



DP3001-5 shown actual size.

DP3001



- ✓ ±19,999 Count Display Span
- ✓ ±2 V to ±200 Vdc Ranges
- ✓ True-Differential Input
- ✓ 120 dB CMR, 56 dB NMR
- ✓ 1 pA Typical Bias Current
- ✓ 3-Wire Ratio Measurement
- ✓ Bright, 14 mm (0.56") LED Display
- ✓ Automatic Zero and Polarity
- ✓ Display Hold and Test
- ✓ 115/230 Vac Power
- ✓ Short 104 mm (4.1") Deep 1/8 DIN Case
- ✓ RoHS 2 Compliant

Options

- ✓ Isolated 9 to 32 Vdc Power
- ✓ Isolated 26 to 56 Vdc Power
- ✓ Screw-Terminal Barrier Strip
- ✓ NEMA 4 (IP65) Splash-Proof Lens Cover

The DP3001 is a low-cost, true-differential 4 1/2 digit panel meter for applications that require high resolution and high accuracy DC measurement. It fits a standard 1/8 DIN panel cutout and requires a depth of less than 104 mm (4.1") behind the panel. Display span is ±19,999 counts. Accuracy is 99.98%.

INPUT RANGES

The DP3001 offers DC voltage ranges of ±1.9999, ±19.999 and ±199.99 Vdc. By using an external DC voltage reference, any of these ranges can be configured for 3-wire ratio measurement.

OPTIONS

The meter can be electrically configured for three input voltage ranges, four decimal-point positions, high-impedance 3-wire ratio input. Mechanical options include a screw-terminal barrier strip for signal and power and a splash-proof lens cover which meets NEMA 4 (IP65) requirements.

SPECIFICATIONS

Noise Rejection

NMR, SIG HI to SIG LO: 56 dB, 50/60 Hz

CMR, SIG LO to ANA GND: 86 dB, DC to 60 Hz

CMR, AC GND to ANA GND: 120 dB, DC to 60 Hz

CMV, SIG LO to ANA GND: ±1 Vp

CMV, AC GND to ANA GND: 1500 Vp per HV test, 354 Vp per IEC spacing

3-Wire Ratio Reference

Analog Input Range: ±2, ±20, ±200 V

External Reference Input: +0.5 to +2.0 V

Load on Reference, Std: 6 kΩ

Load on Reference, Opt: 100 MΩ

Accuracy: 99.98%

Analog Input

Configuration: Differential, bipolar

Zero: Automatic

Span Adjustment: ±5%

Analog-to-Digital Conversion

Technique: Dual-slope, average-value

Polarity: Automatic

Signal Integration Period: 100 ms

Read Rate: 2.5/s

Accuracy at 25°C

Maximum Error: ±0.01% of reading
±2 counts

Span Tempco: ±0.01% of reading/°C

Step Response: 1s

Warmup to Rated Accuracy: 10 min

Display

Type: 7-segment, red LED

Height: 14 mm (0.56")

Symbols: -1.8.8.8.8

Decimal Points: Four positions selectable by jumpers from front panel or at connector, 10 mA sink

Overrange Indication: Four least-significant digits flash

Digital Inputs

HOLD and TEST Inputs:

TTL or 5 V CMOS compatible

Blanking Input: Open-collector compatible

Power

AC Voltages: 115 or 230 Vac ±15%

AC Frequency: 49 to 440 Hz

DC Voltages: 9 to 32 Vdc, isolated to 300 Vp; 26 to 56 Vdc, isolated to 300 Vp

Power Consumption: 2.5 W

Output Voltages: 4.7 Vdc and -4.6 Vdc ±5%, 10 mA max

Environmental

Operating Temperature: 0 to 60°C

Storage Temperature: -40 to 85°C

Relative Humidity: 95% at 40°C (non-condensing)

Mechanical

Bezel: 96 W x 48 H x 5.1 mm D (3.78 x 1.89 x 0.20")

Depth Behind Bezel: 104 mm (4.1")

Panel Cutout: 92 W x 45 mm H (3.62 x 1.77")

Weight: 14 oz (400 g)

Case Material: 94V-0 UL-rated polycarbonate

RANGE	RESOLUTION	MAXIMUM INPUT	INPUT RESISTANCE	BIAS CURRENT
±1.9999 V	100 µV	130 Vp	1 GΩ	10 pA
±19.999 V	1 mV	250 Vp	1 MΩ	1 pA
±199.99 V	10 mV	250 Vp	1 MΩ	1 pA

To Order					
MODEL NO.					DESCRIPTION
DP3001					4 ½ digit DC voltmeter
	-3				±1.9999 Vdc
	-4				±19.999 Vdc
	-5				±199.99 Vdc
		*			(Nothing, leave field blank) for 3-wire ratio input impedance 6 kΩ
		-HZ			High-impedance (100 MΩ reference input only)
			*		(Nothing, leave field blank). Decimal point programmable at D1 connector
		-DP1			1.9999, internally-wired
		-DP2			19.999, internally-wired
		-DP3			199.99, internally-wired
		-DP4			1999.9, internally-wired
			*		(Nothing, leave field blank) 115 Vac, 50/60 Hz power
			-C1		230 Vac, 50/60 Hz
			-C3C		Isolated 9 to 32 Vdc
			-C3E		Isolated 26 to 56 Vdc
				*	(Nothing, leave field blank) red LED display
				-G	Green LED display
				*	(Nothing, leave field blank) No option
				-D4	Screw-terminal barrier strip for power and signal. Removes inputs from D1.

NOTE: All combinations may not be valid, check online for valid part numbers.

Ordering Examples: DP3001-4-D4, for 4½ digit voltmeter, 115 Vac power, with ±19.999 Vdc input, screw terminal barrier strip.

DPF53 Series



- ✓ Miniature DIN Case with 24 x 72 mm Bezel
- ✓ ±1999-Count Display Span
- ✓ AC or DC Power with Excellent Common Mode Rejection
- ✓ Display Hold
- ✓ RoHS 2 Compliant



DPF53-AV2
shown actual size.

The DPF53 is a low-cost 3 1/2 digit dc voltmeter with a full-size 14.2 mm (0.56") LED, yet housed in a small 3/64 DIN case with a 24 x 72 mm bezel. The case fits into a standard 3/64 DIN cutout, 22.2 x 68 mm (0.87 x 2.68"), and requires a depth of less than 120 mm (4.72") behind the panel, including the standard plug-in screw-clamp connectors.

SPECIFICATIONS

Configuration: Differential, bipolar
Zero: Automatic
Span Adjustment: ±5%
NMR: 56 dB, 50/60 Hz
CMR, SIG LO to PWR GND: 120 dB, DC to 60 Hz
CMV, SIG LO to PWR GND: 1500 Vp per HV test, 354 Vp per IEC spacing
CMV, SIG LO to DIG GND: 0V
Maximum Error: ±0.05% rdg ±1 count
Span Tempo: ±0.01% rdg/°C
Step Response: 1 sec
A/D Technique: Dual-slope, avg-value
Polarity: Automatic
Signal Integration Period: 100 ms
Read Rate: 2.5/sec
Display Type: 7-segment, LED
Height: 14.2 mm (0.56")
Symbols: 1.8.8.8
Decimal Points: Three position jumper selectable behind lens
Overrange Indication: Three least significant digits blank
AC Voltage: 24, 100, 115 or 230 Vac ±15%, 49 to 63 Hz
DC Voltage (Non-Isolated): 5V dc ±5%, 7 to 32 Vdc
Power Consumption: 1.5 W
Operating Ambient: 0 to 60°C (32 to 140°F); 95% RH at 40°C, non-condensing
Bezel: 24 x 72 mm (0.94 x 2.83")
Panel Cutout: 22.2 x 68 mm (0.87 x 2.68")
Depth Behind Bezel (With Connector): 120 mm (4.72")
Weight: 200 g (7 oz)

Analog Input

Range	±199.9 mV	±1.999V	±19.99V	±199.9V
Resolution	0.1 mV (100 µV)	0.001V (1 mV)	0.001V (10 mV)	0.1V (100 mV)
Maximum Input	130 Vp	250 Vp	250 Vp	250 Vp
Input Resistance	1 GΩ	1.1 MΩ	1.0 MΩ	1.0 MΩ
Bias Current	50 pA	5 pA	1 pA	1 pA

To Order

Model No.	Meter Input Range
DPF53-AV2	±199.9 mV input voltmeter
DPF53-AV3	±1.999V input voltmeter
DPF53-AV4	±19.99V input voltmeter
DPF53-AV5	±19.99V input voltmeter

Options


Order Suffix	Description
-GR	Green LED display
-230V	230 Vac power
-100V	100 Vac power
-24VAC	24 Vac power
-5VDC	5 Vdc power, non-isolated
-7/32	7 to 32 Vdc power, non-isolated

Accessories

Model No.	Description
DPP-2	3/64 DIN panel punch
SPC364	NEMA 4X splashproof lens cover
TP2	Bezel adaptor, 25 x 74 mm (1.0 x 2.9")
TP3	Bezel adaptor, 3/64 to 1/8 DIN
RP23	19" rack panel for two 3/64 DIN meters
RP43	19" rack panel for four 3/64 DIN meters

Comes complete with operator's manual.

Ordering Examples: DPF53-AV2, 3/64 DIN size voltmeter, ±199.9 mV input, 115 Vac power.
 DPF53-AV4, 3/64 DIN size voltmeter, ±19.99V input, 115 Vac power, with SPC364 NEMA 4X lens cover.

3 1/2 DIGIT MINI SIZE DC PROCESS METERS
3/64 DIN Cutout with 14.2 mm (0.56") LED Display 

DPF51 Series 

- ✓ Miniature DIN Case
- ✓ 0.05% of Reading Accuracy
- ✓ ±1999-Count Display Span
- ✓ Input Ranges from 199.9 mV to 100V or 4 to 20 mA
- ✓ Available with 24V/ 10 Vdc Sensor Excitation
- ✓ AC or DC Power with Excellent Common Mode Rejection
- ✓ RoHS 2 Compliant



DPF51-PA1 shown actual size

The DPF51 and DPF52 are low-cost 3 1/2 digit process indicators with a full-size 14.2 mm (0.56") LED, yet housed in a small 3/64 DIN case with a 24 x 72 mm bezel. The case fits into a standard 3/64 DIN cutout, 22.2 x 68 mm (0.87 x 2.68"), and requires a depth of less than 120 mm (4.72") behind the panel, including the standard plug-in screw-clamp connectors.

SPECIFICATIONS

Maximum Error: ±0.05% rdg ±1 count
Zero Tempco: ±0.01% of offset/°C
Span Tempco: ±0.02% of rdg/°C
Full-Scale Step Response: 1 sec
NMR, SIG HI to SIG LO: 60 dB, 50/60 Hz
CMR, SIG GND to SIG LO: 86 dB, dc to 60 Hz
CMV, SIG GND to SIG LO: -1 to +2.5 Vdc
Power Supply Rejection: 86 dB at 50/60 Hz
A/D Technique: Dual-slope, average value
Signal Integration Period: 100 msec
Read Rate: 2.5/second
Transmitter Excitation Supply: Selectable 10V @ 30 mA or 24 Vdc @ 20 mA
Line Regulation: ±0.01%/V of AC power
Load Regulation: ±0.5%
Tempco: ±0.02%/°C
Ripple at 50/60 Hz: ±0.01%
Type: 7-segment, LED; 14.2 mm (0.56")
Decimal Points: Three positions jumper-selectable
Power: 24, 100, 115 or 230 Vac ±15% @ 2 watts; 49 to 63 Hz
Operating Ambient: 0 to 60°C (32 to 140°F) 95% RH at 40°C (no condensing)

Dimensions: 24 H x 72W x 120 mm D (0.94 x 2.84 x 4.6")
Bezel (with TP2 Adaptor): 25 x 75 mm (0.98 x 2.96")

Panel Cutout: 22.2 x 68 mm (0.87 x 2.68")
Weight: 200 g (7 oz)

Analog Input

Range	4 to 20 mA	0 to 200 mV	1 to 5V	0 to 10V	0 to 100V
Maximum Input	55 mA	250 Vp	250 Vp	250 Vp	250 Vp
Input Resistance	13 Ω	1 MΩ	1 MΩ	1 MΩ	1 MΩ
Bias Current	50 pA	50 pA	10 pA	5 pA	1 pA

To Order

Model No.	Input Range	Excitation
DPF51-PA1	4 to 20 mA	—
DPF51-PV2	0 to 199.9 mV	—
DPF51-PV3	0 to 5 Vdc	—
DPF51-PV4	0 to 10 Vdc	—
DPF51-PV5	0 to 100 Vdc	—
DPF52-EA1	4 to 20 mA	24 Vdc @ 20 mA, 10 Vdc @ 30 mA selectable
DPF52-EV2	0 to 199.9 mV	
DPF52-EV3	0 to 5 Vdc	
DPF52-EA4	0 to 10 Vdc	
DPF52-EV5	0 to 100 Vdc	

Options (no additional cost)

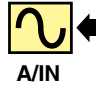
Order Suffix	Description
-GR	Green LED display
-230V	230 Vac power
-100V	100 Vac power
-24VAC	24 Vac power
-5VDC	7 to 32 Vdc power, non-isolated; DPF51 models only
-7/32	7 to 32 Vdc power, non-isolated DPF51 models only

Comes complete with operator's manual.

Ordering Examples: DPF51-PV4, 3/64 DIN size indicator, 0 to 10V input, 115 Vac power.

DPF52-EA1, 3/64 DIN size indicator, 4 to 20 mA input, 24/10V sensor excitation, 115 Vac power, with SPC364 NEMA 4 lens cover.

DIN Rail Mount AC Voltage/Current Signal Conditioners 4-Wire AC Powered Design



DRA-ACT-4I Series AC Current Input DRA-ACT-4V Series AC Voltage Input

- ✓ ± 0.1% Accuracy
- ✓ Isolated
- ✓ 4 to 20 mA Output
- ✓ Low Profile Enclosure



The DRA-ACT-4I AND DRA-ACT-4V Series are isolated 4-wire ac current and ac voltage input DIN rail mount signal conditioners that convert the measured input into a proportional, linear and highly accurate 4 to 20 mA output current. The DRA-ACT-4I Series of ac current input models includes models for 0 to 1 Aac and 0 to 5 Aac inputs with a 4 to 20 mA output. The DRA-ACT-4V Series of ac voltage input models includes models for 0 to 150 Vac, 0 to 250 Vac and 0 to 400 Vac inputs again with a 4 to 20 mA output. Standard instrument power is 115 Vac, 50/60 Hz. Units can also be configured for optional 230 Vac, 50/60 Hz power.

