512       | Integral 512 ppr optical encoder |
| -MB          | Foot mounting bracket            |

Comes complete with operator's manual.

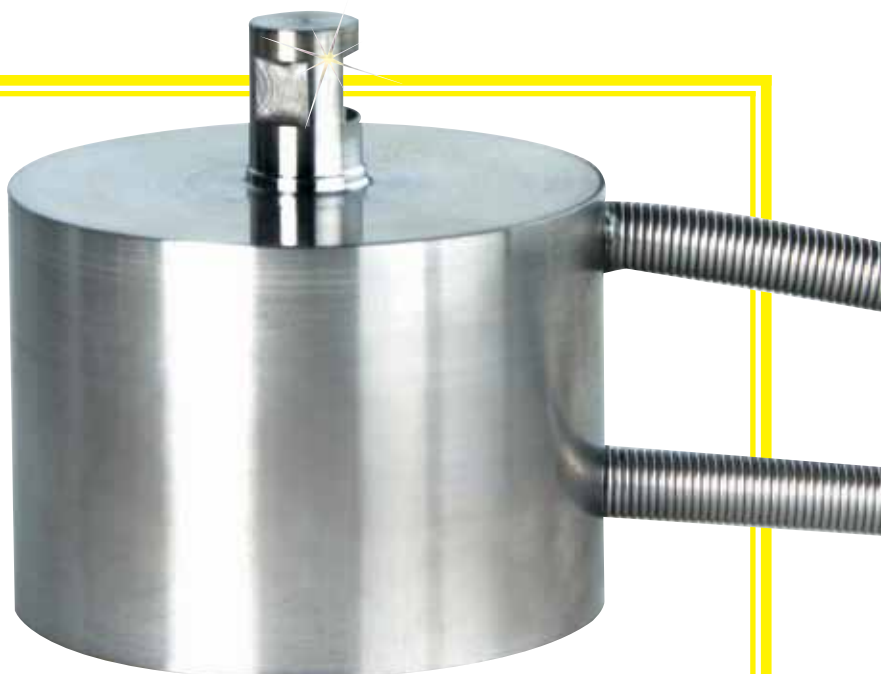
**Ordering Examples:** TQ514-012, 12 in-lb range rotating torque sensor.

TQ514-500-EN512, 500 in-lb rotation torque sensor with 512 ppr optical encoder.

**Combination Torque/Thrust**  
**0 to 100 in-lb/0 to 50 lb**  
**0 to 11 N-m/0 to 225 N**

1 N-m = 0.7375 ft-lb  
 1 ft-lb = 1.356 N-m  
 1 N-m = 8.85 in-lb  
 1 ft-lb = 12 in-lb

TQ601-100/50,  
 shown larger than  
 actual size.



## TQ601 Series



Standard

- ✓ All Stainless Steel for Long-Term Reliability in Industrial Environments
- ✓ Protection Class IP65
- ✓ High Accuracy
- ✓ Dual Shielded Cables for Precise Low-Noise Measurements

### SPECIFICATIONS

#### TORQUE CELL

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±5 Ω  
**Linearity:** ±0.2% FSO  
**Hysteresis:** ±0.10% FSO  
**Repeatability:** ±0.05% FSO

#### Thermal Effects:

**Zero:** ±0.005% FSO/°F  
**Span:** ±0.005% rdg/°F

**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity

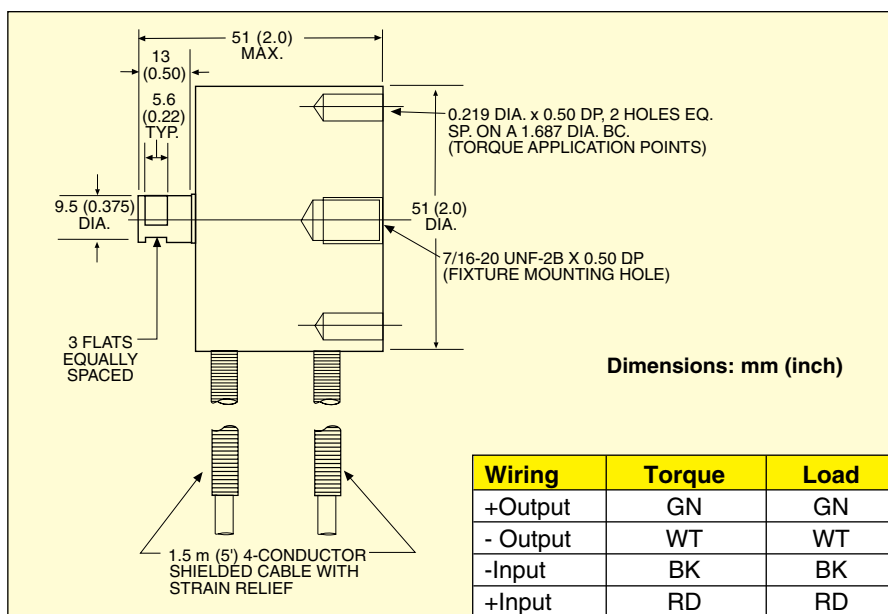
#### THRUST CELL

**Output:** 2 mV/V  
**Excitation:** 10 Vac/dc, 15V maximum  
**Input Resistance:** 360 Ω min  
**Output Resistance:** 350 ±5 Ω  
**Linearity:** ±0.15% FSO  
**Hysteresis:** ±0.10% FSO  
**Repeatability:** ±0.05% FSO  
**Zero Balance:** ±2% FSO

#### Thermal Effects:

**Zero:** 0.0025% FSO/°F  
**Span:** 0.005% rdg/°F

**Safe Overload:** 200% of capacity  
**Ultimate Overload:** 300% of capacity



### COMMON SPECIFICATIONS

**Operating Temperature:**  
 -46 to 107°C (-50 to 225°F)

**Compensated Temperature:**  
 16 to 71°C (60 to 160°F)

**Construction:** Stainless steel

**Electrical:** Two 1.5 m (5') 4-conductor shielded PVC cables

### To Order

| RANGE    |         | MODEL NO.           | COMPATIBLE METERS* |
|----------|---------|---------------------|--------------------|
| in-lb    | lb      |                     |                    |
| 0 to 15  | 0 to 15 | <b>TQ601-15/15</b>  | DP41-S, DP25B-S    |
| 0 to 100 | 0 to 50 | <b>TQ601-100/50</b> | DP41-S, DP25B-S    |

Comes complete with 5-point calibration. Metric ranges available – consult Engineering.

\* Two meters required. Visit us online for compatible meters.

