

OHMMETER INDICATOR/ CONTROLLER

1/8 DIN

 OMEGA®



DP2000-O1 shown
actual size.

DP2000-O Series

Product Discontinued

as of 3/13/2018

- ✓ 1999 or 9999 Count Display Span
- ✓ Analog Outputs Available
- ✓ Proportional Control Available
- ✓ RoHS 2 Compliant

The DP2000/9000-O is a panel mount resistance meter with direct readout in ohms. Resistance ranges are jumper selectable. It is complete with current excitation and open resistance detection. With the addition of analog and control outputs, it can be incorporated as a system component in ATE and closed-loop control applications.

POWER AND DISPLAY OPTIONS

Six types of power supplies are available: 120 Vac, 240 Vac, 24 Vac, 5 Vdc, isolated 9 to 32 Vdc and isolated 26 to 56 Vdc. An LED display is standard, an LCD display is optional and is recommended for viewing in bright ambient light. A NEMA (IP65) 4 splash-proof lens cover is available.

Signal input and power connections are made via a rear barrier terminal strip. The motherboard rear edge connector provides access to hold and test, polarity, clock, and the standard analog output and optional analog outputs. Decimal point positions can be selected by jumpers.

ANALOG OUTPUT OPTIONS

A 1 mV/count (± 2 V full-scale) or 0.1 mV/count (± 1 V full-scale) analog output is standard and is ideal for driving a strip-chart recorder. An additional analog output can be provided by an optional vertical plug-in board. Available output signals are 0 to 5 Vdc, 0 to 10 Vdc, 0 to 1 mA (source or sink) and 4 to 20 mA (source or sink). The top and bottom of each output range can be scaled to fit a user-selected display span.

CONTROL OUTPUT OPTIONS

Additional outputs can be provided by a horizontal upper board. Available options include single-setpoint control with one 10 A relay, dual-setpoint control with two 10 A relays, 4 to 20 mA proportional control (source or sink), time-proportional 2 A solid-state relay control, and isolated, parallel BCD output.

SPECIFICATIONS

Input Configuration

Connection: 2- or 4-wire

Zero Adjustment: ± 50 counts

Overvoltage Protection (Differential): 15 Vp

Open-Circuit Voltage (maximum): 12V

Conversion

Input Configuration: Differential, bipolar

Technique: Dual slope, average value

Polarity: Automatic

Signal Integration Period: 100 ms, nominal

Reading Rate: 2.5/s, nominal

Accuracy at 25°C

Overall Accuracy: $\pm 0.05\%$ of reading ± 1 count

Span Tempco: $\pm 0.006\%$ of reading/ $^{\circ}\text{C}$

Zero Tempco: ± 2.5 m/ $^{\circ}\text{C}$ $\pm 0.001\%$ of full scale/ $^{\circ}\text{C}$

Warmup to Rated Accuracy: 1 min

Display

LED: Red, 14.2 mm (0.56"), 7-segment

LCD: 12.7 mm (0.50"), 7-segment

Power

AC Models: 120, 240, or 24 Vac 10%/-15%, 49 to 440 Hz

DC Models: 9 to 32 Vdc, isolated to 300 Vp; 26 to 56 Vdc, isolated to 300 Vp; 5 Vdc $\pm 5\%$, non-isolated

Common Mode

Voltage: 1500 Vp test (354 Vp per IEC spacing)

Rejection (DC to 60 Hz): 120 dB

Environmental

Operating Temperature: 0 to 60°C (32 to 140°F)

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

Humidity: 95% RH, non-condensing @ 40°C (104°F)

Mechanical

Bezel: 96 W x 48 H x 8 mm D (3.78 x 1.89 x 0.31")

Depth Behind Bezel: 139.8 mm (5.50")

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

Weight: 17 oz (480 g)

Case Material: 94 V-0 UL-rated polycarbonate

DC CURRENT INPUTS

O SERIES

CODE*	DP2000 RANGE	DP9000 RANGE	RES	EXC CURRENT	ACC
O1	19.99 Ω	–	10 M Ω	4.2 mA	$\pm 0.05\%$ of reading ± 1 count
O2	199.9 Ω	–	100 M Ω	4.2 mA	
O3	1.999 k Ω	999.9 Ω	1 Ω	420 μ A	
O4	19.99 k Ω	9.999 k Ω	10 Ω	42 μ A	

Ordering Example: DP2000-O3, LED 120 Vac, 1mV/count, DC current input 0 to 1.999 k Ω .

To Order

MODEL NO.					DESCRIPTION
DP2	3½-DIGIT FOR ± 1999 COUNT				
DP9	4-DIGIT FOR ± 9999 COUNT				
	0	0	0	-X	A. POWER AND DISPLAY
	0				LED; 120 Vac (50/60 Hz)
	1				LCD; 120 Vac (50/60 Hz) (DP2000 only)
	2				LED; 240 Vac (50/60 Hz)
	3				LCD; 240 Vac (50/60 Hz) (DP2000 only)
	4				LED; 9 to 32 Vdc, isolated
	5				LCD; 9 to 32 Vdc, isolated (DP2000 only)
	6				LED; 5 Vdc
	7				LCD; 5 Vdc (DP2000 only)
	8				LED; 24 Vac
	9				LCD; 24 Vac (DP2000 only)
	A				LED; 26 to 56 Vdc, isolated
	B				LCD; 26 to 56 Vdc, isolated (DP2000 only)
					B. ANALOG OUTPUTS
		0			1 mV/count (DP2) or 0.1 mV/count (DP9) (supplied on all units)
		1			0 to 5 Vdc
		2			0 to 10 Vdc
		3			0 to 1 mA (internally driven)
		4			4 to 20 mA (internally driven)
		5			4 to 20 mA (externally driven)
		6			4 to 20 mA (isolated)
					C. CONTROL OUTPUTS
			0		None
			1		Dual setpoint, 10 A relay (SPDT)
			2		Proportional 4 to 20 mA
			3		Proportional/time proportioning, 2 A relay
			4		Parallel BCD, isolated
			5		Single setpoint, 10 A relay (SPDT)
					D. SIGNAL CONDITIONER INPUTS
				-O(*)	Ohmmeter
					ADDITIONAL OPTIONS
				-G	Green LED display

* Refer to chart above for input code options.

Accessory

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

Comes complete with operator's manual.

Ordering Example: DP2000-O1, 3½ digit ohmmeter, red LED display, 120 Vac power, 1mV/count, DC current input 0 to 19.99 Ω .