For complete safety, an internal transformer isolates the signal conditioner input from the output thus enabling these units to withstand large momentary inputs. Complete input to output isolation, high surge current capacity and high output signal-to-noise ratio make these signal conditioners highly immune to ground loop signals and RFI. Zero and span trimmers accessible from the front panel of these units facilitate fine tuning.

Specifications GENERAL

Accuracy: ±0.1% of span typical (2 to 100% of span) for pure sinusoidal input
Temperature Stability: 0.02%/1°C
CMR: 122 dB typical; 117 dB min
Response Time: 220 msec (0 to 98%)
Power Supply: 115 Vac ± 15%, 50/60 Hz standard; 230 Vac ± 15%, 50/60 Hz optional
Power Consumption: 1.9 VA
Loop Resistance: 750 Ω @ nominal ac supply; 600 Ω @ minimum ac supply
Supply and Load Variation Effect: < 0.03% for full change
Output Ripple: better than 0.1% of span RMS
Frequency: 40-500 Hz



DRA-ACT-4 shown smaller actual size.

Output: 4-20 mA
Zero Adjust: ±35% min
Span Adjust: ±25% min
Operating Ambient: 32 to 158°F (0 to 70°C); 5 to 95% RH, noncondensing
Storage Temperature: -13 to 185°F (-25 to 85°C)
Enclosure: polycarbonate
Mounting: standard 35 mm DIN rail or wall mount
Dimensions: 2.87 x 1.77 x 4.69" (73 x 45 x 119 mm)
Weight: 0.9 lb (0.4 kg)
DRA-ACT-4I SERIES (AC CURRENT INPUT)
Input: 0 to 1 Aac, 0 to 5 Aac
Input Power Consumption: 0.26 VA at 5 Aac input
Isolation: Current Input: 2.5 KV RMS/1 min; Power Input: 4 KV RMS/1 min

Inrush Current: 40 Aac RMS max for 8 sec every 10 min; 75 Aac RMS max for 1 sec every 10 min

DRA-ACT-4V (AC VOLTAGE INPUT)
Input: 0 to 150 Vac, 0 to 250 Vac, 0 to 400 Vac
Input Power Consumption: 0.3 VA at 120 Vac input; 1.4 VA at 230 Vac input
Isolation: 4 KV RMS/1 minute



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

To Order

DRA-ACT-4I ac current input models*

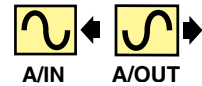
Model No.	Description
DRA-ACT-4I-1	0 to 1 A ac input, 4 to 20 mA output
DRA-ACT-4I-2	0 to 5 A ac input, 4 to 20 mA output
DRA-ACT-4V ac voltage input models*	
DRA-ACT-4V-1	0 to 150 Vac input, 4 to 20 mA output
DRA-ACT-4V-2	0 to 250 Vac input, 4 to 20 mA output
DRA-ACT-4V-3	0 to 400 Vac input, 4 to 20 mA output

* Standard power is 115 Vac, 50/60 Hz. To order unit configured for 230 Vac, 50/60 Hz power, add suffix "-230" to model no., no additional charge.

Comes with complete operators manual.

Ordering Example: DRA-ACT-4V-2, ac voltage signal conditioner, 0 to 250 Vac input, 4 to 20 mA output.

DIN Rail Mount AC Voltage/Current Signal Conditioners



**DRA-ACT-SI Series AC
Current Input**
**DRA-ACT-SV Series AC
Voltage Input**



- ✓ Self-Powered
- ✓ ±0.1% Accuracy
- ✓ Isolated
- ✓ Low Profile Enclosure

The DRA-ACT-SI and DRA-ACT-SV Series are self-powered ac current and ac voltage input DIN rail mount signal conditioners that use the measured input to produce an accurate and linear output current. These signal conditioners have excellent accuracy, linearity and stability which make them unique.

The DRA-ACT-SI Series of ac current input models includes models for 0 to 1 Aac and 0 to 5 Aac inputs with a choice of either 0 to 1 mA or 0 to 20 mA output. The DRA-ACT-SV Series of ac voltage input models includes models for 0 to 150 Vac and 0 to 300 Vac inputs again with a choice of either 0 to 1 mA or 0 to 20 mA output. The output current from all of these self-powered models always starts at 0 mA since these units are powered from the measured signal. Therefore, when the ac current or voltage input is zero, the output is zero.

For complete safety, an internal transformer isolates the signal conditioner input from the output thus enabling these units to withstand large momentary inputs. The input to output isolation provides high output signal-to-noise ratio which makes these signal conditioners highly immune to ground loop signals and RFI.

Specifications

GENERAL

Accuracy: ±0.1% (for 5 to 120% of span) typical; ±0.15% max

Linearity: < ±0.1% (for 5 to 120% of span) typical; ±0.15% max

Temperature Stability: < 0.01%/°C

Power Supply: Self-powered from measured input



Isolation: 4 KV RMS/1 minute
Output: 0 to 1 mA, 0 to 20 mA
Output Ripple: < ± 0.1% of span
Response Time: < 240 msec (10 to 90%)

Frequency: 40 to 400 Hz

Frequency Variation Effect:
< ± 0.02%/Hz

Max Output Loop Impedance:
 $R_{max} (\Omega) = 16/0.02 = 800 \Omega$ max @ 20 mA

Operating Ambient: -20 to 70°C (-4 to 158°F); 5 to 95% Rh, noncondensing

Storage Temperature:
-40 to 90°C (-40 to 194°F)

Enclosure: Polycarbonate

Mounting: Standard 35 mm DIN rail or wall mount

Dimensions: 73 x 32.5 x 114 mm (2.87 x 1.28 x 4.49")

Weight: 0.7 lb (0.3 kg)

DRA-ACT-SI SERIES (AC CURRENT INPUT)

Input: 0 to 1 Aac, 0 to 5 Aac

Overrange: 6 Aac (for full accuracy)

Overload: 10 Aac continuous

Peak Overload: 40 Aac for 5 seconds every 10 minutes

Input Power Consumption: 0.6 VA @ 5 A input

Load Variation Effect: < ±0.02% for full load change

DRA-ACT-SV (AC VOLTAGE INPUT)

Input: 0 to 150 Vac, 0 to 300 Vac

Overrange: +20% of span (for full accuracy)

Overload: +40% of span continuous

Input Power Consumption:
0.9 VA @ 300 Vac input



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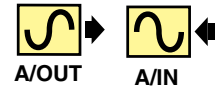
To Order

Model No.	Description
DRA-ACT-SI-1	ac current, 0 to 1 Aac input, 0 to 1 mA output
DRA-ACT-SI-2	ac current, 0 to 5 Aac input, 0 to 1 mA output
DRA-ACT-SI-3	ac current, 0 to 1 Aac input, 0 to 20 mA output
DRA-ACT-SI-4	ac current, 0 to 5 Aac input, 0 to 20 mA output
DRA-ACT-SV-1	ac voltage, 0 to 150 Vac input, 0 to 1 mA output
DRA-ACT-SV-2	ac voltage, 0 to 300 Vac input, 0 to 1 mA output
DRA-ACT-SV-3	ac voltage, 0 to 150 Vac input, 0 to 20 mA output
DRA-ACT-SV-4	ac voltage, 0 to 300 Vac input, 0 to 20 mA output

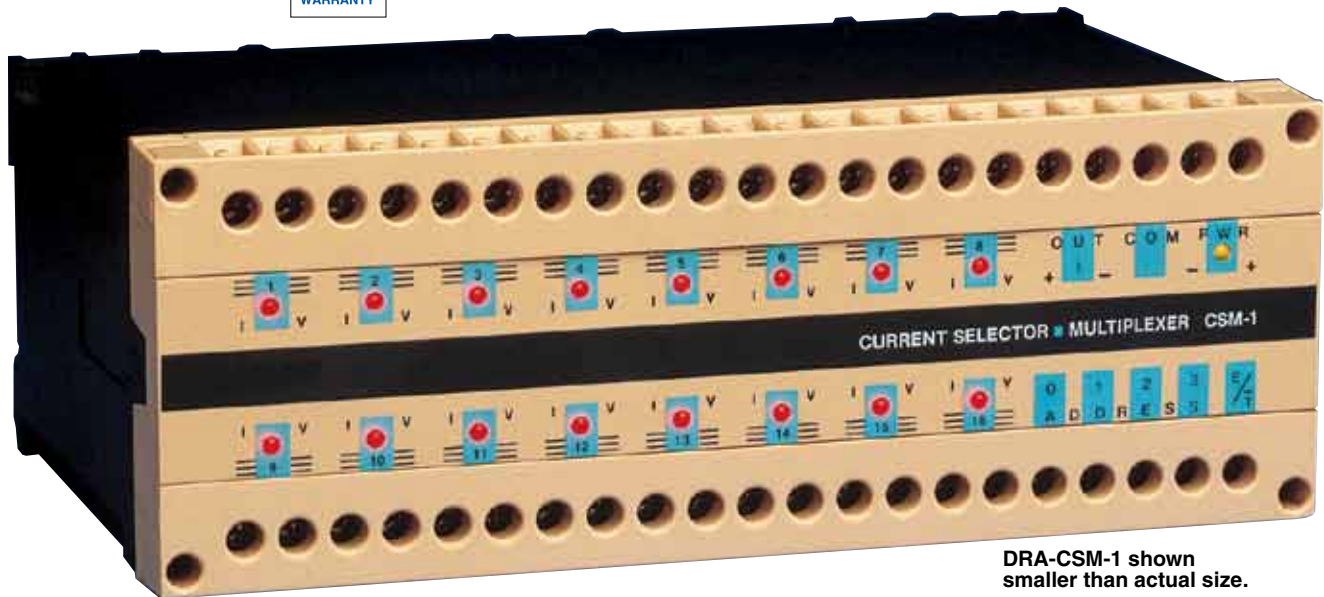
Comes complete with operator's manual.

Ordering Example: **DRA-ACT-SI-4**, AC current signal conditioner, 0-5 Aac input, 0-20 mA output and **OCW-2**. OMEGACARESM extends standard 2-year warranty to a total of 4 years.

Current Multiplexer



DRA-CSM-1



DRA-CSM-1 shown smaller than actual size.

- ✓ Multiplexes Sixteen 4 to 20 mA Inputs Into One 4 to 20 mA Output
- ✓ ±0.01% Accuracy
- ✓ Channel Selection Controlled by 4 Discrete Inputs
- ✓ Solid-State Technology
- ✓ Economical PLC Upgrade

The DRA-CSM-1 Current Multiplexer is a solid state multiplexer capable of transferring the selected 4-20 mA input current signal to the output terminals in less than 10 microseconds at an accuracy better than 0.01%. The DRA-CSM-1 is typically controlled by a PLC thereby obtaining full data synchronization.

The DRA-CSM-1 is provided with a unit enable/disable control line which enables the parallel connection of several multiplexers to the same controller input. The period during which the unit is disabled is used for self-testing according to a self-test procedure which checks the unit's hardware.

Model DRA-CSM-1 is powered by an external DC power supply. Each two-wire 4-20 mA transmitter is connected to the input terminals. Each channel provides a current limited voltage supply for the

connected two-wire transmitter. The channel selected by the multiplexer is directed to the control device's (e.g., PLC's) analog inputs. Power is maintained by the multiplexer to the unselected channels thereby maintaining uninterrupted transmitter current flow. Each 4-20 mA input channel on the multiplexer has its own red LED status light which illuminates on presence of current in the loop.

Specifications

- Analog Inputs:** 16, 4-20 mA current loops
- Digital Inputs:** 4 address, 1 enable/self-test
- Logic:** true low (user selectable)
- Digital Levels:** "0" < 0.4V, 5V < "1" < 60V
- Analog Output:** selected, 4-20 mA current loop
- Accuracy:** ±0.01% of span (for full temp range)
- Switching Time:** 10 microseconds (resistive load)
- Current Leakage:** unmeasurable when disabled

Addition to Loop Resistance:

350 ohm max

Transmitter Current Limitation:

40 ±2mA

Indicators: 16 red LEDs for current inputs, one yellow power on LED

Supply Voltage: 15-40 Vdc

Operating Current Consumption: 12 mA max (not including transmitter currents)

Self-Test Current Consumption: 120 mA peak (not including transmitter currents)

Mounting: standard 35mm DIN rail or wall mount

Operating Ambient: 32 to 158°F (0 to 70°C), 5 to 95% RH noncondensing

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

Weight: 0.6 kg (1.3 lb)

Dimensions: 73 H x 200 W x 121 mm D (2.88 x 7.88 x 4.76")



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

To Order

Model No.	Description
DRA-CSM-1	Current multiplexer
DRN-PS-1000	Power supply, 95-240 Vac input, 24 Vdc @1A output

Comes with complete operator's manual.

Ordering Example: DRA-CSM-1 current multiplexer with DRN-PS-1000 power supply.

AC Powered Potentiometer Input DIN Rail Signal Conditioner

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it



DRI-PT



- ✓ Provides a DC Output in Proportion to a Potentiometer Input
- ✓ Accepts Potentiometers from 100 Ω to 100 k Ω
- ✓ Universal AC Power 85 to 265 Vac
- ✓ Wide Ranging Zero and Span
- ✓ Plug-In Terminals
- ✓ ASIC Technology

The DRI-PT is a DIN rail mount, potentiometer input signal conditioner with 1800 Vdc isolation between AC power and the input/output circuitry. The input provides a constant voltage and is designed to accept any 3-wire potentiometer from 100 Ω to 100 k Ω . The field configurable output is switch selectable providing a 0 to 5V, 0 to 10V, 0 to 1 mA, 0 to 20 mA or 4 to 20 mA DC signal.

Wide ranging, precision zero and span pots, used in conjunction with DIP switches, allow 80% adjustability of offset and gain to transmit a full scale output from any 20% portion of the potentiometer input.

The DRI-PT is useful in transmitting process control setpoints to remote PID controllers or interfacing position or level sensors to data acquisition and control systems. The high density DIN rail mounting offers an extremely compact solution for saving valuable panel space.

In a valve positioning application a potentiometer is sometimes used as a feedback signal. Quite often a wide open valve is only a 25% turn of the feedback potentiometer. The DRI-PT can easily be adjusted with the zero and span to provide a full scale output signal (e.g. 4 to 20 mA) representing 0 to 25% or even 50 to 75% of the potentiometer input.