Ordering Example: TQ601-100/50 dual 100 in-lb torque/50 lb load range combination cell

# REACTION TORQUE CELL

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## SHAFT MOUNT LOW TORQUE RANGE

### STANDARD AND METRIC MODELS

**Reaction Torque**  
**0-25 oz-inch to 0-1000 inch-lb**  
**0-0.18 N-m to 0-110 N-m**

## TQ201/TQM201 Series



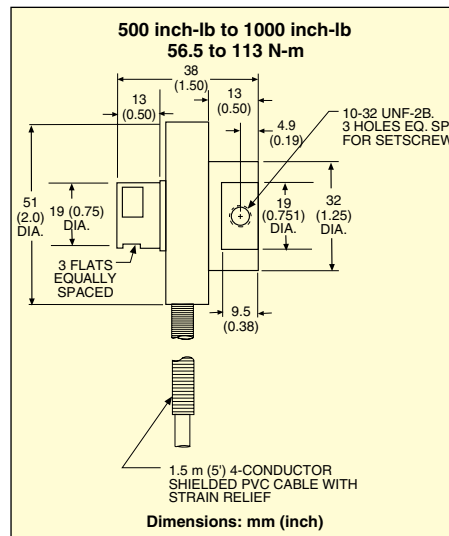
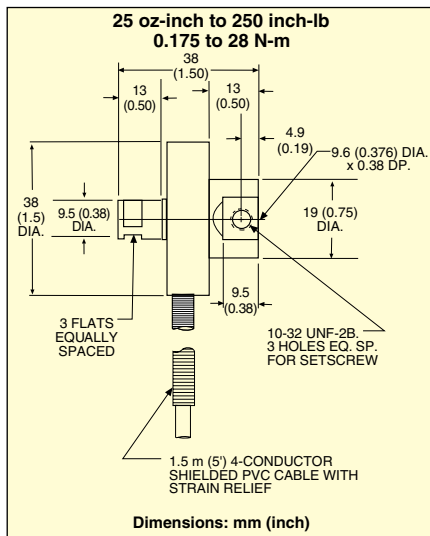
TQ201-100  
shown actual size.

- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Shielded Cable for Precise Low-Noise Measurements
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

OMEGA's TQ201/TQM201 Series comprises in-line mount reaction torque sensors. They are designed to be mounted to the torque-producing element for measuring the starting torque of motors.

### SPECIFICATIONS

- Output:** 2 mV/V
- Excitation:** 10 Vdc, 15V maximum
- Input Resistance:** 350 Ω minimum
- Output Resistance:** 350 Ω minimum
- Accuracy Class:** ±0.2% FSO
- Linearity:** ±0.15% FSO
- Hysteresis:** ±0.10% FSO
- Repeatability:** ±0.03% FSO
- Zero Balance:** ±2% FSO
- Operating Temp Range:** -54 to 107°C (-65 to 225°F)
- Compensated Temp Range:** 16 to 71°C (60 to 160°F)
- Thermal Effects:**
  - Zero: ±0.005% FSO/°F
  - Span: ±0.005% rdg/°F
- Safe Overload:** 150% of capacity
- Ultimate Overload:** 300% of capacity
- Construction:** Stainless steel
- Protection Class:** IP65
- Electrical:** 1.5 m (5') 4-conductor shielded PVC cable with strain relief



| To Order        |                    |                |                  |                    |
|-----------------|--------------------|----------------|------------------|--------------------|
| STANDARD RANGE  | STANDARD MODEL NO. | METRIC RANGE   | METRIC MODEL NO. | COMPATIBLE METERS* |
| 0 to 25 oz-in   | TQ201-25Z          | 0 to 0.175 N-m | TQM201-0.175     | DP41-S, DP25B-S    |
| 0 to 30 oz-in   | TQ201-30Z          | 0 to 0.20 N-m  | TQM201-0.2       | DP41-S, DP25B-S    |
| 0 to 100 oz-in  | TQ201-100Z         | 0 to 0.70 N-m  | TQM201-0.7       | DP41-S, DP25B-S    |
| 0 to 120 oz-in  | TQ201-120Z         | 0 to 0.85 N-m  | TQM201-0.85      | DP41-S, DP25B-S    |
| 0 to 150 oz-in  | TQ201-150Z         | 0 to 1.0 N-m   | TQM201-1         | DP41-S, DP25B-S    |
| 0 to 200 oz-in  | TQ201-200Z         | 0 to 1.4 N-m   | TQM201-1.4       | DP41-S, DP25B-S    |
| 0 to 25 in-lb   | TQ201-25           | 0 to 2.8 N-m   | TQM201-2.8       | DP41-S, DP25B-S    |
| 0 to 50 in-lb   | TQ201-50           | 0 to 5.6 N-m   | TQM201-5.6       | DP41-S, DP25B-S    |
| 0 to 100 in-lb  | TQ201-100          | 0 to 11 N-m    | TQM201-11        | DP41-S, DP25B-S    |
| 0 to 250 in-lb  | TQ201-250          | 0 to 28 N-m    | TQM201-28        | DP41-S, DP25B-S    |
| 0 to 500 in-lb  | TQ201-500          | 0 to 56.5 N-m  | TQM201-56.5      | DP41-S, DP25B-S    |
| 0 to 1000 in-lb | TQ201-1K           | 0 to 113 N-m   | TQM201-113       | DP41-S, DP25B-S    |

Comes complete with 5-point calibration.  
 \* Visit us online for compatible meters.  
**Ordering Examples:** TQ201-30Z, 30 oz-in range reaction torque sensor.  
 TQ201-250, 250 in-lb range reaction torque sensor.

# REACTION TORQUE SENSORS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## FLANGE-TO-SHAFT MOUNT LOW TORQUE RANGE

### STANDARD AND METRIC MODELS

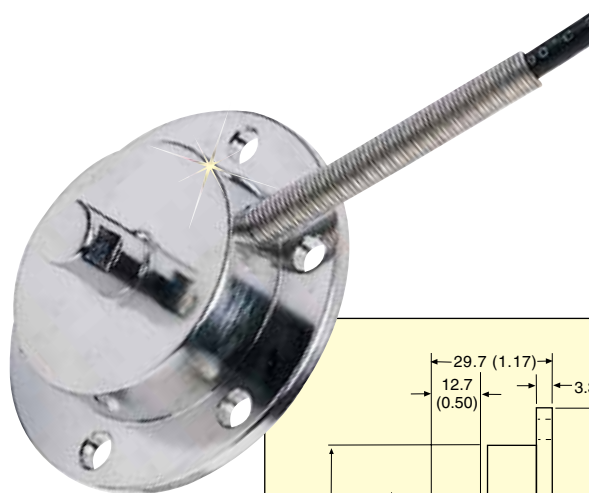
**Reaction Torque**  
**0-25 oz-inch to 0-250 inch-lb**  
**0-0.18 N-m to 0-30 N-m**

## TQ202/TQM202 Series



- ✓ All Stainless Steel Case for Long-Term Reliability in Industrial Environments
- ✓ High Accuracy
- ✓ Shielded Cable for Precise Low-Noise Measurements
- ✓ Heavy-Duty Mounting for Positive, Non-Slip Connection

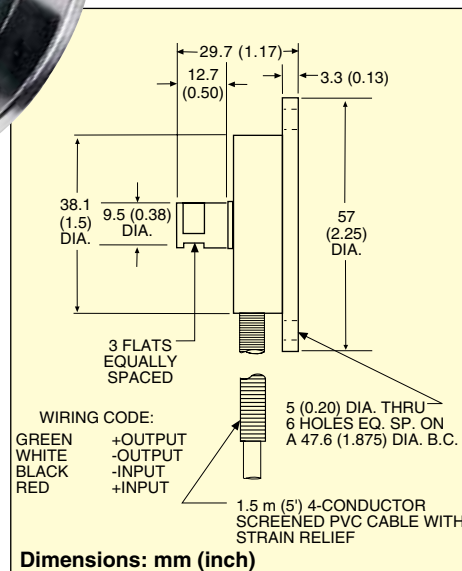
OMEGA's TQ202/TQM202 Series torque sensors are small, high-accuracy flange- or surface-mount devices designed for measuring reaction torque forces up to 250 inch-lb. The shaft attachment has 3 equally spaced flat surfaces to ensure non-slip mounting without the use of a key. The all stainless steel construction ensures long life in industrial environments, as well as long-term accuracy.



