



# MPN-1600

## Digital Panel Meter

- IP65/NEMA 4 front panel display
- Very compact, 0.94 in. H x 2.83 in. W (24 mm x 72 mm); 3/64 DIN
- -1999 to 9999 Digits, 0.56 in. LED
- Two alarm relay outputs, programmable functions
- Wide range of inputs
- Excitation voltage supply (MPN-1640 only)
- CE approval
- Options: analog output, RS-232 and infrared pen interface

### ■ Options

- **Analog Output** — isolated analog output can be referenced by setup to the actual reading, net, gross, or peak/valley in memory.
- **Printer Output** — isolated serial RS-232 printer output. Front key selection of baud rate, CR/CRLF line termination, print rate and manual or automatic (continuous) print operation.
- **IR Remote Setup** — provides programming of menu options by IR pen. Pen is interfaced to personal computer. PC menu instructions are transmitted via the pen when pointed at the IR port on front panel.

### ■ Operational Description

The MPN-1600 series is a range of programmable digital panel meters. The meters can be used for display, alarming or monitoring of various process instruments.

This series is low profile and compact with a 3/64 DIN design. The meter is setup by scrolling mnemonic commands, or optionally, with a personal computer or remotely with an infrared pen connected to a PC.

The MPN-1600 offers many standard features including: 4 digit display, leading zero blanking control, presettable under range and over range limits.



## ■ Applications

The MPN-1600 series is available as a process meter, temperature meter, or strain gage/load cell meter.

As a process meter, the MPN-1600 can be used with process inputs: 0-20 mA, 4-20 mA, 1-5 VDC, or 0-10 VDC. As a voltage meter input is  $\pm 10.500$  VDC. As a current meter it can be configured with inputs  $\pm 22.00$  mA. In all cases, scaling is accomplished by establishing a low and high range setting through the program menu.

The temperature meter offers menu selection of several different input types including: thermocouples type J, K, T, R, & S. RTD type Pt100, Ni100. Resolution is 0.1 degree C or F. The zero and span are set through the program menu.

The strain gage/load cell meter provides input selection  $\pm 120$  mVDC. Excitation is provided at 10 VDC or 24 VDC @ 30 mA. The zero and span are set through the program menu.

## ■ Specifications

<b>Performance</b>
<b>Input Type/Accuracy</b>
<b>Current:</b> 0-20 mA, $\pm 0.05\%$
<b>Voltage:</b> 0-10 VDC, $\pm 0.04\%$
<b>Strain Gage:</b> $\pm 30$ to $\pm 120$ m VDC; $\pm 0.04\%$
<b>T/C:</b> J, $\pm 0.5\text{C}$ ; K, $\pm 0.6\text{C}$ ; T, $\pm 0.3\text{C}$ ; R, $\pm 1\text{C}$ ; S, $\pm 1\text{C}$
<b>RTD:</b> Pt100, $\pm 0.5\text{C}$ ; Ni100, $\pm 0.5\text{C}$
<b>Conversion Rate:</b> programmable to 5/sec., 2.5/sec. on temperature models
<b>Electrical:</b> Isolation exceeds 2500 Vrms
<b>Conversions</b>
<b>Internal Resolution:</b> 1 part over 200,000
<b>Conversion Time:</b> Setable at 200, 400, 800/sec.; except temperature models fixed at 400/sec.
<b>Digital Filter:</b> Walking window mean; setable at slow, medium or fast
<b>Control Output</b>
<b>Alarm Relay:</b> (2) SPST form A, 5 A resistive @ 250 VAC; 1 A resistive @ 24 VDC
<b>Time Delay:</b> Programmable 0-20 sec., on or off delay
<b>State:</b> Programmable low or high, low with start up disable alarm, on/off controller with direct or reverse action; high or low deviation alarm
<b>Other Features:</b> Password protection; alarm function switched on gross, net or peak; alarm latching: off/manual reset/failsafe
<b>Approvals:</b> CE (EN50081-2: 1993, EN50082-2: 1995)
<b>Electrical</b>
<b>Supply Voltage:</b> 90 to 264 VAC $\pm 10\%$ ; 47/70 Hz; 4 VA power consumption
<b>Physical</b>
<b>Material:</b> Polycarbonate UL94V.2
<b>Dimensions</b>
<b>Overall:</b> 0.94 x 2.83 x 4.92 in. (24 x 72 x 125 mm) 3/64 DIN
<b>Cutout:</b> 0.87 x 2.68 in. (22 x 68 mm)
<b>Rating:</b> IP65 / NEMA 4
<b>Weight:</b> 0.4 lb. (0.2 kg) approximately
<b>Environmental</b>
<b>Operating Temperature:</b> 14 to 140°F (-10 to 60°C)
<b>Maximum Pressure:</b> 1000 psig at 68°F (20°C)

Specifications are subject to change without notice.