The factory default configuration for the DRI-PT is as follows:

Input Range: 0 to 100%

Output: 4 to 20 mA

Specifications

POTENTIOMETER INPUT

End-to-End Resistance: 100 Ω up to 100 k Ω

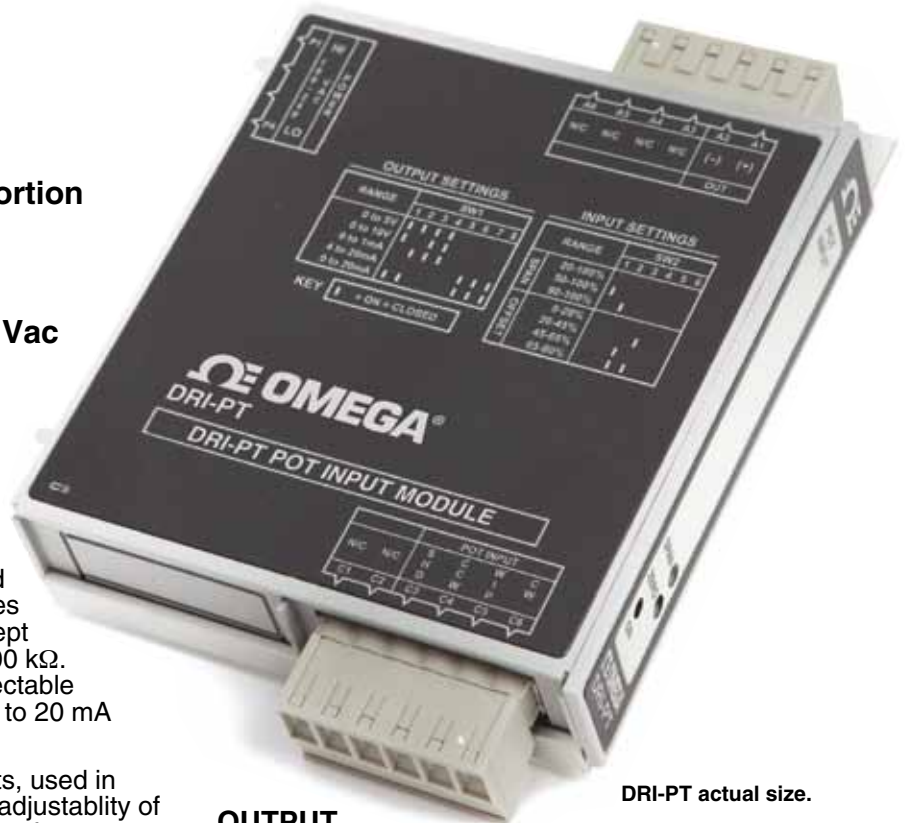
Input Impedance: >1 M Ω

Input Excitation: 500 mV, 5 mA maximum drive

Zero Turn-Up: 80% of full scale input

Span Turn-Down: 80% of full scale input

Common Mode Rejection: 1800 Vdc (input to power)



DRI-PT actual size.

OUTPUT

Voltage Output:

Range: 0 to 5V, 0 to 10V (dip-switch selectable)

Source Impedance: <10 Ω

Drive: 10 mA max (1 k Ω min @ 10V)

Current Output:

Range: 0 to 1 mA, 0 to 20 mA, 4 to 20 mA (dip-switch selectable)

Source Impedance: >100 k Ω

Compliance:

0 to 1 mA: 7.5V max (7.5 k Ω max)

0 to 20 mA: 12V max (600 Ω max)

4 to 20 mA: 12V max (600 Ω max)

Accuracy (Including Linearity, Hysteresis): $\pm 0.1\%$ maximum at 25°C

Temperature Stability: $< \pm 0.05\%/^{\circ}\text{C}$ maximum of full scale range

Response Time (10 to 90%): <200 msec, typical

Common Mode Rejection: 120 dB @ DC, >100 dB @ 60 Hz

Isolation: 1800 Vdc between line power and input, output

LED Indication (Green): Active DC power

Humidity (Non-Condensing):

Operating: 15 to 95% RH @ 45°C (113°F)

Soak: 90% RH for 24 hours @ 65°C (149°F)

Temperature Range:

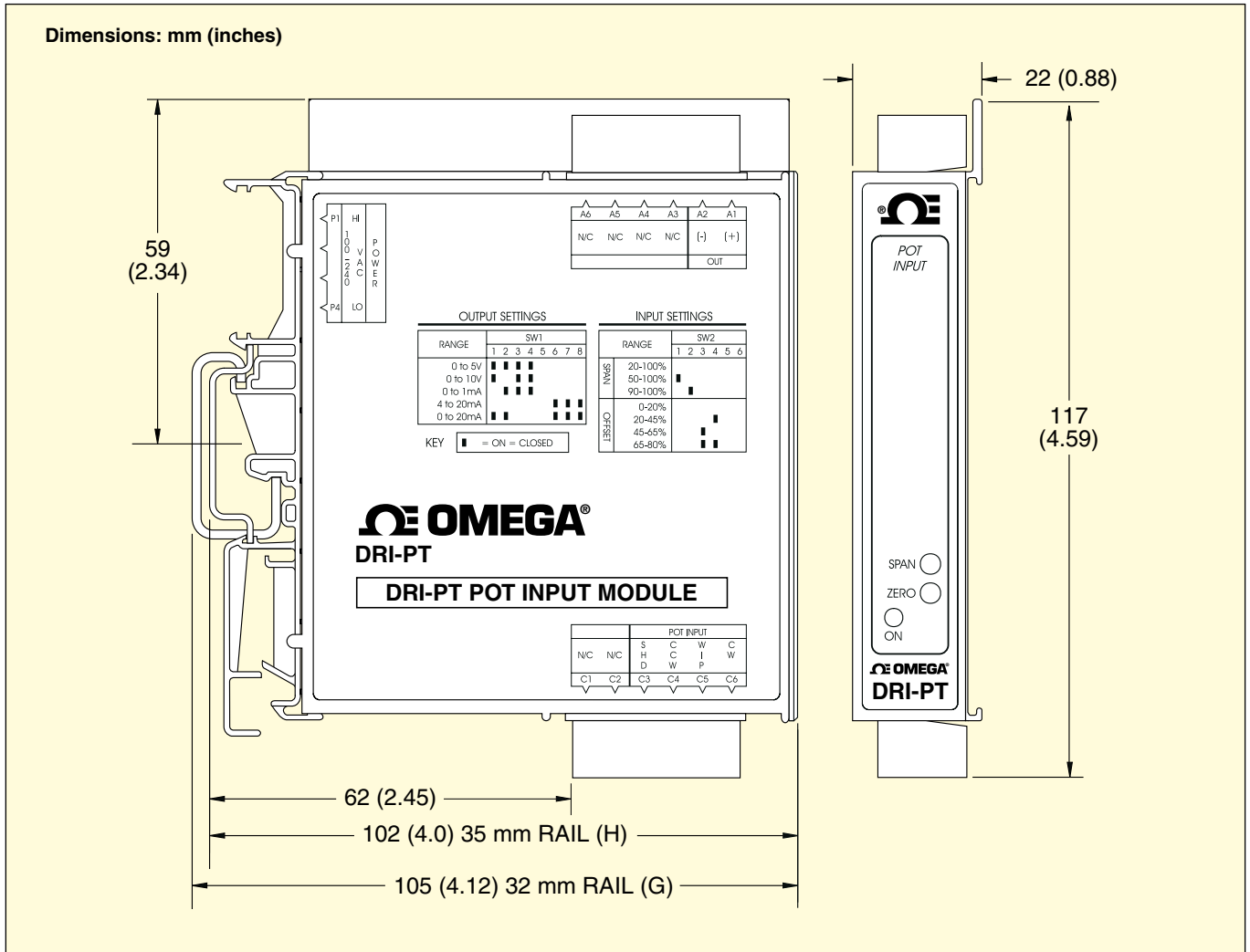
Operating: 0 to 55°C (32 to 131°F)

Storage: -25 to 70°C (-13 to 158°F)

Power: 100 to 240 Vac, $\pm 10\%$, 50 to 400 Hz; 1.5 W typical, 2.5 W max

Weight: 218 g (0.48 lb)

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

To Order	
Model No.	Description
DRI-PT	AC powered potentiometer input DIN rail signal conditioner
ACPB-2	AC power distribution bus for 2 modules
ACPB-4	AC power distribution bus for 4 modules
ACPB-8	AC power distribution bus for 8 modules

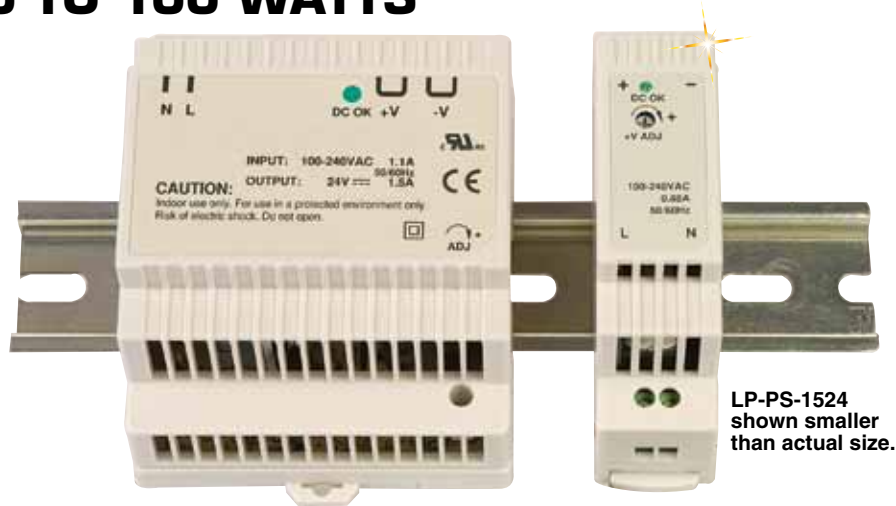
Note: An ACPB power rail is required to power the modules and is ordered separately.

Ordering Example: DRI-PT, AC powered potentiometer input DIN rail signal conditioner, ACPB-2 AC power distribution bus for 2 signal conditioner modules, and OCW-1. OMEGACARE extends standard 1-year warranty to a total of 2 years.

POWER SUPPLIES

SINGLE PHASE 10 TO 100 WATTS

LP-PS Series



LP-PS-3024 shown smaller than actual size.

LP-PS-1524 shown smaller than actual size.

- Universal AC Inputs/Full Range
- Isolation Class 2
- Protections: Short Circuit/Overload/Overvoltage
- LED Indicator for Power On
- 100% Full Load Burn-In Test
- Install on 35 x 7.5 or 35 x 15 mm DIN Rail

The LP-PS Series of power supplies provides a reliable DC power source for any industrial control system. These economical and reliable power supplies for industrial devices are designed to take minimal depth in your electrical control cabinet. The LP-PS Series power supplies offering short-circuit, overload and over-voltage protection. These high quality power supplies have passed a 100% full load burn-in test, and are UL listed, CE marked and are class 2 compliant.

SPECIFICATIONS

Working Temperature: -20 to 50°C (-4 to 122°F)

Working Humidity: 20 to 90% RH non-condensing

Dimensions: 96 H x 56 mm D (3.66 x 2.22") for width see "To Order" table

Output Voltage: 24 Vdc

Voltage Tolerance: ±1%

Line and Load Regulation: ±1%

Input Voltage: 85 to 264 Vac, 47 to 63 Hz, 120 to 370 Vdc

AC Current:

LP-PS-1524 and LP-PS-3024: 0.88A/115 Vac, 0.48A/230 Vac

LP-PS-4524: 1.5A/115 Vac, 0.75A/230 Vac

LP-PS-6024: 1.2A/115 Vac, 0.80A/230 Vac

LP-PS-10024: 3A/115 Vac, 1.6A/230 Vac

Inrush Current:

LP-PS-1524: Cold start 35A/115 Vac, 65A/230 Vac

LP-PS-3024: Cold start 15A/115 Vac, 30A/230 Vac

LP-PS-4524: Cold start 30A/115 Vac, 60A/230 Vac

LP-PS-6024: Cold start 18A/115 Vac, 36A/230 Vac

LP-PS-10024: Cold start 30A/115 Vac, 45A/230 Vac

OUTPUT

Ripple and Noise:

LP-PS-1524, LP-PS-3024, LP-PS-6024 and LP-PS-10024: 150 mVp-p

LP-PS-4524: 480 mVp-p

Voltage Range:

LP-PS-1524, LP-PS-3024, LP-PS-4524 and LP-PS-6024: 21.6 to 26.4V

LP-PS-100724: 24 to 29V

Protection Overload:

LP-PS-1524, LP-PS-3024, LP-PS-4524 and LP-PS-6024: 105 to 160%, 27.6 to 32.4V

LP-PS-10024: 105 to 135%, 30 to 35V

Efficiency:

80 to 89%

Safety Standards: EN60950-1, LP-PS-4524 UL508

Withstand Voltage (I/P-O/P): 3k Vac

Insulation Resistance: I/P-O/P, 100 m Ω/500 Vdc EMI compliance to EN55011, EN55022 (CISPR22), Class B

Harmonic Current: Compliance to EN61000-3-2,-3

EMS Immunity 10 and 20 W Models: Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN50204, EN55024, EN61000-6-1, EN61204-3, light industry level, criteria A

EMS Immunity 40, 60 and 100 W Models: Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A

To Order Visit omega.com/lp-ps for Pricing and Details

MODEL NO.	RATED POWER	CURRENT	WIDTH mm (inch)	DESCRIPTION
LP-PS-1524	15.2 W	0.63 A	25 (0.98)	Low profile 24 Vdc power supply
LP-PS-3024	36 W	1.5 A	78 (3.07)	Low profile 24 Vdc power supply
LP-PS-4524	48 W	2 A	78 (3.07)	Low profile 24 Vdc power supply
LP-PS-6024	60 W	2.5 A	78 (3.07)	Low profile 24 Vdc power supply
LP-PS-10024	100.8 W	4.0 A	100 (3.94)	Low profile 24 Vdc power supply

Ordering Examples: LP-PS-3024, low profile 24 Vdc power supply, 1.5 A output.
 LP-PS-6024, low profile 24 Vdc power supply, 2.5 A output.

AC Current Transformers

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it

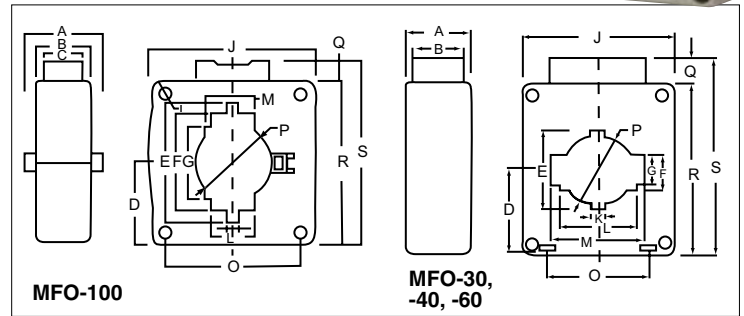
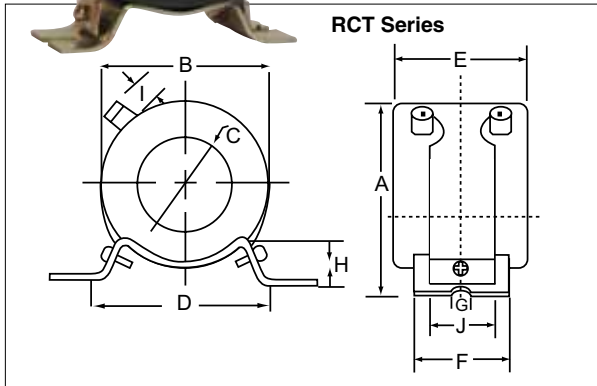
for Ammeters

RCT/MFO Series



MFO301255A shown smaller than actual size.

