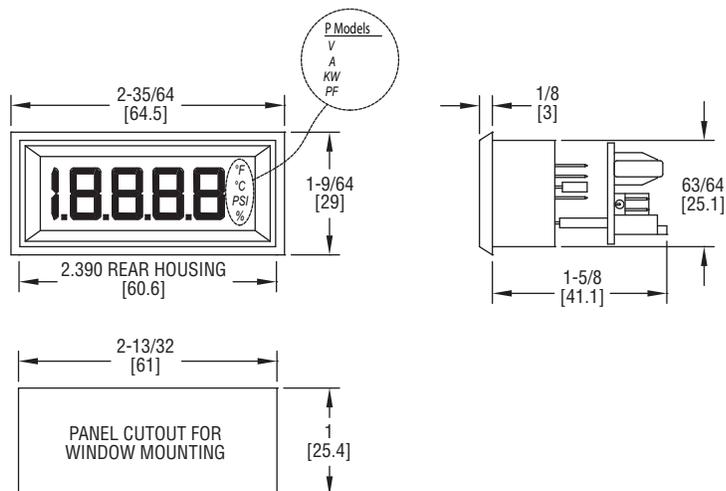




# Series DPML-4 LCD Digital Panel Meters

## Specifications - Installation and Operating Instructions



The Series DPML-4 LCD Digital Panel Meter offers a large 4-1/2 digit LCD display with a choice of red, amber or green segments for easy viewing at a distance. The meter accepts loop powered 4-20 mA DC input. Standard features include field engineering units and decimal point positions. A separate 24 VDC power supply is required for the operation of the back light.

### INSTALLATION

The Series DPML-4 is designed to snap into a 2.4" (61 mm) W x 1" (25.4 mm) H panel cutout. No additional hardware is required.

### WIRING

The unit is powered by a 4-20 mA loop and the screw terminal for wiring is located on the back of the adder board marked with + SIG -. The backlighting requires a 24 VDC power supply and should be connected to terminals identified with + B/L -.

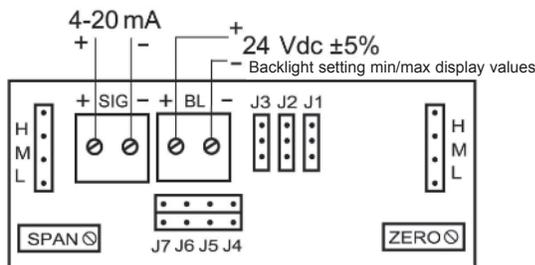


FIGURE 1

**Note:** If backlight supply is not loop supply, ground should be referenced together.

### SPECIFICATIONS

- Inputs:** 4 to 20 mA.
- Input Impedance:** 300Ω nominal.
- Accuracy:** ±(0.1% FS + 2 count).
- Power Supply:** Powered by control loop.
- Backlight Power Supply:** 24 VDC @ 35 mA typical.
- Span and Zero:** Adjustable (±19999 counts).
- Display:** 4-1/2 digits, 7 segments, 0.45" (11.4 mm) H.
- Decimal Points:** 4-position, user selectable.
- Engineering Units:** DPML-XXX: °F, °C, %, PSI; DPML-XXXP: V, A, KW, PF.
- Polarity:** Automatic, "-" displayed.
- Operating Temperature:** 32 to 122°F (0 to 50°C).
- Storage Temperature:** -4 to 158°F (-20 to 70°C)
- Mounting:** Snap-in bezel mount.
- Connection:** Screw terminals.
- Conversion Rate:** 3 per second.
- Warm-Up:** 10 minutes typical.
- Weight:** 2 oz (56.7 g).
- Agency Approvals:** RoHS.

### OPERATION

#### Selecting Engineering Units

Four sets of jumper pins are located in the back of the meter, between the meter and the adder board. Move the jumper to fit over the appropriate pins which correspond to the desired engineering unit. See Figure 2.