TQ202-100Z shown actual size.

### SPECIFICATIONS

**Output:** 2 mV/V  
**Excitation:** 10 Vdc, 15V maximum  
**Input Resistance:** 360 Ω minimum  
**Output Resistance:** 350 ±5 Ω  
**Accuracy:** ±0.2% FSO (combined linearity, hysteresis and repeatability)  
**Zero Balance:** ±2% FSO  
**Compensated Temp Range:** 16 to 71°C (60 to 160°F)  
**Operating Temp Range:** -54 to 107°C (-65 to 225°F)  
**Thermal Effects:**  
**Zero:** 0.005% FSO/°F  
**Span:** 0.005% rdg/°F



**Safe Overload:** 150% of capacity  
**Ultimate Overload:** 300% of capacity  
**Construction:** Stainless steel  
**Electrical:** 1.5 m (5') 4-conductor shielded PVC cable with strain relief  
**Protection Class:** IP65

### To Order

| STANDARD RANGE   | STANDARD MODEL NO. | METRIC RANGE   | METRIC MODEL NO. | COMPATIBLE METERS* |
|------------------|--------------------|----------------|------------------|--------------------|
| 0 to 25 oz-inch  | TQ202-25Z          | 0 to 0.175 N-m | TQM202-0.175     | DP41-S, DP25B-S    |
| 0 to 30 oz-inch  | TQ202-30Z          | 0 to 0.20 N-m  | TQM202-0.2       | DP41-S, DP25B-S    |
| 0 to 100 oz-inch | TQ202-100Z         | 0 to 0.70 N-m  | TQM202-0.7       | DP41-S, DP25B-S    |
| 0 to 120 oz-inch | TQ202-120Z         | 0 to 0.85 N-m  | TQM202-0.85      | DP41-S, DP25B-S    |
| 0 to 150 oz-inch | TQ202-150Z         | 0 to 1.0 N-m   | TQM202-1         | DP41-S, DP25B-S    |
| 0 to 200 oz-inch | TQ202-200Z         | 0 to 1.4 N-m   | TQM202-1.4       | DP41-S, DP25B-S    |
| 0 to 25 inch-lb  | TQ202-25           | 0 to 2.8 N-m   | TQM202-2.8       | DP41-S, DP25B-S    |
| 0 to 50 inch-lb  | TQ202-50           | 0 to 5.6 N-m   | TQM202-5.6       | DP41-S, DP25B-S    |
| 0 to 100 inch-lb | TQ202-100          | 0 to 11 N-m    | TQM202-11        | DP41-S, DP25B-S    |
| 0 to 250 inch-lb | TQ202-250          | 0 to 28 N-m    | TQM202-28        | DP41-S, DP25B-S    |

Comes complete with 5-point calibration.

\* Visit us online for compatible meters.

Ordering Examples: TQ202-25Z, 25 oz-in range reaction torque sensor.



# TANK AND BIN WEIGHING SYSTEMS

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)

## CAPACITIES TO 2500 POUNDS

See page F-55 for full details on LCDA Series load cells.



### TWA3 Assembly with LCDA Load Cell

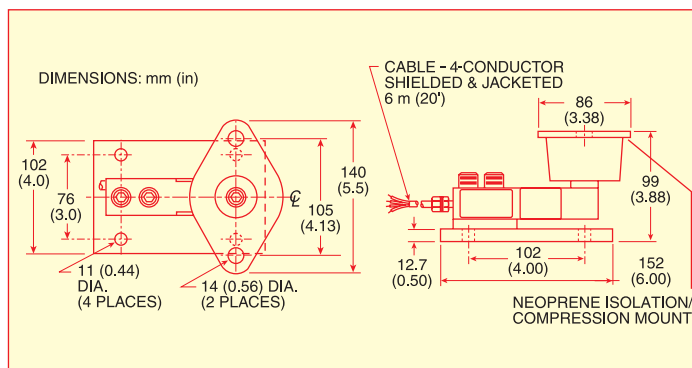
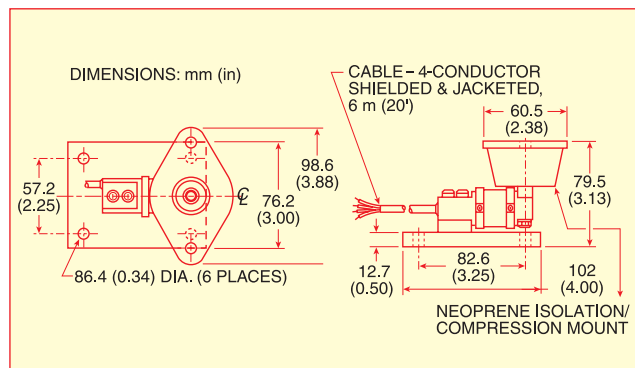
- ✓ 50 to 250 lb Capacity
- ✓ 150% Compression Overload
- ✓ 50% Side Force Protection
- ✓ Complete Environmental Protection

See page F-61 for full details on LCJA Series load cells.



### TWA4 Assembly with LCJA Load Cell

- ✓ 500 to 2500 lb Capacity
- ✓ Provides Shock Absorption for Industrial Applications
- ✓ Ideal for Multicell Installations



   **MOST POPULAR MODELS HIGHLIGHTED!**

### To Order (Specify TWA Assembly and Load Cell Model Numbers)

| CAPACITY kg (lb) | TWA ASSEMBLY     |                | LOAD CELL        |                |
|------------------|------------------|----------------|------------------|----------------|
|                  | MODEL NO.        | WEIGHT kg (lb) | MODEL NO.        | WEIGHT kg (lb) |
| 22.6 (50)        | <b>TWA3-050</b>  | 2.3 (5)        | <b>LCDA-50</b>   | 0.5 (1)        |
| 34.0 (75)        | <b>TWA3-075</b>  | 2.3 (5)        | <b>LCDA-75</b>   | 0.5 (1)        |
| 45.3 (100)       | <b>TWA3-100</b>  | 2.3 (5)        | <b>LCDA-100</b>  | 0.5 (1)        |
| 68.0 (150)       | <b>TWA3-150</b>  | 2.3 (5)        | <b>LCDA-150</b>  | 0.5 (1)        |
| 113.3 (250)      | <b>TWA3-250</b>  | 2.3 (5)        | <b>LCDA-250</b>  | 0.5 (1)        |
| 226.7 (500)      | <b>TWA4-500</b>  | 2.7 (6)        | <b>LCJA-500</b>  | 1.8 (4)        |
| 453.5 (1000)     | <b>TWA4-1K</b>   | 2.7 (6)        | <b>LCJA-1K</b>   | 1.8 (4)        |
| 907.1 (2000)     | <b>TWA4-2K</b>   | 2.7 (6)        | <b>LCJA-2K</b>   | 1.8 (4)        |
| 1133.9 (2500)    | <b>TWA4-2.5K</b> | 2.7 (6)        | <b>LCJA-2.5K</b> | 1.8 (4)        |

LOAD CELLS





**UNITED STATES**

[www.omega.com](http://www.omega.com)  
1-800-TC-OMEGA  
Stamford, CT.