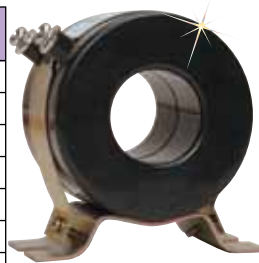
For Ammeters, Wattmeters, Instrumentation, Relays and Energy Management Systems
Current Ratios from 20:5 to 3000:5



Dimensions: mm

Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	O	P	Q	R	S
MFO-30	43.5	31		41.8	30.5	20.5	10.7			75	10.7	20.5	30.5	48		16.5	82.5	99
MFO-40	43.5	31		41.8	41.5	13.3	10.5			75	13.5	30.6	41.5	48	31	16.5	82.5	99
MFO-60	43.5	31		53.4	50.2	22.2	20.7			99	10.7	50.5	60.3	65	45.8	16	108	124
MFO-100	64	44	31	67	100	80	60		8	140	10.5	35.8	41	110	63.4	16.5	133.5	150
RCT-15-1	92	78	35	65	55	45	8	17	14	25								
RCT-15-2	116	100	60	65	57	45	8	17	15	25.5								
RCT-15-3	150	135	91	74	59	45	8	17	15	26.2								
RCT-15-4	178	160	110	74	60	45	8	19	16	26.7								

Model No.	Current Ratio	Window Size	Burden (VA)
RCT151205A	20/5 A	35 mm	2.5
RCT151605A	60/5 A	35 mm	5
RCT151755A	75/5 A	35 mm	5
RCT1511005A	100/5 A	35 mm	5
RCT1511255A	125/5 A	35 mm	5
RCT1511505A	150/5 A	35 mm	5
RCT1512005A	200/5 A	35 mm	10
RCT1512505A	250/5 A	35 mm	10
RCT1513005A	300/5 A	35 mm	10
RCT1524005A	400/5 A	60 mm	15
RCT1525005A	500/5 A	60 mm	15
RCT1526005A	600/5 A	60 mm	15
RCT1538005A	800/5 A	91 mm	15
RCT15310005A	1000/5 A	91 mm	15
RCT15312005A	1200/5 A	91 mm	15
RCT15415005A	1500/5 A	110 mm	15
RCT15420005A	2000/5 A	110 mm	15
RCT15425005A	2500/5 A	110 mm	15



RCT1511005A shown smaller than actual size.

Note: Accuracy is class 1, secondary current is 5 A and power 40 VA.

Ordering Examples:
RCT1538005A, 800/5 A current ratio current transformer.

MFO10010005A, 1000/5 A current ratio current transformer.

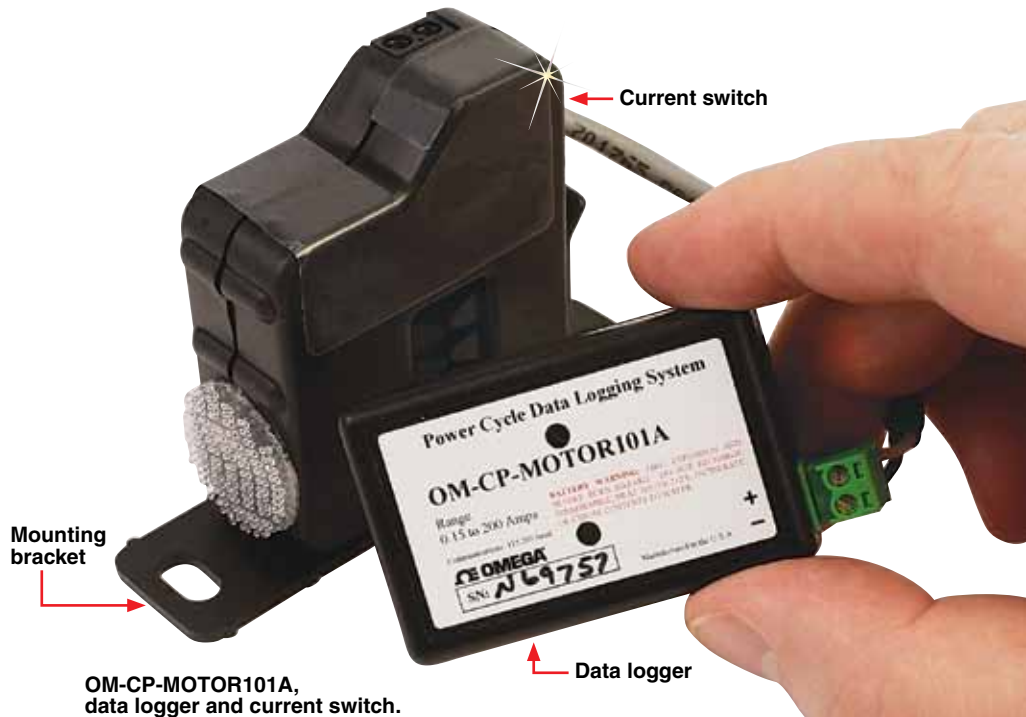
Model No.	Current Ratio	Window Size	Burden (VA)
MFO30505A	50/5 A	30.5 mm	2
MFO30605A	60/5 A	30.5 mm	2
MFO30755A	75/5 A	30.5 mm	2.5
MFO301005A	100/5 A	30.5 mm	2.5
MFO301255A	125/5 A	30.5 mm	2.5
MFO301505A	150/5 A	30.5 mm	3
MFO402005A	200/5 A	41.5 mm	5
MFO402505A	250/5 A	41.5 mm	5
MFO403005A	300/5 A	41.5 mm	5
MFO404005A	400/5 A	41.5 mm	5
MFO605005A	500/5 A	60.3 mm	7.5
MFO606005A	600/5 A	60.3 mm	7.5
MFO607005A	700/5 A	60.3 mm	7.5
MFO607505A	750/5 A	60.3 mm	7.5
MFO608005A	800/5 A	60.3 mm	7.5
MFO10010005A	1000/5 A	100 mm	10
MFO10012005A	1200/5 A	100 mm	10
MFO10015005A	1500/5 A	100 mm	10
MFO10020005A	2000/5 A	100 mm	10
MFO10025005A	2500/5 A	100 mm	10

**Machinery On/Off Data Logging System
Part of the NOMAD® Family**

**OM-CP-MOTOR101A
Series**



- ✓ Measure and Record On/Off Status of Motors, Fans, Pumps and Other Equipment
- ✓ 150 mA Trip Point
- ✓ Compatible up to 200 A
- ✓ Real Time Operation
- ✓ Useful for Energy Audits and Time Studies
- ✓ Complete Kit Includes Data Logger and Current Switch with Mounting Bracket



OM-CP-MOTOR101A, data logger and current switch.

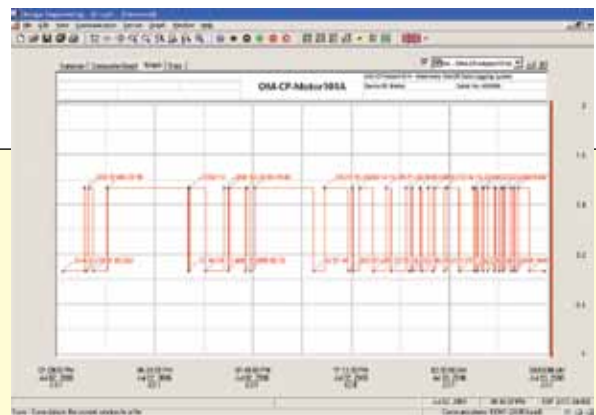
The OM-CP-MOTOR101A Series measures and records on and off status changes for motors or other equipment drawing up to 200 Amps. Simply route the current carrying wire for the equipment being monitored through the current switch. The state change occurs when the current switch exceeds the 150 mA set point. This allows for most basic equipment to be monitored. The current switch monitors whether there is current passing through a wire around which it is attached.

When the current exceeds 150 mA, the output changes and provides a voltage for the OM-CP-MOTOR101A to measure. The device can hold up to 406,323 state changes, but memory will only be used if the status has changed. The device can be programmed to check for status changes 4 times per second up to once every 24 hours.

Data retrieval is simple. Simply plug it into an available USB port and our user-friendly software does the rest. The software converts a PC into a real-time strip chart recorder. Data can be printed in graphical and tabular format or exported to a text or Microsoft Excel® file. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged.



OM-CP-MOTOR101A, data logger and current switch, shown smaller than.



OM-CP-IFC200 Windows software displays data in graphical or tabular format, included with the OM-CP-MOTOR101A-KIT

Specifications

Amperage Range:

0.15 to 200 A

Trip Point: 0.15A (150 mA)

fixed (200 mA AC for 50 Hz operation)

Status Output (Max):

N.O. 1.0 A @ 30 Vac/Vdc

Current Switch Housing: Split core

Reading Rate: 4 Hz to 1 every 24 hr

Memory: 406,323 readings; software configurable memory wrap

Wrap Around: Yes

Start Modes: Immediate start, delay start up to 18 months, multiple pushbutton start/stop

Multiple Start/Stop Mode: Start and stop the device multiple times without having to download data or communicate with a PC

Multiple Start/Stop Mode Activation:

To Start the Device:

Press and hold the pushbutton for 5 seconds, the green LED will flash during this time; the device has started logging

To Stop the Device:

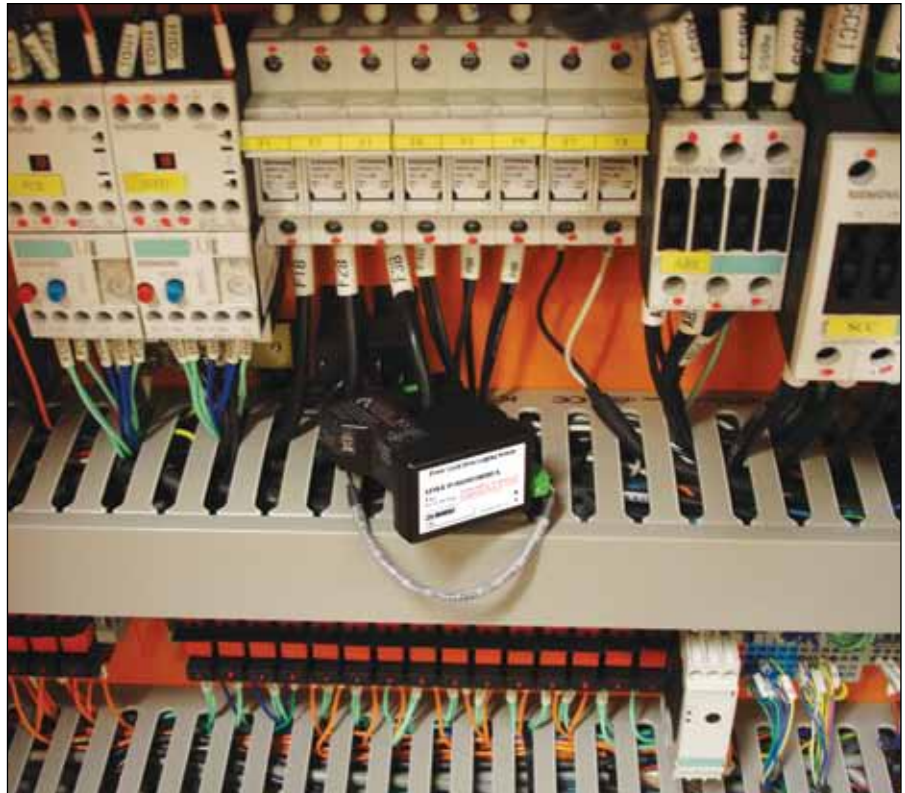
Press and hold the pushbutton for 5 seconds, the red LED will flash for three seconds and then the green LED will flash for two seconds; the device has stopped logging

Real Time Recording: The device may be used with PC to monitor and record data in real-time

LED Functionality:

Green LED Blinks: 10 second rate to indicate logging, 15 second rate to indicate delay start mode

Red LED Blinks: 10 second rate to indicate low battery and/or full memory



Password Protection:

An optional password may be programmed into the device to restrict access to configuration options; data may be read out without the password

Engineering Units: Native measurement units can be scaled to display measurement units of another type such as on/off, open/closed and more

Battery Type: 3.6V lithium battery included; user replaceable

Battery Life: 10 years typical, dependent upon frequency and duty cycle

Time Accuracy: ±1 minute/month (at 20°C/68°F, stand alone data logging)

OM-CP-MOTOR101A shown monitoring current in an electrical panel.

Computer Interface: USB (interface cable required); 115,200 baud

Software: XP SP3/Vista/7 and 8 (32- and 64-bit)

Operating Environment: -15 to 40°C (5 to 104°F), 10 to 90% RH non-condensing

Dimensions (Data Logger): 36 x 56 x 16 mm (1.4 x 2.2 x 0.6")

Current Switch: 54 x 89 x 26 mm (2.1 x 3.5 x 1.0")

Weight: 113 g (4 oz)

With OM-CP-IFC200: 255 g (9 oz)

Materials: ABS plastic

To Order

Model No.	Description
OM-CP-MOTOR101A-KIT	Machinery on/off status data logging system, includes data logger, current switch and OM-CP-IFC200 Windows software and USB interface cable
OM-CP-MOTOR101A	Machinery on/off status data logging system, includes data logger, current switch; (OM-CP-IFC200 Windows software and USB interface cable sold separately)
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-BAT105	Replacement battery

Comes complete with 3.6 V lithium battery and operator's manual. OM-CP-MOTOR101A-KIT includes OM-CP-IFC200 Windows software and USB interface cable.

Ordering Example: OM-CP-MOTOR101A-KIT, data logging system, includes data logger, current switch and OM-CP-IFC200 Windows® software and USB interface cable.