### For the Latest Information

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Logan, UT  
Tel. 1/435/753-7300 1/888/525-7300

#### UK Sales Office

Gloucestershire  
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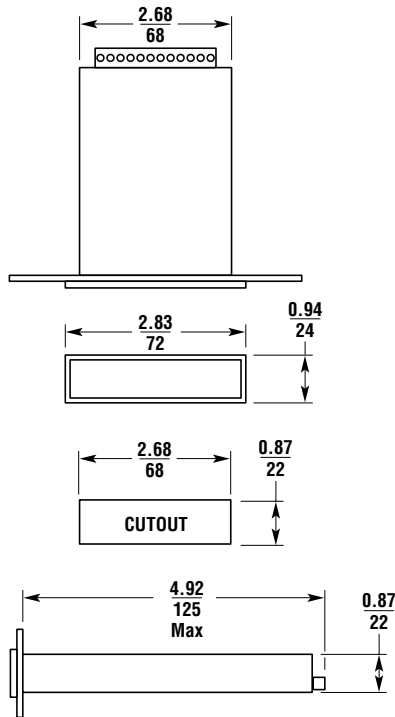
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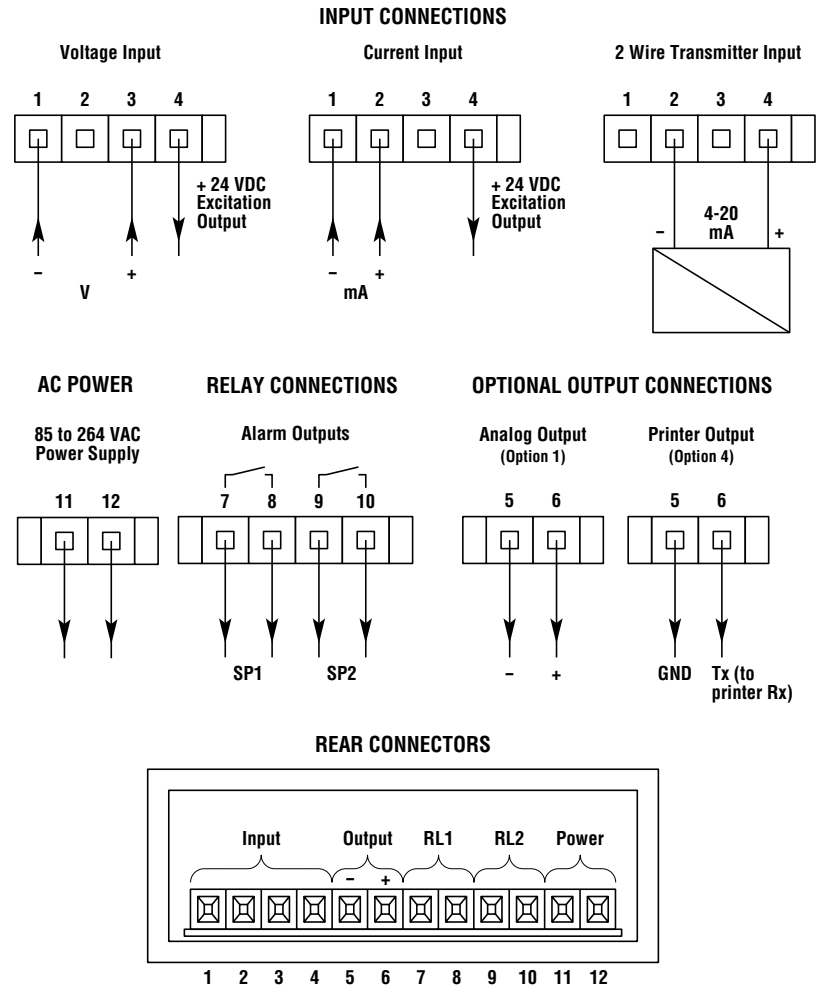
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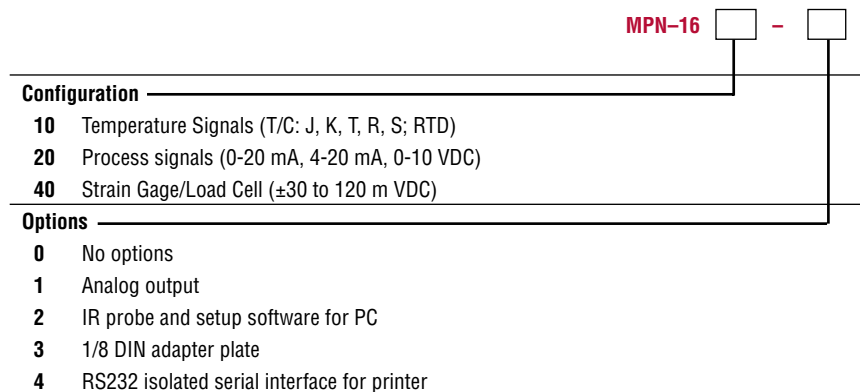
■ Dimensions — in./mm



■ Wiring



■ Ordering Information



relays, controllers & MMI