**CANADA**

[www.omega.ca](http://www.omega.ca)  
Laval(Quebec)  
1-800-TC-OMEGA

**GERMANY**

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0800-8266342

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Guyancourt, France  
088-466-342

**CZECH REPUBLIC**

[www.omegaeng.cz](http://www.omegaeng.cz)  
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• **Flow and Level**

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• **pH and Conductivity**

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• **Data Acquisition**

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• **Pressure, Strain and Force**

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• **Heaters**

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters

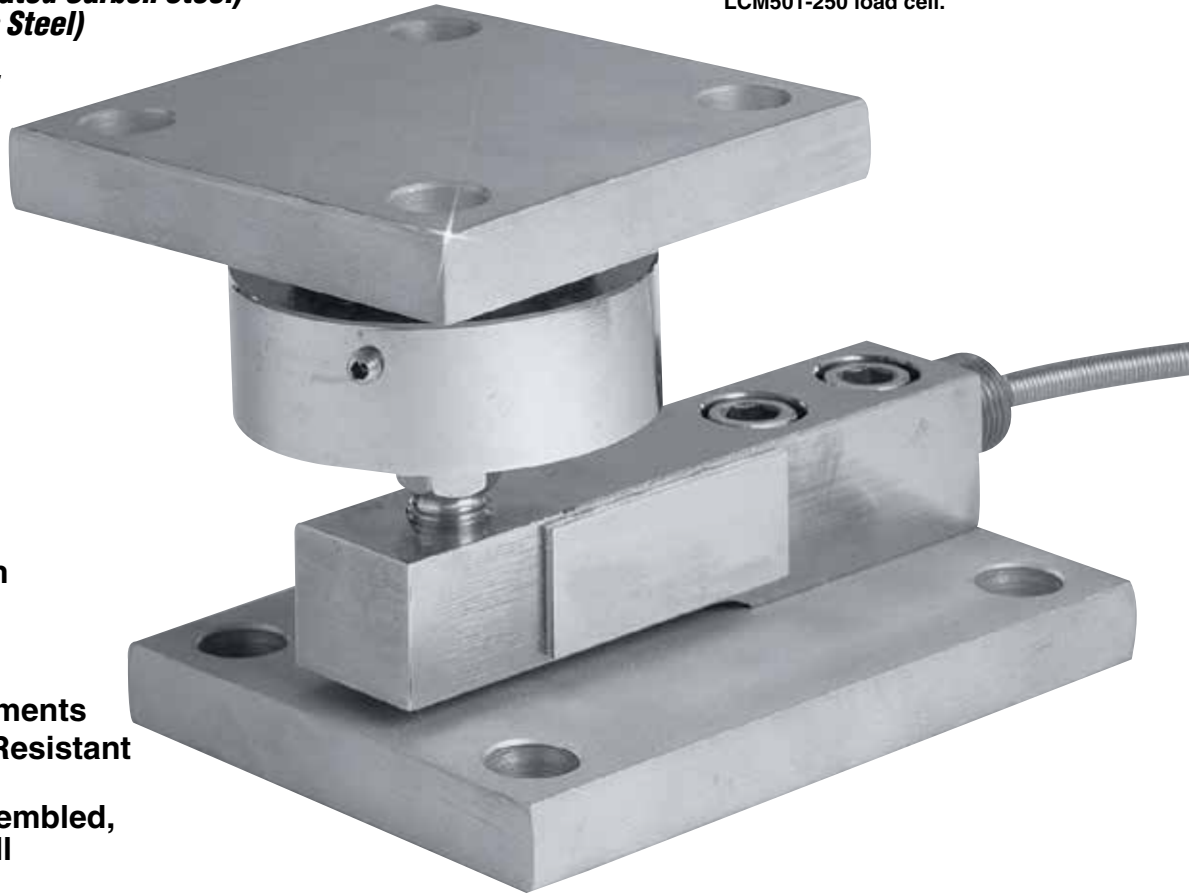
# WEIGH ASSEMBLIES

## WITH LC501/LCM501 SERIES LOAD CELL INCLUDED

### STANDARD AND METRIC MODELS

**TWA5/TWAM5 (Nickel-Plated Carbon Steel)**  
**TWA6/TWAM6 (Stainless Steel)**  
**0-100 lb to 0-20,000 lb**  
**0-25 kgf to 0-10,000 kgf**

**METRIC**  
 TWAM5-250 shown smaller than actual size, includes LCM501-250 load cell.



**TWA5/TWAM5**  
**TWA6/TWAM6**



Standard

- Heavy-Duty Design
- For Tank and Bin Weighing
- Self-Adjusting for Accurate Measurements
- Highly Corrosion-Resistant Materials
- Shipped Fully Assembled, Including Load Cell
- 5-Point Calibration Provided
- 150% Compression Overload
- Ideal for Multicell Installations

### SPECIFICATIONS

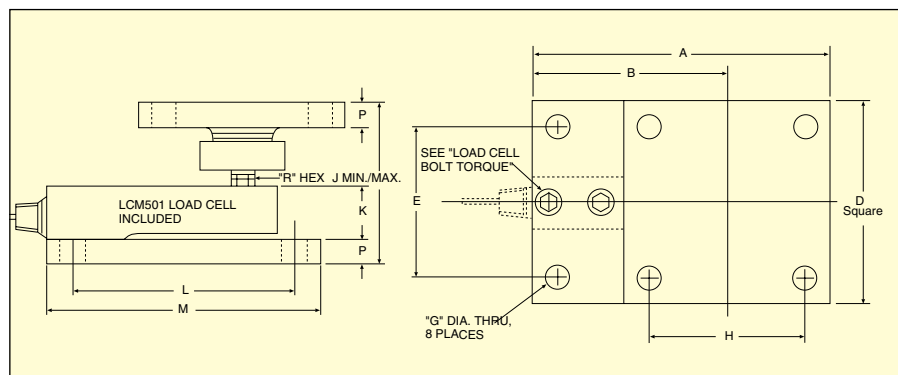
**Non-Parallel Mounting:**  
 Self-adjusting for surfaces up to 2°