OM-CP-PROCESS101A



- 10 Year Battery Life
- 4 Hz Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- 1 Million Reading Storage Capacity
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Programmable High and Low Alarms
- Field Upgradeable
- USB Cable and Software (Model OM-CP-IFC200) Sold Separately and Required to Program the Unit

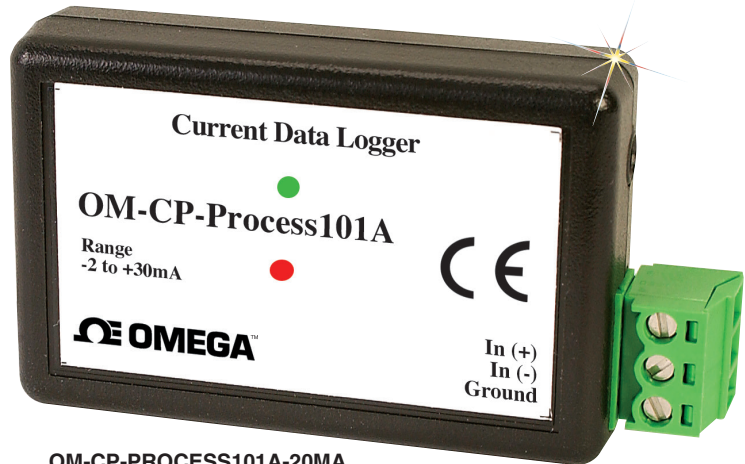
The OM-CP-PROCESS101A is part of a series of low cost, state-of-the-art data logging devices that has taken the lead in offering the most advanced, low cost, battery powered data loggers in the world today.

The OM-CP-PROCESS101A is available in three ranges, 20 mA, ±160 mA and ±3A. All of the ranges offer a 10 year battery life, a 4 Hz reading rate, a multiple start/stop function, ultra-high speed download capability, 1 million reading storage capacity, optional memory wrap, battery life indicator, optional password protection, programmable high-low alarms and more.

Using the OM-CP-IFC200 software, starting, stopping and downloading from the OM-CP-PROCESS101A is simple and easy. Graphical, tabular and summary data is provided for analysis and data can be viewed in A, mA or µA.

The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. Its small size allows it to fit almost anywhere. Data retrieval is simple. Plug it into an available USB port and the easy to use Windows® software does the rest. The software converts your PC into a real time strip chart recorder. Data can be printed in tabular format and can also be exported to a text or Microsoft Excel file for further calculations. As the leader in low power data logger technology, we continuously improve our products and develops solutions to meet ever-changing challenges.

The OM-CP-PROCESS101A was designed with our customers in mind. There are free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this automatically from any PC.



OM-CP-PROCESS101A-20MA, shown larger than actual size.

Specifications

- Input Connection:** Removable screw terminal
Analog Conversion Time: 133 ms nominal
Frequency Rejection: 50 to 60 Hz
Temperature Coefficient: < ±50 ppm/°C typical
Reading Rate: 4 Hz to 1 reading every 24 hours
Memory: 1,000,000 readings; software configurable memory wrap 333,000 readings in multiple start/stop mode
Wrap Around: Yes
Start Modes:
- Immediate start
 - Delay start up to 18 months
 - Multiple pushbutton start/stop
- Multiple Start/Stop Mode:** Start and stop the device multiple times without having to download data or communicate with a PC
Multiple Start/Stop Mode Activation:

To Start the Device:

Press and hold the pushbutton for 5 seconds. The device has started logging.

To Stop the Device:

Press and hold the pushbutton for 5 seconds, the red LED will flash for three seconds and then the green LED will flash for two seconds. The device has stopped logging

Real Time Recording: The device may be used with PC to monitor and record data in real-time

Alarm: Programmable high and low limits; alarm is activated when current reaches or exceeds set limits

INPUT RANGES			
Nominal Input Range	20 mA	±160 mA	±3A
Measurement Range	-2 to 30 mA	±160 mA	±3A
Input Voltage Range	0 to 2.5V	0 to 2.5V	0 to 2.5V
Resolution	0.5 µA	5 µA	100 µA
Accuracy	±0.05% FSR	±0.05% FSR	±0.15% FSR
Input Impedance	10 Ω, ±1%	1 Ω, ±1%	<0.05 Ω
Overload Protection	±316 mA	1A	6A

LED Functionality:

Green LED Blinks: 10 second rate to indicate logging 15 second rate to indicate delay start mode

Red LED Blinks: 10 second rate to indicate low battery and/or full memory

Password Protection: An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

Engineering Units: Native measurement units can be scaled to display measurement units of another type. This is useful when monitoring voltage outputs from different types of sensors such as temperature, CO, flow rate and more

Calibration: Digital calibration through software

Calibration Date: Automatically recorded within device

Battery Type: 3.6V lithium battery (included); user replaceable

Battery Life: 10 year battery life typical, at a 15 minute reading rate

Data Format: Date and time stamped current, engineering units specified through software

Time Accuracy: ±1 minute/month (stand alone data logging)

Computer Interface: USB (interface cable required); 115,200 baud

Software: XP SP3/Vista/7 and 8 (32 and 64-bit)

Operating Environment: -40 to 80°C (-40 to 176°F) 0 to 95% RH non-condensing

Dimensions:

Data Logger: 36 H x 56 W x 16 mm D (1.4 x 2.2 x 0.6")

Waterbox Enclosure: 74 H x 148 W x 39 mm D (2.9 x 5.8 x 1.5")

Weight: 24 g (0.9 oz)

Materials:

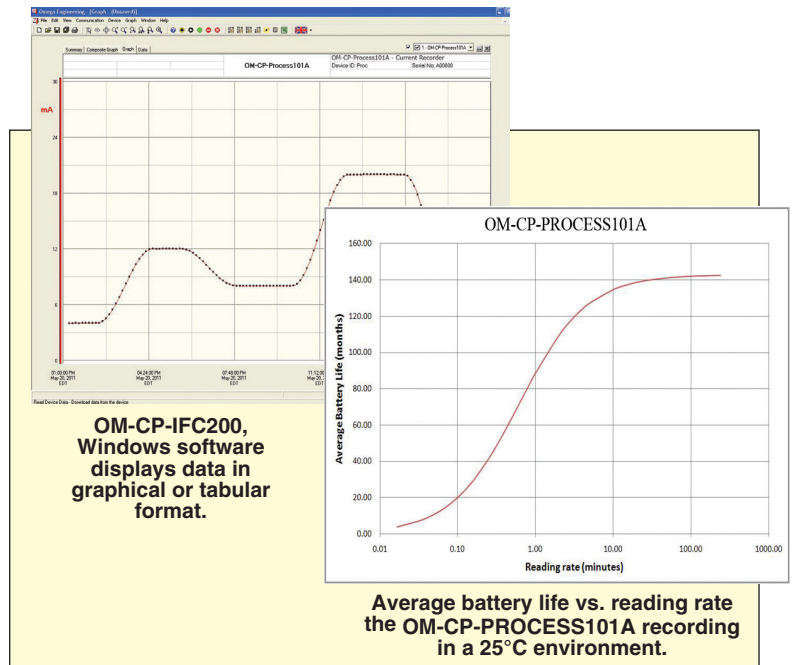
Data Logger: ABS Plastic

Waterbox Enclosure:

Black anodized aluminum



OM-CP-WATERBOX101A, optional weatherproof enclosure for data logger, shown smaller than actual size.



OM-CP-IFC200, Windows software displays data in graphical or tabular format.

Average battery life vs. reading rate the OM-CP-PROCESS101A recording in a 25°C environment.

To Order	
Model No.	Description
OM-CP-PROCESS101A-20MA	DC current data logger, ±20 mA range
OM-CP-PROCESS101A-20MA-CERT	DC current data logger, ±20 mA range and NIST calibration certificate
OM-CP-PROCESS101A-160MA	DC current data logger, ±160 mA range
OM-CP-PROCESS101A-160MA-CERT	DC current data logger, ±160 mA range and NIST calibration certificate
OM-CP-PROCESS101A-3A	DC current data logger, ±3A range
OM-CP-PROCESS101A-3A-CERT	DC current data logger, ±3A range and NIST calibration certificate
OM-CP-IFC200	Windows software and 1.8 m (6') USB interface cable
OM-CP-BAT105	Replacement 3.6V lithium battery
OM-CP-CONNECTOR-3	Replacement 3 position terminal block for data logger
OM-CP-WATERBOX101A	Weatherproof NEMA 4 (IP65) enclosure for data logger

Comes complete with 3.6V lithium battery. USB cable and operator's manual are included with the OM-CP-IFC200 Windows software (required to operate the data logger and sold separately).

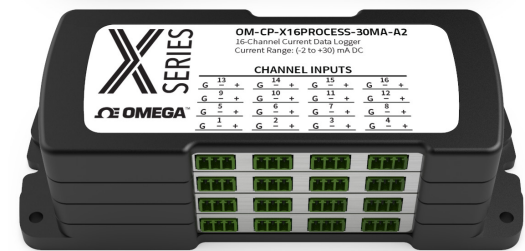
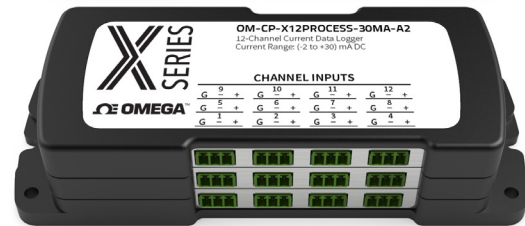
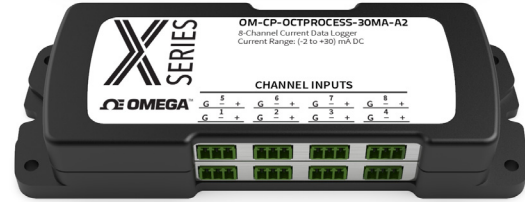
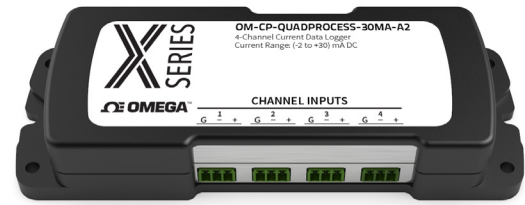
Ordering Example: OM-CP-PROCESS101A-160MA-CERT, DC current data logger, ±160 mA range with NIST calibration certificate and OM-CP-IFC200, Windows software.

X SERIE

4, 8, 12 and 16-Channel Current Data Loggers



- 16-bit Readings Provide High Resolution
- User-defined Engineering Units
- Pushbutton or Programmable Start Time
- External Power or User Replaceable Battery
- Real Time Operation
- Up to 4 Hz Reading Rate
- NIST Traceable Calibration Certificate Included
- Configurable Channel Names



The new OM-CP-ProcessX Series consists of 4, 8, 12 and 16-channel, battery powered, low level DC current data loggers with a reading rate of up to 4 Hz. X-Series devices ship with a standard USB-A to Micro USB cable for use with free OM-CP PC based software. The X-series has a high memory capacity and increased download speed compared to previous generations of product.

These easy-to-use devices feature an 18 month typical battery life, user replaceable battery and programmable engineering units. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. To maximize memory capacity, users can enable or disable channels. For easy identification, each channel can be named with up to a ten digit title.

Using the OM-CP Data Logger Software, starting, stopping and downloading from the OM-CP-ProcessX Series data loggers is simple and easy. Graphical, tabular and statistical data is provided for analysis and data can be viewed in multiple units, using the Engineering Units function. The data can also be automatically exported to Excel® for further calculations.

Specifications

MEASUREMENT			
Input Connection	3-input removable screw terminals		
Model	30 mA	160 mA	3 A
Current Range	-2 mA to +30 mA	±160 mA	±3 A
Current Resolution	0.0005 mA	0.005 mA	0.001 A
Calibrated Accuracy	±0.016 mA	±0.16 mA	±0.009 A
Input Impedance	10 Ω	1 Ω	0.1 Ω
Overload Protection (-0.3 V to +3.5 V)	±316 mA	±1000 mA	±6 A
Maximum Voltage Between Inputs to Ground	3 V (Common mode voltage must be less than 3 volts. All inputs must be within 3 volts of all other inputs.)		
Analog Conversion Time	150 ms		
Temperature Coefficient	< 50 ppm/°C typical		



Specifications

Engineering Units	Native Measurement units can be scaled to display measurement units of another type. This is useful when monitoring current outputs from different types of sensors such as temperature, CO ₂ , flow rate and more.
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GENERAL	
Memory (All channels enabled)	4-channel: 1,048,064 readings per channel 8-channel: 524,032 readings per channel 12-channel: 349,354 readings per channel 16-channel: 262,016 readings per channel
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
LEDs	1 per channel and 2 status LEDs
Reading Rate	4 Hz up to 1 reading every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium included, user replaceable
Battery Life	18 months typical
Data Format	Date and time stamped A, mA, μ A, engineering units specified through software
Time Accuracy	\pm 1 minute/month

Computer Interface	USB-A to micro USB cable (included); 460,800 baud
Operating System Compatibility	Windows XP SP3/7/8/10
Software Compatibility	Standard Software version 4.2.19.0 or later Secure Software version 4.2.18.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	4-channel: 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) 8-channel: 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) 12-channel: 2.70 in x 7.25 in x 1.68 in (65.6 mm x 184.2 mm x 42.7 mm) 16-channel: 2.70 in x 7.25 in x 2.14 in (65.6 mm x 184.2 mm x 54.4 mm)
Weight	4-channel: 13 oz (368 g) 8-channel: 13 oz (368 g) 12-channel: 20 oz (580 g) 16-channel: 28 oz (800 g)
Enclosure	Black anodized aluminum
Approvals	CE, ROHS

BATTERY WARNING: BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

To Order	
P/N	Description
OM-CP-QUADPROCESS-30MA-A2	4-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-QUADPROCESS-160MA-A2	4-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-QUADPROCESS-3A-A2	4-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-OCTPROCESS-30MA-A2	8-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-OCTPROCESS-160MA-A2	8-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-OCTPROCESS-3A-A2	8-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X12PROCESS-30MA-A2	12-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X12PROCESS-160MA-A2	12-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X12PROCESS-3A-A2	12-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X16PROCESS-30MA-A2	16-Channel 30 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X16PROCESS-160MA-A2	16-Channel 160 mA Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X16PROCESS-3A-A2	16-Channel 3 A Current Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-BAT103	Replacement 9V lithium battery

State Data Logger
Part of the NOMAD® Family

OM-CP-STATE101A



- Interfaces to Contact Closures or TTL Inputs up to 30V
- 10 Year Battery Life
- 4 Hz Second Reading Rate
- Multiple Start/Stop Function
- Ultra High Speed Download
- Memory Wrap
- Battery Life Indicator
- Optional Password Protection
- Field Upgradeable



OM-CP-STATE101A shown larger than actual size.

The OM-CP-STATE101A is one of our newest data loggers. It is part of a new series of low cost, state-of-the-art data logging devices that has taken the lead in offering the most advanced, low cost, battery powered data loggers in the world today.

