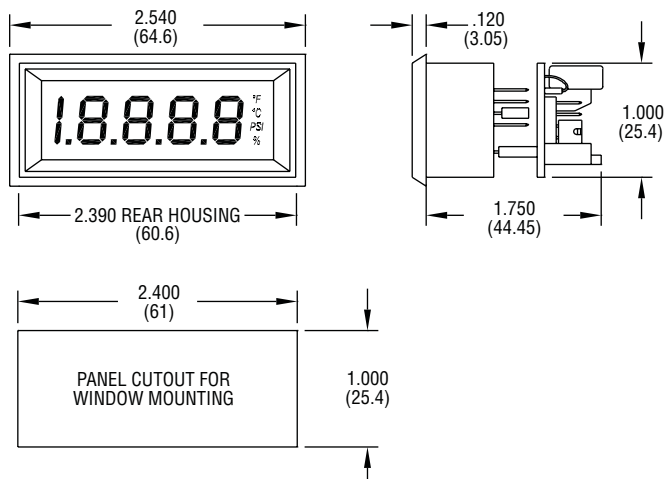




Series DPML-4 LCD Digital Panel Meters

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.

SPECIFICATIONS

- Inputs:** 4-20 mA DC.
- Input Impedance:** 300Ω nominal.
- Accuracy:** ±(0.1% FS + 2 count).
- 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.
- Annunciator:** °F, °C, %, PSI.
- 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.
- Weight:** 2 oz (56.7 g).
- Conversion Rate:** 3 per second.
- Normal Mode Rejection:** > 30 db @ 60 Hz.
- Warm-Up:** 10 minutes typical.

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 -.

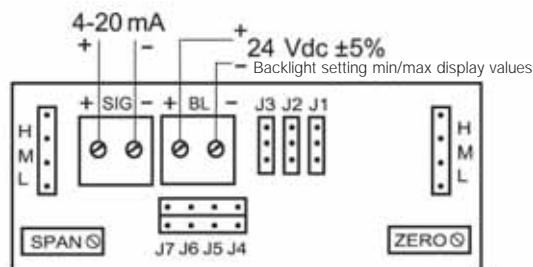


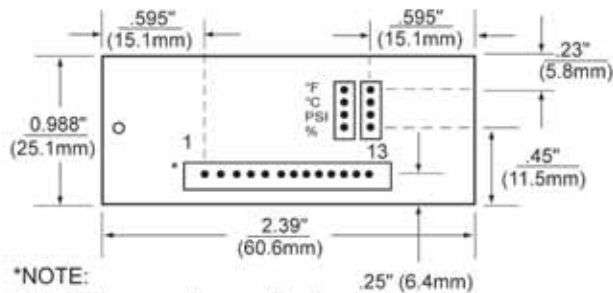
FIGURE 1

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

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.



*NOTE:
(13) .025" square pins on .1" centers

FIGURE 2

Selecting Decimal Point Position

Four 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.

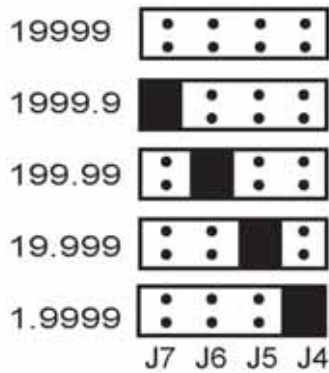
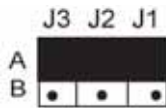


FIGURE 3

Setting J1, J2, J3 (See Figure 3):

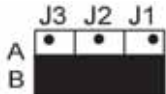
If:
Min Display is ≤ 0 *or*
Min Display is > 0 *and* Max Display/Min Display > 5

Then:
J1, J2 & J3 should be all set to the top jumper.



If:
Min Display is > 0 *and* Max Display/Min Display ≤ 5

Then:
J1, J2 & J3 should be all set to the bottom jumper.



Span & Zero Adjustment

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

Span Adjustment:

If:

Min Display is ≤ 0 *or*

Min Display is > 0 *and* Max Display \div Min Display > 5

Then:

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

If:

Min Display is > 0 *and* Max Display \div Min Display ≤ 5

Then:

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

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

Zero Adjustment:

If:

Min Display is ≤ 0 *or*

Min Display is > 0 *and* Max Display \div Min Display > 5

Then:

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

If:

Min Display is > 0 *and* Max Display \div Min Display ≤ 5

Then:

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

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

MAINTENANCE

Upon final installation of the Series DPML-4 LCD Digital Process Meters, no routine maintenance is required. A periodic check of the system calibration is recommended. 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). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return good authorization number before shipping.