**Thermal Expansion:**  
 Self-adjusting for up to ±1.6 mm

**Height:** Adjustable per dimension "J"

| Weight: (Including Load Cell) | Standard Range | kgf (lb)  |
|-------------------------------|----------------|-----------|
| 100 to 750                    |                | 4.5 (10)  |
| 1000 to 5000                  |                | 10.5 (23) |
| 10,000                        |                | 11.5 (25) |
| 20,000                        |                | 25 (55)   |
| Metric Range                  | kgf (lb)       |           |
| 25 to 250                     |                | 4.5 (10)  |
| 500 to 2500                   |                | 10.5 (23) |
| 5000                          |                | 11.5 (25) |
| 10,000                        |                | 25 (55)   |

**5-Point Calibration (in Compression):**  
 0%, 50%, 100%, 50%, 0%



### Dimensions: mm (inch)

| CAPACITY kgf (lb)       | A          | B          | D           | E           | G           | H           | J                    | K           | L            | M           | P           | R           | TORQUE N-m (ft-lb) |
|-------------------------|------------|------------|-------------|-------------|-------------|-------------|----------------------|-------------|--------------|-------------|-------------|-------------|--------------------|
| ≤375 (≤750)             | 146 (5.75) | 102 (4.00) | 88.9 (3.50) | 63.5 (2.50) | 13.5 (0.53) | 63.5 (2.50) | 95.3/102 (3.75/4.00) | 25.4 (1.00) | 101.6 (4.00) | 127 (5.00)  | 12.7 (0.50) | 14.2 (0.56) | 30 (22)            |
| 500 to 2.5K (1 K to 5K) | 222 (8.75) | 146 (5.75) | 152 (6.00)  | 114 (4.50)  | 17.3 (0.68) | 114 (4.50)  | 121/127 (4.75/5.00)  | 38.1 (1.50) | 165.1 (6.50) | 203 (8.00)  | 19 (0.75)   | 14.2 (0.56) | 76 (56)            |
| 5K (10K)                | 248 (9.75) | 171 (6.75) | 152 (6.00)  | 114 (4.50)  | 17.3 (0.68) | 114 (4.50)  | 127/133 (5.00/5.25)  | 38.1 (1.50) | 165.1 (6.50) | 203 (8.00)  | 19 (0.75)   | 22.4 (88)   | 245 (180)          |
| 10K (20K)               | 318 (12.5) | 216 (8.50) | 203 (8)     | 140 (5.50)  | 20.6 (0.81) | 140 (5.50)  | 184/191 (7.25/7.50)  | 63.5 (2.50) | 203 (8.00)   | 254 (10.00) | 25.4 (1.00) | 28.4 (1.12) | 245 (180)          |

## To Order

| CAPACITY               |        | WEIGHING ASSEMBLIES WITH LOAD CELL |                              | REPLACEMENT LOAD CELL<br>MODEL NO. |
|------------------------|--------|------------------------------------|------------------------------|------------------------------------|
|                        |        | CARBON STEEL<br>MODEL NO.          | STAINLESS STEEL<br>MODEL NO. |                                    |
| kgf                    | lb     |                                    |                              |                                    |
| <b>STANDARD MODELS</b> |        |                                    |                              |                                    |
| 45                     | 100    | TWA5-100                           | TWA6-100                     | LC501-100                          |
| 91                     | 200    | TWA5-200                           | TWA6-200                     | LC501-200                          |
| 227                    | 500    | TWA5-500                           | TWA6-500                     | LC501-500                          |
| 341                    | 750    | TWA5-750                           | TWA6-750                     | LC501-750                          |
| 455                    | 1000   | TWA5-1K                            | TWA6-1K                      | LC501-1K                           |
| 909                    | 2000   | TWA5-2K                            | TWA6-2K                      | LC501-2K                           |
| 1361                   | 3000   | TWA5-3K                            | TWA6-3K                      | LC501-3K                           |
| 2269                   | 5000   | TWA5-5K                            | TWA6-5K                      | LC501-5K                           |
| 4537                   | 10,000 | TWA5-10K                           | TWA6-10K                     | LC501-10K                          |
| 9074                   | 20,000 | TWA5-20K                           | TWA6-20K                     | LC501-20K                          |
| <b>METRIC MODELS</b>   |        |                                    |                              |                                    |
| 25                     | 55     | TWAM5-25                           | TWAM6-25                     | LCM501-25                          |
| 50                     | 110    | TWAM5-50                           | TWAM6-50                     | LCM501-50                          |
| 100                    | 220    | TWAM5-100                          | TWAM6-100                    | LCM501-100                         |
| 250                    | 551    | TWAM5-250                          | TWAM6-250                    | LCM501-250                         |
| 500                    | 1102   | TWAM5-500                          | TWAM6-500                    | LCM501-500                         |
| 1000                   | 2205   | TWAM5-1K                           | TWAM6-1K                     | LCM501-1K                          |
| 2500                   | 5512   | TWAM5-2.5K                         | TWAM6-2.5K                   | LCM501-2.5K                        |
| 5000                   | 11,023 | TWAM5-5K                           | TWAM6-5K                     | LCM501-5K                          |
| 10,000                 | 22,046 | TWAM5-10K                          | TWAM6-10K                    | LCM501-10K                         |

**Note:** Weighing assembly is shipped fully assembled including the load cell. Load cell comes with 5-point NIST-traceable calibration and 59 kΩ shunt data. LC501 series load cell will be installed into the TWA module.

**Ordering Examples:** TWA6-5K, 5000 lb weighing assembly in stainless steel with, LC501-5K load cell included.

TWA5-750, 750 lb weighing assembly in carbon steel with LC501-750 load cell included.

TWAM6-2.5K, 2500 kgf capacity stainless steel weighing assembly with LCM501-2.5K, load cell (included).

TWAM5-250, 250 kgf capacity carbon steel weighing assembly with LCM501-250, load cell (included).

## COMPATIBLE METERS/CONTROLLERS FOR PX309 SERIES PRESSURE TRANSDUCERS

The iSeries is available in 1/32, 1/16, and 1/8 DIN programmable process controllers with serial and embedded Internet/Ethernet communications (Order EI Option CNI16D). The iSeries features programmable color displays, free software and ActiveX Controls, selectable full autotune PID control, and NEMA 4 (IP65) rated front bezel. Ordering Examples: DPiS8, strain/process (monitor only), 1/8 DIN; CNI8, strain/process controller with 2 control outputs. Visit us online for a complete selection.