The OM-CP-STATE101A offers a 10 year battery life, 4 Hz reading rate, a multiple start/stop function, ultra-high speed download capability, 406,323 reading storage capacity, optional memory wrap, battery life indicator, optional password protection and more.

The OM-CP-STATE101A senses input transitions or contact closures from external sources such as transducers and/or state initiators and records the time and input state of the device when a transition occurs. Once activated the data logger senses and records transition or state changes at the input. The device's real-time clock ensures that all data is time and date stamped. 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 its small size allows it to fit almost anywhere. Data retrieval is simple. Simply plug it into an available USB port and our user-friendly software does the rest.

The software converts a PC into a real-time strip chart recorder. Data can be printed in graphical and tabular format or exported to a text or Microsoft Excel file.

The OM-CP-STATE101A was designed with our customers in mind. We offer free firmware upgrades for the life of the product so that data loggers already deployed in the field can grow with new technological developments. Units do not need to be returned to the factory for upgrades. The user can do this automatically from any PC.

Specifications

- Input Connection:** Removable screw terminal
- Input Range:** 0 to 30V
- Input Low:** <0.4V
- Input High:** >2.8V
- Internal Weak Pull-Up:** <60µA
- Input Impedance:** >60 kΩ
- Time Resolution:** 4 Hz (reading rate selectable in software)
- Reading Rate:** 4 Hz to 1 every 24 hours
- Memory:** 406,323 readings; software configurable memory wrap

Wrap Around: Yes

Start Modes:

- Immediate start
- Delay start up to 18 months
- Multiple pushbutton start/stop

Multiple Start/Stop Mode: Start and stop the device multiple times without having to download data or communicate with a PC

Multiple Start/Stop Mode Activation:

To Start the Device:

Press and hold the pushbutton for 5 seconds, the green LED will flash during this time. The device has started logging.

To Stop the Device:

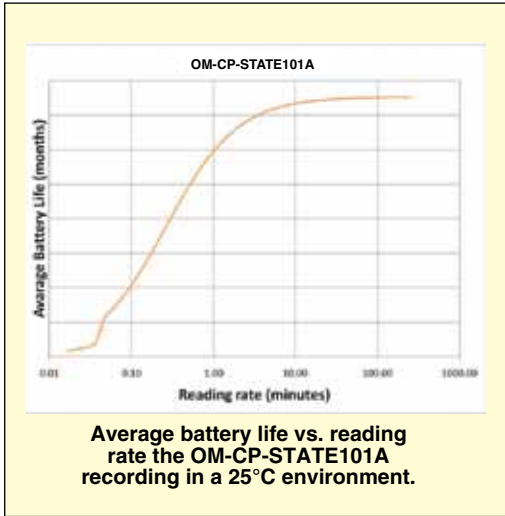
Press and hold the pushbutton for 5 seconds, the red LED will flash for three seconds and then the green LED will flash for two seconds. The device has stopped logging.

Real Time Recording: The device may be used with PC to monitor and record data in real-time

LED Functionality:

- Green LED Blinks:** 10 second rate to indicate logging 15 second rate to indicate delay start mode

- Red LED Blinks:** 10 second rate to indicate low battery and/or full memory



Password Protection: An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.

Engineering Units: Native measurement units can be scaled to display measurement units of another type such as on/off, open/closed and more.

Battery Type: 3.6V lithium battery (included); user replaceable

Battery Life: 10 years typical, dependent upon frequency and duty cycle

Time Accuracy: ±1 minute/month [at 20°C (68°F), stand alone data logging]

Computer Interface: USB (interface cable required); 115,200 baud

Software: XP SP3/Vista/7 and 8 (32 and 64-bit)

Operating Environment: -40 to 80°C (-40 to 176°F), 0 to 95% RH non-condensing

Dimensions:

Data Logger:
36 H x 56 W x 16 mm D
(1.4 x 2.2 x 0.6")

Waterbox Enclosure:
74 H x 148 W x 39 mm D
(2.9 x 5.8 x 1.5")

Weight: 24 g (0.9 oz)

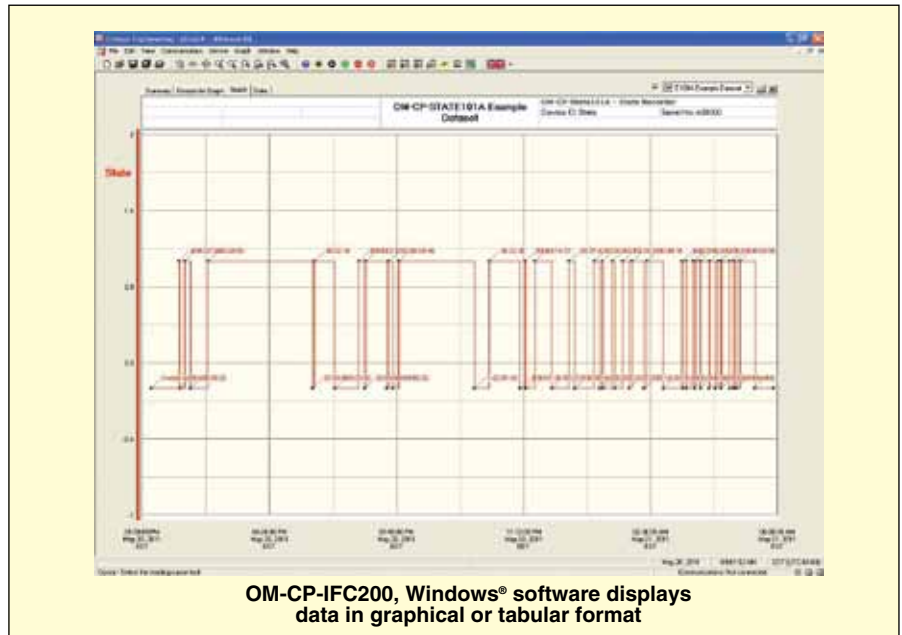
Materials:

Data Logger:

ABS Plastic

Waterbox Enclosure:

Black anodized aluminum



To Order

Model No.	Description
OM-CP-STATE101A	State data logger
OM-CP-IFC200	Windows software and 3.7 m (12') USB interface cable
OM-CP-BAT105	Replacement 3.6V lithium battery
OM-CP-WATERBOX101A	Weatherproof NEMA 4 (IP65) enclosure for data logger
OM-CP-WATERBOX101A-KIT	Maintenance kit for OM-CP-WATERBOX101A

Comes complete with 3.6V lithium battery. USB cable and operator's manual are included with the OM-CP-IFC200 Windows software (required to operate the data logger and sold separately).

Ordering Example: OM-CP-STATE101A, state data logger and OM-CP-IFC200 Windows software.

X SERIE

4, 8, 12 and 16-Channel Voltage Data Loggers



- Real-time Operation
- Programmable Engineering Units
- 24-bit Readings Provide High Resolution
- Up to 4 Hz Reading Rate
- Compact Size
- External Power or User Replaceable Battery
- Pushbutton or Programmable Start Time
- Configurable Channel Names
- NIST Traceable Calibration Certificate Included



The new OM-CP-VoltX Series consists of 4, 8, 12 and 16-channel, battery powered, DC voltage data logger with a reading rate of up to 4 Hz. X-Series devices ship with a standard USB-A to Micro USB cable for use with free OM-CP PC based software. The X-series has a high memory capacity and increased download speed compared to previous generations of product.

This easy-to-use device features an 18 month typical battery life, user replaceable battery and programmable engineering units. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. To maximize memory capacity, users can enable or disable channels. For easy identification, each channel can be named with up to a ten digit title.

Using the OM-CP Data Logger Software, starting, stopping and downloading from the OM-CP-VoltX Series data loggers are simple and easy. Graphical, tabular and statistical data is provided for analysis and data can be viewed in multiple units, using the Engineering Units function. The data can also be automatically exported to Excel® for further calculations.

Specifications

MEASUREMENT			
Input Connection	Removable screw terminals		
Model	160 mV	3.2 V	32 V
Voltage Range	±160 mV	±3.2 V	-8 V to +32 V
Voltage Resolution	0.02 mV	0.0004 mV	0.004 mV
Calibrated Accuracy	±0.032 mV	±0.0032 V	±0.02 V
Input Impedance	1 MΩ	125 kΩ	125 kΩ
Maximum Voltage Between Inputs to Ground	+3 V	+50 V	+50 V
Analog Conversion Time	150 ms		
Frequency Rejection	60+50 Hz		
Temperature Coefficient	25 ppm/°C		
Specified Accuracy Range	Nominal range @ 25 °C		



Specifications

Engineering Units	Native Measurement units can be scaled to display measurement units of another type. This is useful when monitoring current outputs from different types of sensors such as temperature, CO ₂ , flow rate and more.
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GENERAL	
Memory (All channels enabled)	4-channel: 698,709 readings per channel 8-channel: 349,354 readings per channel 12-channel: 232,903 readings per channel 16-channel: 174,677 readings per channel
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
LEDs	1 per channel and 2 status LEDs
Reading Rate	4 Hz up to 1 reading every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium included, user replaceable
Battery Life	18 months typical
Data Format	Date and time stamped V, mV, μ V, engineering units specified through software
Time Accuracy	\pm 1 minute/month

Computer Interface	USB-A to micro USB cable (included); 460,800 baud
Operating System Compatibility	Windows XP SP3/7/8/10
Software Compatibility	Standard Software version 4.2.19.0 or later Secure Software version 4.2.18.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	4-channel: 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) 8-channel: 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) 12-channel: 2.70 in x 7.25 in x 1.68 in (65.6 mm x 184.2 mm x 42.7 mm) 16-channel: 2.70 in x 7.25 in x 2.14 in (65.6 mm x 184.2 mm x 54.4 mm)
Weight	4-channel: 13 oz (368 g) 8-channel: 13 oz (368 g) 12-channel: 20 oz (580 g) 16-channel: 28 oz (800 g)
Enclosure	Black anodized aluminum
Approvals	CE, ROHS

BATTERY WARNING: BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

To Order	
P/N	Description
OM-CP-QUADVOLT-160MV-A2	4-Channel \pm 160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-QUADVOLT-3.2V-A2	4-Channel \pm 3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-QUADVOLT-32V-A2	4-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-OCTVOLT-160MV-A2	8-Channel \pm 160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-OCTVOLT-3.2V-A2	8-Channel \pm 3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-OCTVOLT-32V-A2	8-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X12VOLT-160MV-A2	12-Channel \pm 160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X12VOLT-3.2V-A2	12-Channel \pm 3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X12VOLT-32V-A2	12-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X16VOLT-160MV-A2	16-Channel \pm 160 mV Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X16VOLT-3.2V-A2	16-Channel \pm 3.2 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter
OM-CP-X16VOLT-32V-A2	16-Channel -8 V to +32 V Voltage Data Logger, USB-A to micro USB cable, universal power adapter

AC Current and Voltage Data Logger with Display

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it



OM-DVCV



- ✓ Measures AC Current up to 300A and Voltage up to 600V
- ✓ Text Display: Real Time Measurements, Logging Summary, Sample Rate, Memory Used and Memory Left
- ✓ Graph Display: Shows Measurement Trends with Scrolling Feature
- ✓ Visual Over and Under Alarm Indicators
- ✓ USB Connection
- ✓ Compatible with Windows® XP, Vista, 7, 8 and 10 (32-Bit and 64-Bit)
- ✓ Ideal for MRO Studies, Industrial Processes, Troubleshooting Electrical Problems

OM-DVCV shown actual size.

Easy-to-use Windows software is included with the OM-DVCV. The software is a full-featured program that allows you to set-up all data logger functions including sampling rate, logging duration, start mode, logging mode, and high and low alarm values. Once data has been logged, the program then allows you to download data from the logger, plot the data and export the data to an ASCII text or Excel® file format for further analysis.

Specifications

DATA LOGGER

Measurement Type: True RMS up to the 21st harmonic at 60 Hz

Current:

Range: 1 to 300 Aac

Accuracy: ±1.0 A

Resolution: 0.2 A

Voltage:

Range: 1 to 600 Vac

Accuracy: ±0.4V

Resolution: 0.2V

Text Display: Displays real time current, voltage and watts; displays logging summary, sample rate, memory used and memory left

Graph Display: Shows measurement trends graphically; graph can be scrolled through the entire logged data

Sample Point Capacity: 43,344 points for current or voltage only; 21,672 points for current and voltage

The OM-DVCV is a self-contained, precision instrument for recording AC current and AC voltage.

The OM-DVCV can record voltage up to 600 Vac and current up to 300 Aac. The OM-DVCV records true RMS AC current and AC voltage. It measures RMS signals up to the 21st harmonic at 60 Hz. The OM-DVCV can store up to 21,672 points when recording both voltage and current. It can store up to 43,344 samples when recording only voltage or only current.

The OM-DVCV features a display that allows the user to see measured current, voltage and power (in Watts). In addition, the unit graphs the current and voltage that has been logged during the current logging session. A summary screen shows information about the logging session, such as the logging rate, the number of samples recorded, the length of the recording and the amount of time left for recording.