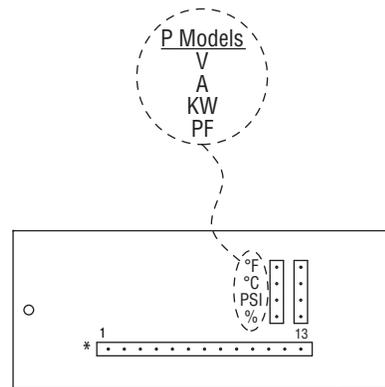


FIGURE 2

### Selecting Decimal Point Position

Five decimal point positions are available on the digital process meter, J4-J7. Move the jumper to correspond to the desired decimal point location. See Figure 3.

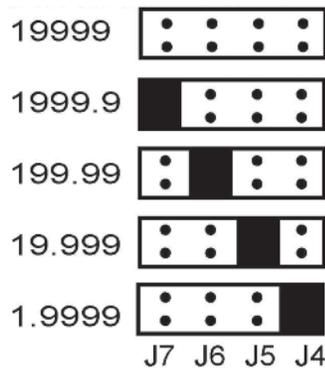


FIGURE 3

### Setting Min/Max Display Value J1, J2, J3 (See Figures 4 & 5):

**If:**  
Min Display is  $\leq 0$  **or**  
Min Display is  $> 0$  **and** Max Display  $\div$  Min Display  $> 5$

**Then:**  
J1, J2 & J3 should be all set to the top jumper (see Figure 4).

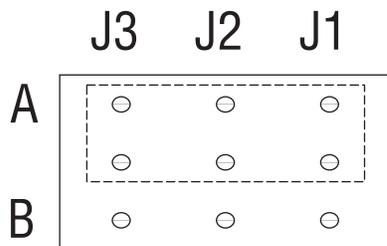


FIGURE 4

**If:**  
Min Display is  $> 0$  **and** Max Display  $\div$  Min Display  $\leq 5$

**Then:**  
J1, J2 & J3 should be all set to the bottom jumper (see Figure 5).

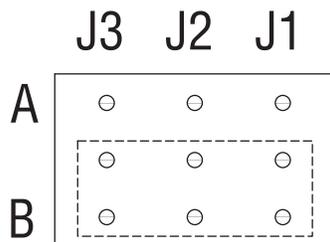


FIGURE 5

### Span & Zero Adjustment

The unit is equipped with a span adjustment and a zero to L,M,H. Use the potentiometer for the zero adjustment.

#### Span Adjustment:

**If:**  
Min Display is  $\leq 0$  **or**  
Min Display is  $> 0$  **and** Max Display  $\div$  Min Display  $> 5$

**Then:**  
Span Factor = 
$$\frac{2.5 (\text{Max Display} - \text{Min Display})}{4000 + 0.02 (\text{Min Display}) - 0.004 (\text{Max Display})}$$

**If:**  
Min Display is  $> 0$  **and** Max Display  $\div$  Min Display  $\leq 5$

**Then:**  
Span factor = 
$$\frac{\text{Max Display} - \text{Min Display}}{1600}$$

Span Factor	Set Jumpers
0-12	L
10-22	M
22-32	H

#### Zero Adjustment:

**If:**  
Min Display is  $\leq 0$  **or**  
Min Display is  $> 0$  **and** Max Display  $\div$  Min Display  $> 5$

**Then:**  
Zero Factor = 
$$\left[ \frac{(250,000 + \text{Min Display}) \times 83,834}{(250,000 + 400 (\text{Span Factor}))} \right] - 73,200$$

**If:**  
Min Display is  $> 0$  **and** Max Display  $\div$  Min Display  $\leq 5$

**Then:**  
Zero Factor = 
$$10,634 - \left[ \frac{(\text{Min Display} - 400 (\text{Span Factor})) \times 83,834}{250,000} \right]$$

Zero Factor	Set Jumpers
0-3994	H
3320-7314	M
6640-10634	L

### MAINTENANCE/REPAIR

Upon final installation of the Series DPML-4, no routine maintenance is required. The Series DPML-4 is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

### WARRANTY/RETURN

Refer to "Terms and Conditions of Sale" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.