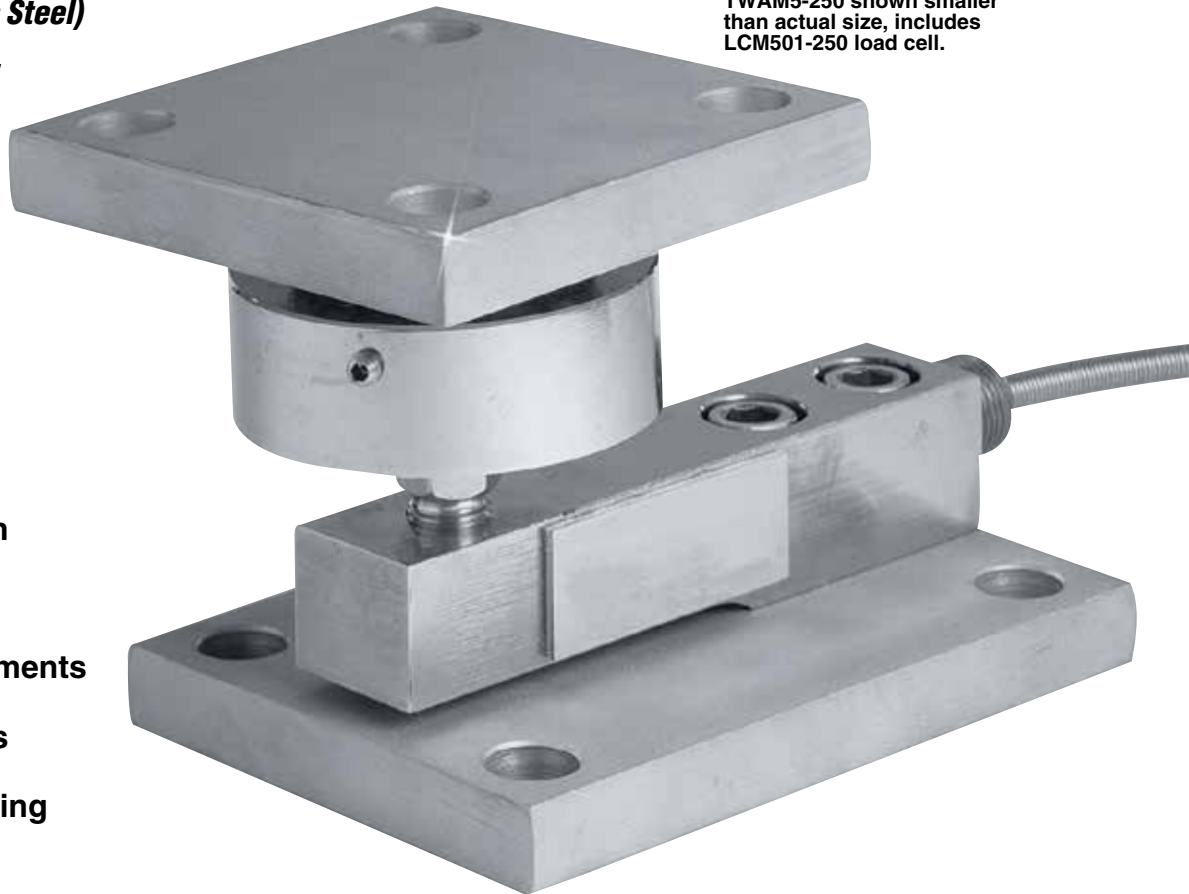
# WEIGH ASSEMBLIES

## WITH LC501/LCM501 SERIES LOAD CELL INCLUDED

### STANDARD AND METRIC MODELS

**TWA5/TWAM5 (Nickel-Plated Carbon Steel)**  
**TWA6/TWAM6 (Stainless Steel)**  
**0-100 lb to 0-20,000 lb**  
**0-25 kgf to 0-10,000 kgf**

**METRIC**  
 TWAM5-250 shown smaller than actual size, includes LCM501-250 load cell.



**TWA5/TWAM5**  
**TWA6/TWAM6**



Standard

- ✓ Heavy-Duty Design
- ✓ For Tank and Bin Weighing
- ✓ Self-Adjusting for Accurate Measurements
- ✓ Highly Corrosion-Resistant Materials
- ✓ Shipped Partially Assembled, Including Load Cell
- ✓ 5-Point Calibration Provided
- ✓ 150% Compression Overload
- ✓ Ideal for Multicell Installations

### SPECIFICATIONS

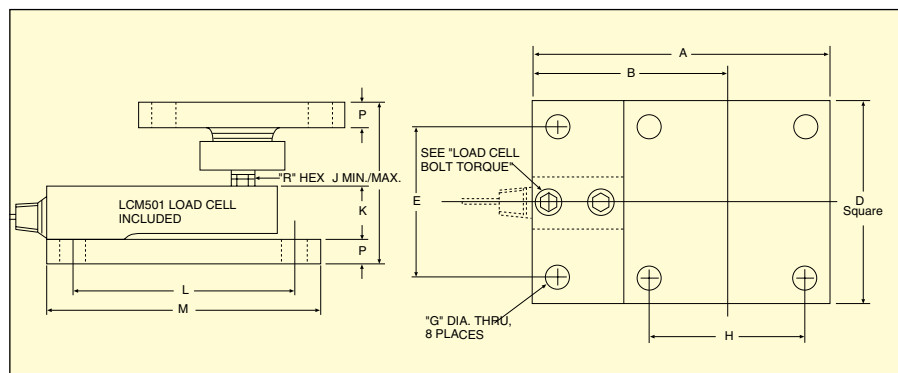
**Non-Parallel Mounting:**  
 Self-adjusting for surfaces up to 2°

**Thermal Expansion:**  
 Self-adjusting for up to ±1.6 mm

**Height:** Adjustable per dimension "J"

| Weight:               | Standard Range | kgf (lb)  |
|-----------------------|----------------|-----------|
| (Including Load Cell) | 100 to 750     | 4.5 (10)  |
|                       | 1000 to 5000   | 10.5 (23) |
|                       | 10,000         | 11.5 (25) |
|                       | 20,000         | 25 (55)   |
| Metric Range          | kgf (lb)       |           |
|                       | 25 to 250      | 4.5 (10)  |
|                       | 500 to 2500    | 10.5 (23) |
|                       | 5000           | 11.5 (25) |
|                       | 10,000         | 25 (55)   |

**5-Point Calibration (in Compression):**  
 0%, 50%, 100%, 50%, 0%



**Dimensions: mm (inch)**

| CAPACITY                   | A              | B             | D              | E              | G              | H              | J                       | K              | L               | M              | P              | R              | TORQUE       |
|----------------------------|----------------|---------------|----------------|----------------|----------------|----------------|-------------------------|----------------|-----------------|----------------|----------------|----------------|--------------|
| kgf (lb)                   |                |               |                |                |                |                |                         |                |                 |                |                |                | N-m (ft-lb)  |
| ≤375<br>(≤750)             | 146<br>(5.75)  | 102<br>(4.00) | 88.9<br>(3.50) | 63.5<br>(2.50) | 13.5<br>(0.53) | 63.5<br>(2.50) | 95.3/102<br>(3.75/4.00) | 25.4<br>(1.00) | 101.6<br>(4.00) | 127<br>(5.00)  | 12.7<br>(0.50) | 14.2<br>(0.56) | 30<br>(22)   |
| 500 to 2.5K<br>(1 K to 5K) | 222<br>(8.75)  | 146<br>(5.75) | 152<br>(6.00)  | 114<br>(4.50)  | 17.3<br>(0.68) | 114<br>(4.50)  | 121/127<br>(4.75/5.00)  | 38.1<br>(1.50) | 165.1<br>(6.50) | 203<br>(8.00)  | 19<br>(0.75)   | 14.2<br>(0.56) | 76<br>(56)   |
| 5K<br>(10K)                | 248<br>(9.75)  | 171<br>(6.75) | 152<br>(6.00)  | 114<br>(4.50)  | 17.3<br>(0.68) | 114<br>(4.50)  | 127/133<br>(5.00/5.25)  | 38.1<br>(1.50) | 165.1<br>(6.50) | 203<br>(8.00)  | 19<br>(0.75)   | 22.4<br>(.88)  | 245<br>(180) |
| 10K<br>(20K)               | 318<br>(12.53) | 216<br>(8.50) | 203<br>(8)     | 140<br>(5.50)  | 20.6<br>(0.81) | 140<br>(5.50)  | 184/191<br>(7.25/7.50)  | 63.5<br>(2.50) | 203<br>(8.00)   | 254<br>(10.00) | 25.4<br>(1.00) | 28.4<br>(1.12) | 245<br>(180) |