Alarms: Visual over and under alarm indicator for current and voltage; watts alarms are not available

Calibration: No user calibration is available

Operating Temperature: -10 to 65°C (15 to 150°F)

Storage Temperature: -20 to 70°C (-5 to 160°F)

Time Accuracy: ±100 ppm @ 24°C (75°F)

Power: Three "AA" batteries (included)

Battery Life: 1 year continuous use, 2 years average use; the logger automatically turns itself off after 1 hour, when not logging; turn on by pressing any button

Dimensions: 10.2 W x 7.7 H x 3.8 cm D (4 x 3.05 x 1.5")

Weight: 200 g (7.0 oz)

SOFTWARE

PC Interface: USB port

Sampling Interval: User selectable from 1 second to 9 hours, in 1 second increments

Operating System Compatibility: Windows® XP, Vista, 7, 8 and 10 (32-bit and 64-bit)

Recording Start: On button press, immediate after set-up, or at a user specified date and time

Recording Mode Stop: On memory full, or continuous recording with memory rollover

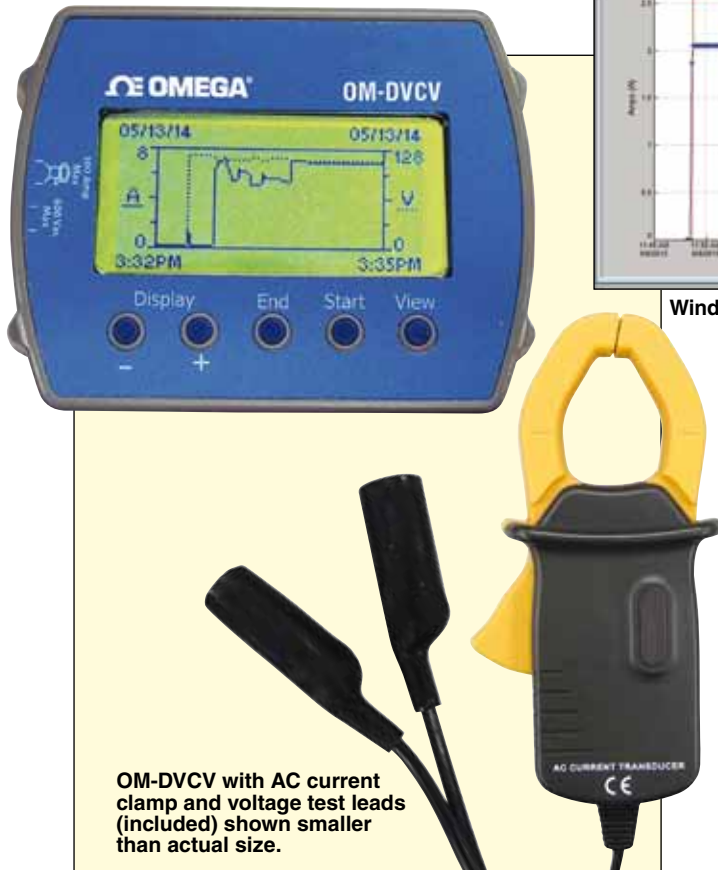
Real Time Status: Visual indication through the status LED. Software real time status

User Information: Up to 30 characters

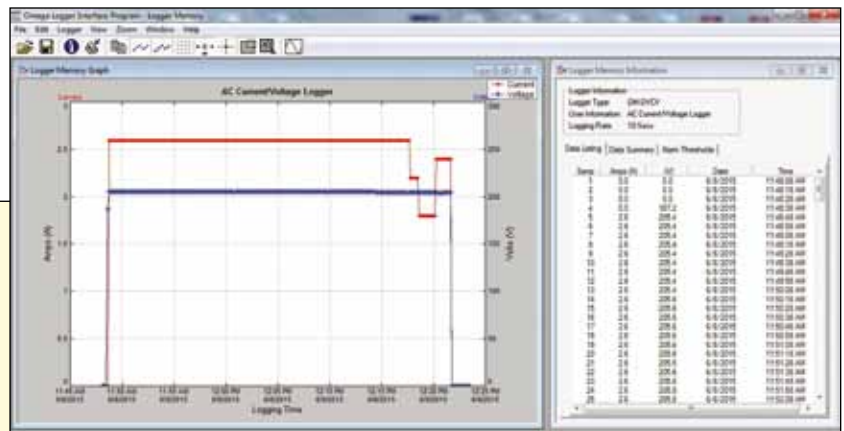
Logger Channels: User selectable; disabling channels increases the storage capacity of the other channels

Units: US and Metric

Data Format: Exportable to text or Excel® files



OM-DVCV with AC current clamp and voltage test leads (included) shown smaller than actual size.



Windows software (included) displays data in graphical and tabular format.

To Order

Model No.	Description
OM-DVCV	AC current and voltage data logger with display

Comes complete with operator's manual and Windows software on CD ROM, 3 "AA" batteries, set of AC voltage and current probes and 1.8 m (6") USB interface cable.

Ordering Example: OM-DVCV AC current and voltage data logger with display and OCW-1 OMEGACARE 1-year extended warranty adds 1 year to standard 1-year warranty for a total of 2 years.



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

ADJUSTABLE DC SPEED CONTROL

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it

OMDC-15DVE



- Dual Voltage (120/240 Vac Input)
- Full Wave Bridge Power Supply
- Adjustable Minimum Speed (0 to 30% of Max)
- Adjustable Maximum Speed (40 to 145% of Base)
- Adjustable IR Compensation
- Fixed Acceleration (0.5 Seconds)
- 5 kΩ Speed Potentiometer
- 25:1 Speed Range
- 1% Speed Regulation
- Shunt Field Supply Provided (1 Amp Max) 100V for 120 Vac; 200V for 240 Vac Input
- Overload Capacity of 200% for 1 Minute
- Transient Voltage Protection
- NEMA 4/12 (IP66) Enclosure



OMDC-15DVE.

The OMD-15DVE is a general purpose, economical variable speed control for small DC and universal motor applications featuring: dual input voltages of 12/24 or 120/240 Vac with a DC output current rating of 2 Amps, adjustable trimpot settings, and quick connect terminal pins. The OMD-15DVE features a NEMA 4/12 (IP66) enclosure.

SPECIFICATIONS

Temperature: -10 to 45°C (14 to 113°F)
AC Input Voltage: ±10% rated line voltage
Input Frequency: 50/60 Hz
Dimensions: 97 W x 140 H x 89 mm D (3.8 x 5.5 x 3.5")
Weight: 284 g (10 oz)

To Order					
MODEL NO.	MAX CONT. AC AMPS	MAX CONT. ARM AMPS	MAX HP	INPUT	OUTPUT
OMDC-15DVE	3.0	3.0	1/8	120 Vac	0 to 90 Vdc
			3/8	240 Vac	0 to 180 Vdc

Comes complete with operator's manual.

Ordering Example: OMD-15DVE, dual voltage variable speed control for small DC motors up to 3 Arm Amps.

Pulse Control Module

Converts 4 to 20 mA to Proportional Power Control

PCM5



PCM5 shown actual size, mounted on SSR330DC25, solid state relay (sold separately).

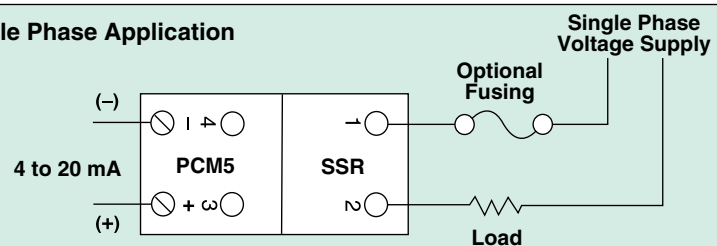
- ✓ Tolerates Inputs Less than 4 mA
- ✓ Converts 4 to 20 mA to a Time Proportional Output
- ✓ Mounts Directly on a Single 3 to 32 Vdc Input SSR
- ✓ Supports Single Phase 50 or 60 Hz Operation

The OMEGA® PCM5 Series converter is designed to convert a 4 to 20 mA signal from a process/temperature controller or computer to a time proportional output.

The modules mount directly to the input terminals on a 3 to 32 Vdc input SSR, and supports single phase 50 or 60 Hz operation. Lever clamps are provided on the converter for the 4 to 20 mA input.

The SSR's power section provides easy connection to the line and load.

Single Phase Application



SPECIFICATIONS

Analog Input Signal: 4 to 20 mA minimal; 0 to 30 mA permissible; reverse polarity protected; no abnormal operation below 4 mA

Compliance Voltage Requirement: 6.4V

Time Base: ~200 mS @ 50%, ~500 mS towards 0 and 100%

Ambient Temperature: 0 to 40°C (32 to 104°F)

Dimensions: 45 L x 51 W x 20 mm D (1.75 x 2.0 x 0.80")

Also Available from omega

1/16 DIN Universal Temperature and Process Controllers with 8-Segment Ramp/Soak

CN8202-R1 shown smaller than actual size.

1/8 DIN and 1/4 DIN Versions Are Also Available!



To Order

Model No	Description
PCM5	Pulse control module

Comes complete with operator's manual.

Ordering Example: PCM5, pulse control module.

SCR Power Controllers

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it

For Electrical Resistance Heaters 125, 200, 250 Amp

SCR19-H and SCR39-H Series



- ✓ Zero Crossing or Phase-Angle Fired
- ✓ Diagnostic LED Indicators
- ✓ Single- or 3-Phase Load Switching
- ✓ Extends Heater Life—Reduces Thermal Shock
- ✓ No Maintenance—All Solid State Components
- ✓ Close Control of Low Mass Heaters
- ✓ Phase Angle with Soft Start for High Inrush Heaters
- ✓ No Relay Noise—Contact Arc Noise Eliminated
- ✓ Semiconductor I²T Fusing
- ✓ Optically Isolated 4 to 20 mA Control Signal Input
- ✓ Fan Cooled

The SCR19-H and SCR39-H Series power controllers are designed to proportion electric power to resistive loads only, such as ovens, furnaces, heat sealers, etc. The controllers consist of power semi-conductors (SCRs), properly sized heat sinks, trigger circuitry, and fuses supplied on panels for surface mounting.

(Note: They are not designed to drive transformers or any inductive load.)

The power controller accepts a 4 to 20 mA dc output from a temperature controller.



SCR39Z-H-48-250 shown smaller than actual size.

Zero Voltage Switched Models

The SCR19Z-H and SCR39Z-H SCR power controllers are zero crossover fired, high-power solid state switched devices. Zero crossover firing eliminates the RFI (radio frequency interference) generation associated with mechanical relays. With zero crossover firing, the output appears as bursts of full sine waves of line voltage which provides excellent regulation to the load.

Phase Angle Fired Models

The SCR19P-H and SCR39P-H SCR phase-angle fired power controllers turn on each SCR for a controlled portion of a half-cycle of the line voltage. The effective line voltage is determined by the portion of the line voltage delivered, which is proportional to the input control signal. Additionally, the voltage is regulated as the line voltage changes.

Dimensions: mm (inch)

Model No.	Height	Width	Depth
SCR19-H	222.25 (8.750)	135.12 (5.320)	370.84 (14.6)
SCR19P-H	222.25 (8.750)	135.12 (5.320)	370.84 (14.6)
SCR39Z-H	222.25 (8.750)	287.02 (11.3)	370.84 (14.6)
SCR39P-H	222.25 (8.750)	394.46 (15.530)	370.84 (14.6)

Note: When fuses are added to unit, add 83 mm (3.3") to height.

Specifications

Supply Voltage: 120 to 600 Vac

Frequency: 50 to 60 Hz

Current Rating: 125 to 250 A

Input Control Signal Isolation:
2500 Vac

Transient Voltage Protection:
Inherent built-in immunity

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

Load: Resistive

SCR39Z-H: 1-phase, 2-leg
control for 3-wire delta, 3-phase
ungrounded wye

SCR19Z-H: 1-phase, 1-leg control

SCR39P-H: 3-phase, 3-leg half
control for 3-wire delta or 3-phase
ungrounded wye

SCR19P-H: 1-phase, 1-leg control

Diagnostic Indicators: Shorted or
open SCR

Cooling: Fan cooled, requires 120 Vac
control voltage

Single-Phase Load Current (Amps) Equation

Total Amps = $\frac{\text{Total Watts (Load)}}{\text{Volts (Line Voltage)}}$

Volts (Line Voltage)

Three-Phase Load Current (Amps) Equation

Total Amps = $\frac{\text{Total Watts (Load)}}{1.73 \times \text{Volts (Line Voltage)}}$

1.73 x Volts (Line Voltage)



OMEGACARESM extended warranty program
is available for models shown on this page.
Ask your sales representative for full details
when placing an order. OMEGACARESM
covers parts, labor and equivalent loaners.

(*) Specify Line Voltage

Code	Description
12	120 Vac
20	208 Vac
24	240 Vac
48	480 Vac

(**) Soft Start or Voltage Limit

Code	Description
S9	Soft start 9 seconds
S15	Soft start 15 seconds
S30	Soft start 30 seconds
S60	Soft start 60 seconds
S120	Soft start 120 seconds
V	Voltage limit

Phase-Angle Firing Models

To Order		
Model No.	Current Load (A)	Weight kg (lb)
Single-Phase Models		
SCR19P-H-(*)-125-(**)	125	6.1 (13.5)
SCR19P-H-(*)-200-(**)	200	6.4 (14.0)
SCR19P-H-(*)-250-(**)	250	6.4 (14.0)
3-Phase Models		
SCR39P-H-(*)-125-(**)	125	16.1 (35.5)
SCR39P-H-(*)-200-(**)	200	16.8 (37.0)
SCR39P-H-(*)-250-(**)	250	16.8 (37.0)

All phase-angle models come complete with 1 fuse per SCR line controlled, and operator's manual.

Ordering Examples: SCR19P-H-24-125-S30, 125 A, 240V single-phase-angle model with a 30 second soft start option. OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years.

SCR39P-H-48-200-S9, 200 A, 480V three-phase-angle model with a 9 second soft start option.

Zero-Voltage Switching Models

Model No.	Current Load (A)	Weight kg (lb)
120 to 480V, Single-Phase Models		
SCR19Z-H-48-125	125	6.1 (13.5)
SCR19Z-H-48-200	200	6.4 (14.0)
SCR19Z-H-48-250	250	6.4 (14.0)
120 to 480V, 3-Phase Models		
SCR39Z-H-48-125	125	12.5 (27.0)
SCR39Z-H-48-200	200	12.5 (27.5)
SCR39Z-H-48-250	250	12.5 (27.5)

All zero-voltage models come complete with 1 fuse per SCR line controlled, and operator's manual.

Ordering Examples: SCR19Z-H-48-250, 250 A, 120-480V, single-phase zero-voltage model.

SCR39Z-48-125, 125 A, 120-480V, three-phase, zero-voltage model.

OCW-1, OMEGACARESM extends standard 2-year warranty to a total of 3 years.

Replacement Fuses for SCR19-H, SCR39-H Series (120 to 480 Vac)

Model No.	Current (A)
SCR-210A044U01	125
SCR-210A046U01	200
SCR-210A045U01	250

For Electrical Resistance Heaters; 40, 60, 80 Amp

SCR19 and SCR39 Series



SCR19Z-24-060 shown without fuse shown much smaller than actual size.

- ✓ Zero Crossing or Phase Angle Fired
- ✓ Single- or 3-Phase Load Switching
- ✓ Extends Heater Life—Reduces Thermal Shock
- ✓ No Maintenance—All Solid State Components
- ✓ Close Control of Low Mass Heaters
- ✓ Phase Angle with Soft Start for High Inrush Heaters
- ✓ No Relay Noise—Contact Arc Noise Eliminated
- ✓ Semiconductor I²T Fusing
- ✓ Optically Isolated 4 to 20 mA Control Signal Input

The SCR19 Series power controllers are designed to proportion electric power to resistive loads only, such as ovens, furnaces, heat sealers, etc. The controllers consist of power semi-conductors (SCRs), properly-sized heat sinks, trigger circuitry, and fuses supplied on panels for surface mounting. (*Note: They are not designed to drive transformers or any inductive load.*)

The power controller accepts a 4 to 20 mA_{dc} output from a temperature controller or can be supplied with manual option using a remote potentiometer.