## To Order

| CAPACITY               |        | WEIGHING ASSEMBLIES WITH LOAD CELL |                 | REPLACEMENT LOAD CELL |
|------------------------|--------|------------------------------------|-----------------|-----------------------|
|                        |        | CARBON STEEL                       | STAINLESS STEEL |                       |
| kgf                    | lb     | MODEL NO.                          | MODEL NO.       | MODEL NO.             |
| <b>STANDARD MODELS</b> |        |                                    |                 |                       |
| 45                     | 100    | TWA5-100                           | TWA6-100        | LC501-100             |
| 91                     | 200    | TWA5-200                           | TWA6-200        | LC501-200             |
| 227                    | 500    | TWA5-500                           | TWA6-500        | LC501-500             |
| 341                    | 750    | TWA5-750                           | TWA6-750        | LC501-750             |
| 455                    | 1000   | TWA5-1K                            | TWA6-1K         | LC501-1K              |
| 909                    | 2000   | TWA5-2K                            | TWA6-2K         | LC501-2K              |
| 1361                   | 3000   | TWA5-3K                            | TWA6-3K         | LC501-3K              |
| 2269                   | 5000   | TWA5-5K                            | TWA6-5K         | LC501-5K              |
| 4537                   | 10,000 | TWA5-10K                           | TWA6-10K        | LC501-10K             |
| 9074                   | 20,000 | TWA5-20K                           | TWA6-20K        | LC501-20K             |
| <b>METRIC MODELS</b>   |        |                                    |                 |                       |
| 25                     | 55     | TWAM5-25                           | TWAM6-25        | LCM501-25             |
| 50                     | 110    | TWAM5-50                           | TWAM6-50        | LCM501-50             |
| 100                    | 220    | TWAM5-100                          | TWAM6-100       | LCM501-100            |
| 250                    | 551    | TWAM5-250                          | TWAM6-250       | LCM501-250            |
| 500                    | 1102   | TWAM5-500                          | TWAM6-500       | LCM501-500            |
| 1000                   | 2205   | TWAM5-1K                           | TWAM6-1K        | LCM501-1K             |
| 2500                   | 5512   | TWAM5-2.5K                         | TWAM6-2.5K      | LCM501-2.5K           |
| 5000                   | 11,023 | TWAM5-5K                           | TWAM6-5K        | LCM501-5K             |
| 10,000                 | 22,046 | TWAM5-10K                          | TWAM6-10K       | LCM501-10K            |

**Note:** Weighing assembly is shipped fully assembled including the load cell. Load cell comes with 5-point NIST-traceable calibration and 59 kΩ shunt data. LC501 series load cell will be installed into the TWA module. For LC501 unit specifications visit [omega.com/lc501](http://omega.com/lc501) for details.

**Ordering Examples:** TWA6-5K, 5000 lb weighing assembly in stainless steel with, LC501-5K load cell included.

TWA5-750, 750 lb weighing assembly in carbon steel with LC501-750 load cell included.

TWAM6-2.5K, 2500 kgf capacity stainless steel weighing assembly with LCM501-2.5K, load cell (included).

TWAM5-250, 250 kgf capacity carbon steel weighing assembly with LCM501-250, load cell (included).

## COMPATIBLE METERS/CONTROLLERS FOR PX309 SERIES PRESSURE TRANSDUCERS

The iSeries is available in 1/32, 1/16, and 1/8 DIN programmable process controllers with serial and embedded Internet/Ethernet communications (Order EI Option CNI16D). The iSeries features programmable color displays, free software and ActiveX Controls, selectable full autotune PID control, and NEMA 4 (IP65) rated front bezel. Ordering Examples: DPiS8, strain/process (monitor only), 1/8 DIN; CNI8, strain/process controller with 2 control outputs. Visit us online for a complete selection.



# Strain Bridge/ Load Cell Conditioner

TXDIN1600S



- ✓ Suitable for Load Cell/Strain Gauge Applications
- ✓ Universal Current, Bipolar Voltage Outputs
- ✓ Input Range 0.2 to 7.5 mV/V, 5 V Excitation
- ✓ Powered 10 to 32 Vac or 10 to 48 Vdc Supply
- ✓ 2 to 6 Point Calibration with Active Set Option
- ✓ Remote Tare, Front Panel Push Button Configuration
- ✓ USB Programmable



TXDIN1600S, shown actual size.

The TXDIN1600S is a “smart” powered bridge amplifier for use with strain gauges or load cell signals. The product has a built-in capability to scale the input signal to a process value while the output stage offers either voltage, bipolar voltage or active/passive current re-transmission signals.

The TXDIN1600S requires an AC/DC power supply that will operate in the range (10 to 48) Vdc and 10 to 32 Vac making the device ideal for battery operation. An additional volt free contact input is available for tare

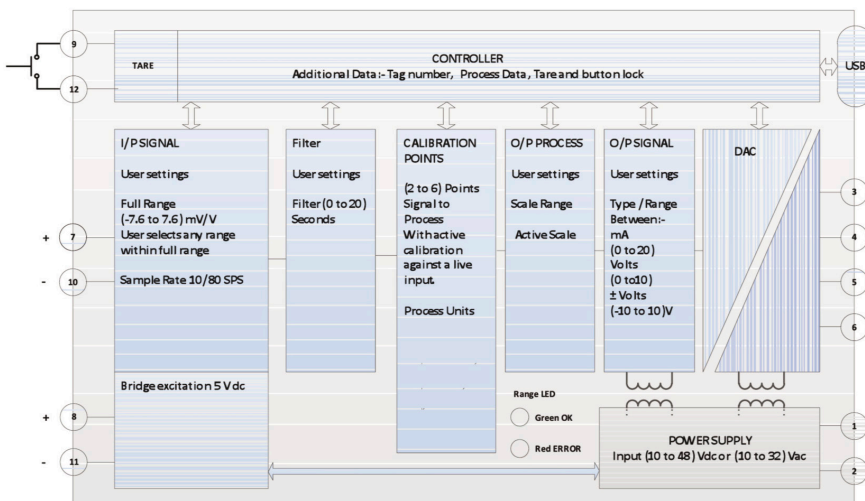
setting using a remote switch. The high precision input stage of the device allows for a bridge excitation voltage of 5 Vdc to be used as opposed to the traditional 10 Vdc. This reduces the power requirement for the bridge supply and up to four bridges (cells) may be connected to the input.