Operation

The SCR19 Series controllers offers 2 methods of proportional control—0-voltage-switched and phase-angled fired. With the 0 voltage switching mode, the controller switches on complete cycles of the AC supply voltage. The trigger circuit

Dimensions: mm (inch)

Model No.	Height	Width	Depth
SCR19Z	178 (7)	121 (4.8)	102 (4)
SCR19P	178 (7)	121 (4.8)	102 (4)
SCR39Z	178 (7)	244 (9.6)	102 (4)
SCR39P	178 (7)	365 (14.4)	102 (4)

Note: When fuses are added to unit, add 83 mm (3.3") to height.

is designed to turn on the SCRs as close as possible to the point where the AC sine wave crosses through zero. In effect, the line voltage is turned on and off and applied to the heaters in whole cycles. With an input of 4 to 20 mA, the output will be off below 4 mA and full on at 20 mA. Proportioning action is obtained by varying the number of cycles on to the number of cycles off. The output will vary from one cycle on and 9 cycles off at low input, to all cycles on at maximum input. This output is integrated by the heaters which produce a smoothly proportioning heat output that varies directly with the input signal. With the phase-angle-fired mode, the power to the load is controlled by governing the point of turn-on (firing) of each half cycle of the full AC sine wave.

Features

- ✓ Designed to allow the operation of multiple units by a single temperature controller

- ✓ Unique circuitry in the 3-phase units allows any phase connection—phases cannot be incorrectly wired resulting in partial output power on or off
- ✓ Optical coupler ensures the elimination of ground loops, high-voltage potentials, or damage to drive controller of the SCR power controller
- ✓ Completely solid-state, SCR19 Series SCRs have no moving parts to wear out. They are as effective as new, even after 100,000,000 operations.
- ✓ SCR19 Series SCRs offer smooth, rapid, proportional heating action. SCR control proportions only the power required to maintain exact temperature.
- ✓ SCR19 Series SCRs eliminate high/low cycling and, because the temperature of the heating element is constant, thermal shock is eliminated. Heater life may be increased by up to 7 times

Specifications

Rometec srl - www.rometec.it - info@rometec.it - Rometec srl - www.rometec.it - info@rometec.it

Frequency: 50 to 60 Hz

Current Rating: 40, 60, and 80 A

Control Signal Isolation: 2500 Vac

Transient Voltage Protection:

MOV and RC suppression

Ambient Temperature Range:

0 to 50°C (32 to 122°F) for listed current rating

Load: Resistive

SCR19Z: 3-phase, 3-wire, delta or ungrounded wye

SCR19P: 1-phase, 1-line control

SCR39Z: 3-phase, 2-line control

SCR39P: 3-phase, 3-line control

Diagnostic Indicators: Shorted or open SCR reversed signal input (mA/V)

Zero-Voltage Switching

Power is controlled by governing the percentage of complete sine waves to the load. The point of turn on in the sine wave is at (or very near) zero voltage, thus no RFI is generated. SCR19 Series units feature an infinitely variable time base. They provide the ultimate resolution in power proportioning to the load. Also, because there are no time base adjustments to make,

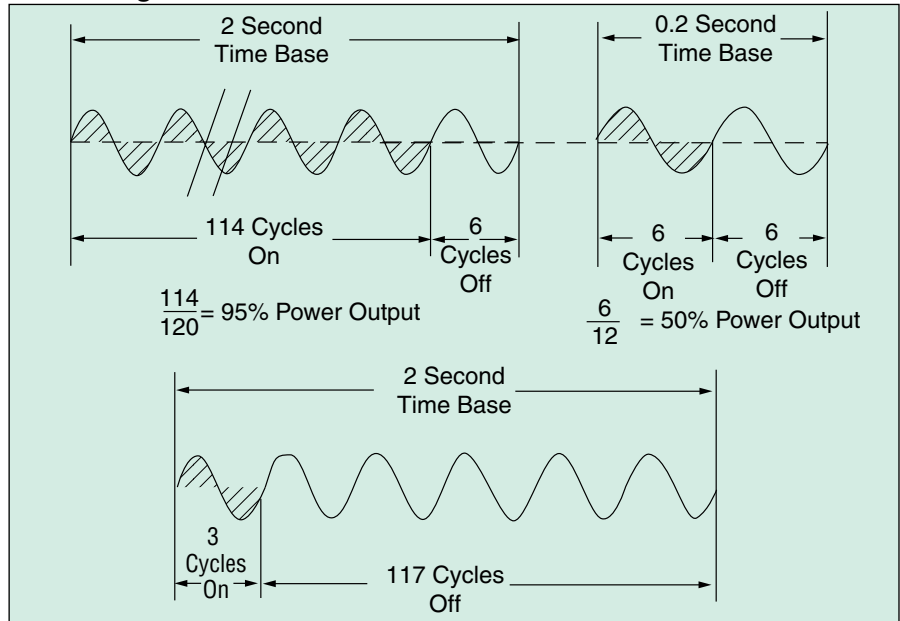


OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

they are easy to use. The time base is infinitely adjustable. The Controller is operating from a minimum 0.2 second time base at half power output to a maximum 2 second time base at the 5% and 95% power outputs. See graphical representation below. Power to load = ratio of cycles absent to total cycles. An SCR19 Series

0-voltage-switched SCR power controller with infinitely variable time base provides maximum resolution in temperature regulation by offering higher power resolution than fixed time base units, i.e., 20 cycle fixed = $\frac{1}{20} = 5\%$ power change minimum step change. Infinitely variable time base units also produce less power line disturbances.

Zero Voltage



Phase-Angled Fired

Power to load is controlled by governing the point of turn on (firing) of each half cycle of the full AC sine wave (see example). After triggering, the remainder of the AC cycle is applied to the load. Phase-angle-fired controllers are recommended when controlling temperatures of low-mass heating elements that require high switching speeds, such

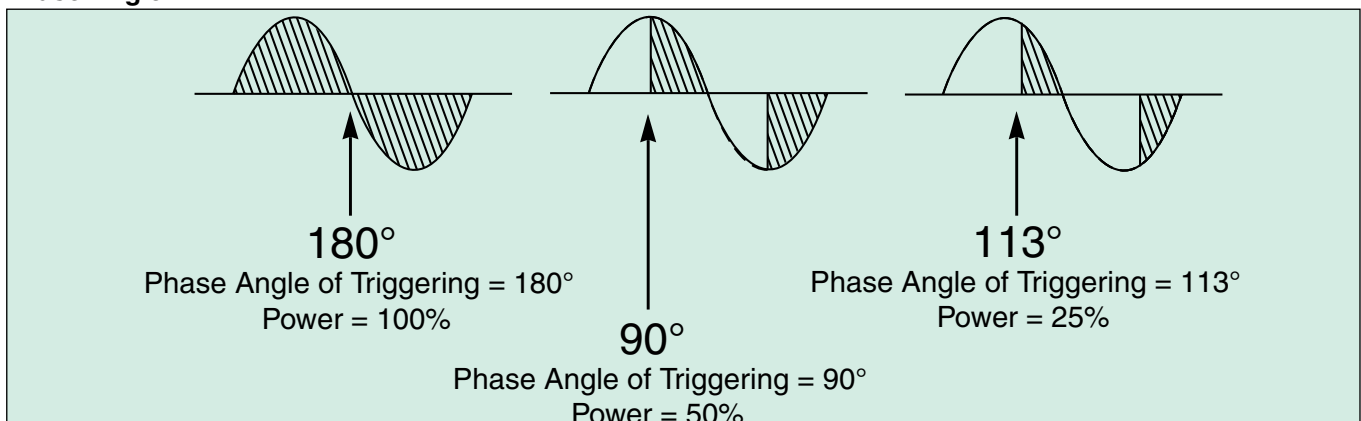
as tungsten elements, quartz lamps, hot wires and other loads requiring high inrush currents.

(Note: Some RFI can be generated from the phase angle units.)

A soft-start timing circuit is available that provides ramp to peak voltage to limit the power to the load at startup. Soft start action is required for loads having high current, turn-on characteristics, and slowly

changes the input signal from 4 to 20 mA when full output is required. It is selectable from 9, 15, 30, 60 or 120 seconds. A voltage limit option is also available which "clamps" output power to a level lower than supply power. The output power is adjustable from approximately 20% to full output.

Phase Angle



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SCR19Z-24-060 shown without fuse shown smaller than actual size.

(*) Specify Line Voltage

02	24 Vac
12	120 Vac
20	208 Vac
24	240 Vac
48	480 Vac

(**) Soft Start or Voltage Limit

Code	Description
S9	Soft start 9 seconds
S15	Soft start 15 seconds
S30	Soft start 30 seconds
S60	Soft start 60 seconds
S120	Soft start 120 seconds
V	Voltage limit
X	No soft start or voltage limit

Note: Soft start with phase angle only.

Replacement Fuses for SCR19 Series

Model No.	Current (A)
SCR-210A015U01	40
SCR-210A012U01	60
SCR-210A014U01	80

Phase-Angle Firing Models

To Order Visit omega.com/scr19 for Pricing and Details

Model Number	Current Load (A)	Weight kg (lb)
Single-Phase Models		
SCR19P-(*)-040-(**)	40	1.4 (3)
SCR19P-(*)-060-(**)	60	1.4 (3)
SCR19P-(*)-080-(**)	80	1.4 (3)
3-Phase Models		
SCR39P-(*)-040-(**)	40	4.1 (9)
SCR39P-(*)-060-(**)	60	4.1 (9)
SCR39P-(*)-080-(**)	80	4.1 (9)

Comes complete with operator's manual.

To order a unit with manual input option module and remote pot, add suffix "-M" to model number for an additional cost.

Ordering Examples: SCR19P-24-060-S30, 60 A, 240 V single-phase model with a 30 second soft start option.

OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years.

SCR39P-48-040-S9, 40 A, 480 V single-phase model with a 9 second soft start option.

Zero-Voltage Switching Models

Model No.	Model No.	Model No.	Wt. kg (lb)	Current (A)
120 V Single-Phase		240V Single-Phase		
SCR19Z-12-040	SCR19Z-24-040	SCR19Z-48-040	1.4 (3)	40
SCR19Z-12-060	SCR19Z-24-060	SCR19Z-48-060	1.4 (3)	60
SCR19Z-12-080	SCR19Z-24-080	SCR19Z-48-080	1.4 (3)	80
		240V 3-Phase		
—	SCR39Z-24-040	SCR39Z-48-040	2.7 (6)	40
—	SCR39Z-24-060	SCR39Z-48-060	2.7 (6)	60
—	SCR39Z-24-080	SCR39Z-48-080	2.7 (6)	80

All phase-angle and 0 voltage models come complete with operator's manual and 1 fuse per SCR line controlled.

Note: To order a unit with manual input option module and remote pot, add suffix "-M" to model number for an additional cost.

Ordering Examples: SCR19Z-24-060-M, 60 A, 240V single-phase model with optional manual potentiometer input.

SCR39Z-24-080, 80 A, 240V 3 phase model.

Space Saving DIN Rail Power Supplies

Single Phase 10 to 100 Watts

SL-PS Series



- ✓ Universal AC Inputs/Full Range
- ✓ NEC Class 2/LPS Compliant
- ✓ Protections: Short Circuit/ Overload/ Overvoltage
- ✓ LED Indicator for Power On
- ✓ % Full Load Burn-In Test
- ✓ Installs on 35 x 7.5 or 35 x 15 mm DIN Rail
- ✓ Built-In DC OK Active Signal or Relay Contact

The SL-PS Series of power supplies provides a reliable DC power source for any industrial control system. These economical and reliable power supplies for industrial devices (PLCs, sensors, switches) are designed to take minimal space in your electrical control cabinet. The SL-PS Series of power supplies offer short-circuit, over-load and over-voltage protection.

These high quality power supplies have passed a 100% full load burn-in test, and are UL/CUL listed and CE marked and are NEC class 2 compliant.

SPECIFICATIONS

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

Working Humidity: 20 to 90% RH non-condensing

Dimensions: 90 H x 100 mm D (3.564 x 3.94") for width see ordering table

Output Voltage: 24 Vdc

Ripple and Noise: 150 mVp-p

Voltage Tolerance: ±1%

Line and Load Regulation: ±1%

Input Voltage: 85 to 264 Vac, 47 to 63 Hz, 120 to 370 Vdc



SL-PS-S10024

SL-PS-S1024

Shown smaller than actual size.

Inrush Current:

SL-PS-S1024: Cold start 35 A/115 Vac, 70 A/230 Vac

SL-PS-S2024: Cold start 20 A/115 Vac, 40 A/230 Vac

SL-PS-S4024, SL-PS-S6024: Cold start 30 A/115 Vac, 60 A/230 Vac

SL-PS-S10024: Cold start 30 A/115Vac, 60 A/230 Vac

Protection Overload:

SL-PS-S1024: 105%, 27.6 to 32.4V

SL-PS-S2024: 105 to 160%, 27.6 to 32.4V

SL-PS-S4024, SL-PS-S6024 and SL-PS-S10024: 105 to 150%, 31.2 to 36V

Efficiency:

84 to 88%

Safety Standards: UL508, EN60950-1*

approved, NEC Class 2/LPS compliant

*Except SL-PS-S2024

Withstand Voltage:

I/P-O/P: 3k Vac; **I/P-FG:** 1.5k Vac

O/P-FG: 0.5k Vac

Insulation Resistance:

I/P-O/P, I/P-FG, O/P-FG: 100 M Ω / 500 Vdc EMI compliance to EN55011, EN55022 (CISPR22), EN61204-3 Class B

Harmonic Current: Compliance to EN61000-3-2,-3

EMS Immunity 10 and 20 W Models:

Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN50204, EN55024, EN61000-6-1, EN61204-3, light industry level, criteria A

EMS Immunity 40, 60 & 100 W Models:

Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN50204, EN55024, EN61000-6-2, EN61204-3, heavy industry level, criteria A

To Order

MODEL NO.	RATED POWER	CURRENT	WIDTH mm (in)	DESCRIPTION
SL-PS-S1024	10 W	0.42 A	22.5 (0.89)	Slim 24 Vdc power supply with DC OK active signal, 18 to 27V/20 mA
SL-PS-S2024	20 W	1 A	22.5 (0.89)	Slim 24 Vdc power supply with DC OK active signal, 18 to 27V/20 mA
SL-PS-S4024	40 W	0.83 A	40 (1.57)	Slim 24 Vdc power supply with DC OK relay contact, 30V/1A resistive
SL-PS-S6024	60 W	2.5 A	40 (1.57)	Slim 24 Vdc power supply with DC OK relay contact, 30V/1A resistive
SL-PS-S10024	100 W	4 A	55 (2.17)	Slim 24 Vdc power supply with DC OK relay contact, 30V/1A resistive

Ordering Examples: SL-PS-S2024, 24 Vdc power supply, 1 A output with DC OK signal.

SL-PS-S6024, 24 Vdc power supply, 2.5 A output with DC OK contact relay.