The device is provided with two front panel push buttons that can be configured to perform one of two functions or be disabled.

Set as function 1, the buttons allow the user to push button configure the output range at high and low scale against a live input signal, set as function 2, the buttons allow the operator to trim the output at high and low scale. The device uses ratio metric measurement to obtain high stability.

The product uses a USB port for configuration, together with a simple to use menu driven software configuration tool, allowing the user to take advantage of the product’s comprehensive specification. Additionally, the user may read live process data when connected to the PC, allowing for offset and span calibration.

If configuration is not specified at the time of order, the product will be shipped with the default range 2 mV/V input. 4 to 20 mA output.



## Specifications

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)



**Full Range:** -7.6 to 7.6 mV/V (-38 to 38) mV at 5V excitation

**Type:** Four wire radiometric

**Drift:**  $\pm 0.05\%$

**Linearity:**  $\pm 0.01\%$

**Update:** Selectable, 10 or 80 SPS (samples per second)

### Bridge Excitation

**Voltage:** 5 Volts DC  $\pm 0.1$  V @ 59 mA

**Bridge Impedance:** Total 85 to 10000  $\Omega$  (operates with four 350  $\Omega$  cell in parallel)

### Tare Input

**Type:** Remote volt free contact, up to 10 meter distance

### Output Current

**Current Source:** Range (0 to 21.5) mA, max load 750  $\Omega$

**Current Sink:** Range 0 to 21.5 mA, supply 10 to 30 Vdc, voltage effect 0.2  $\mu$ A/V

**Accuracy:** (mA out/2000) or 5  $\mu$ A whichever is the greater, drift 1  $\mu$ A/ $^{\circ}$ C

### Output Voltage

**Range:** 0 to 10.1 V or -10.1 to 10.1 V, accuracy  $\pm 5$  mV

**Current Drive:**  $\pm 2$  mA, min load 5000  $\Omega$  @ 10 V

### Push Button Configuration

**Type:** Independent "Low" "High" front panel push buttons allow user to manually set low and high output points

### Supply

**Range:** 10 to 48 Vdc, 10 to 32 Vac protected by internal 500 mA resettable fuse

**Power:** < 1 W full power

### General

**Isolation:** Supply to input to output 500 Vdc

**Indication:** LED, green when output -0.1 to 100.1%, all else red

### User Interface

**Type:** USB 2.0

**Baud rate:** 19,200 baud

**Equipment:** PC running Windows XP or later, USB cable.

### User Interface Functions

**Calibration Scaling:** (2 to 6) points signal against process

**Filter:** (1 to 20) seconds to reach 70% of final value

**Tare:** Remote set tare offset with programmable user set point

**Active Calibration:** Active calibration against live load cell

**Process Units:** 4 characters

**Tag Number:** 20 characters

**Process Output:** Process output range

**Signal Output:** Select type, signal range

**Active Scaling Output:** Set output process range against active sensor input

**Sensor Information:** Model, sensitivity and balance

### Environment

**Operating Ambient:** -30 to 70 $^{\circ}$ C (-22 to 158 $^{\circ}$ F); 10 to 90%RH (non condensing)

**Storage Ambient:** -30 to 70 $^{\circ}$ C (-22 to 158 $^{\circ}$ F); 10 to 90%RH (non condensing)

**Configuration Ambient:** 10 to 30 $^{\circ}$ C (50 to 86 $^{\circ}$ F)

**Installation Enclosure:** DIN rail enclosure offering Protection  $\geq$  IP65

### Approvals

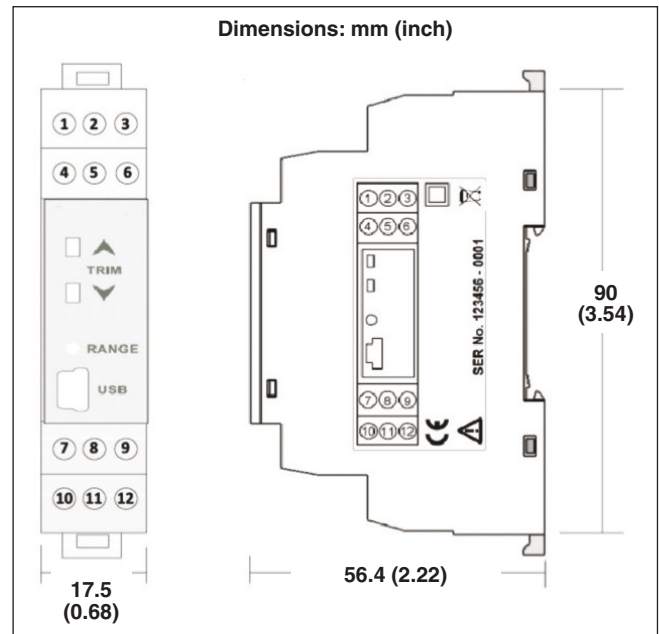
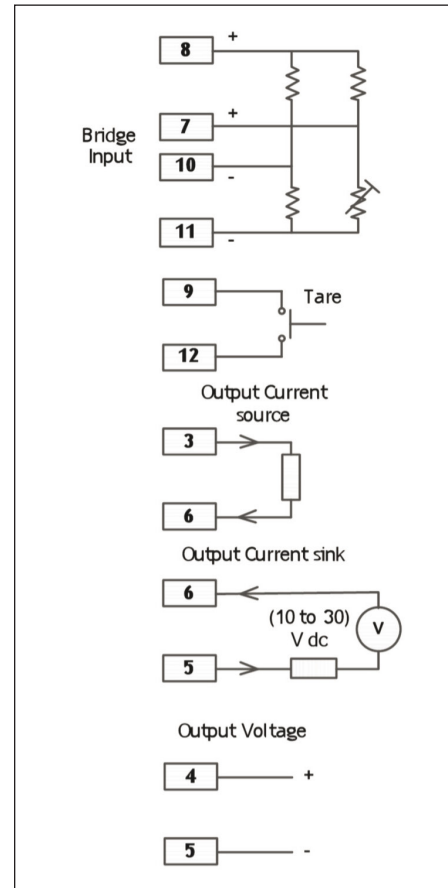
**CE:** BS EN 61326

### Mechanical

**Style:** DIN 43880, color grey, material Polyimide 6.6

**Weight:** < 70 g

**Terminals:** 2.5 mm (0.10") maximum



| To Order   |                                      |
|------------|--------------------------------------|
| Model No.  | Description                          |
| TXDIN1600S | DIN-rail mount load-cell transmitter |

Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it) - Rometec srl - [www.rometec.it](http://www.rometec.it) - [info@rometec.it](mailto:info@rometec.it)