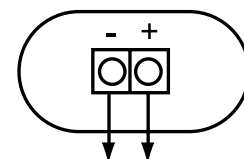
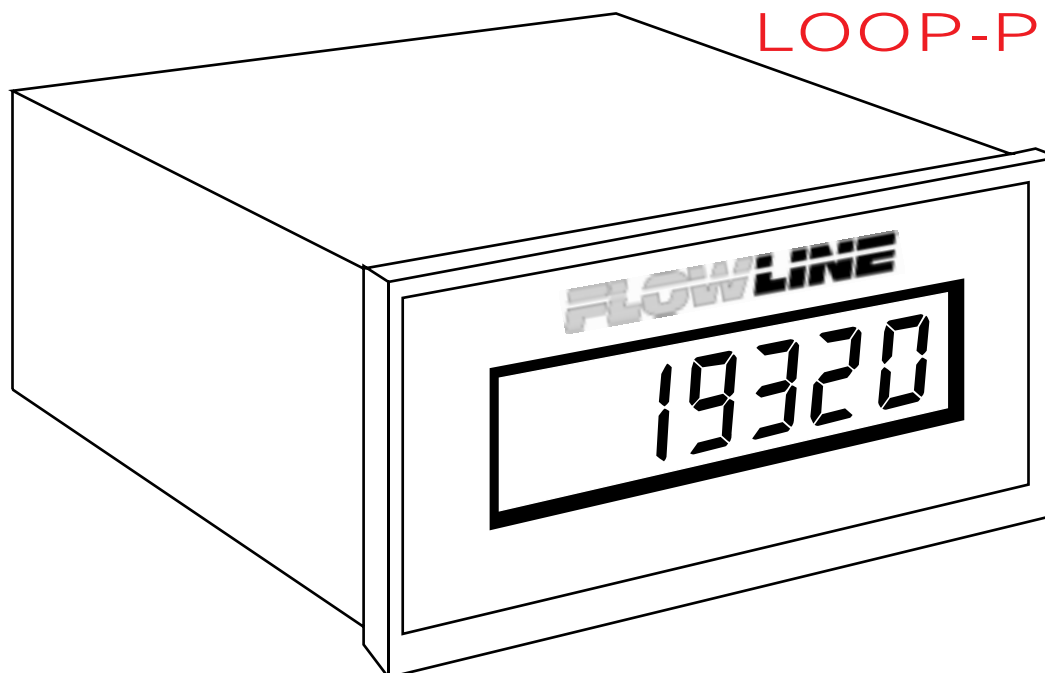


# DIGITAL PANEL METERS

## PROCESS CONTROL

### LI20

### 3<sup>1</sup>/<sub>2</sub> DIGIT LOOP-POWERED



The LI20 control loop readout is a "go anywhere" meter. First, there is its freedom from the AC lines. You may power the LI20 directly from the 4-20 mA loop. Its 1V drop makes the LI20 usable even in loops protected by safety barriers. Or you can flip a switch and power the LI20 from a low voltage DC source with transformer isolation between the DC power and the signal.

Also, you can put the LI20 anywhere because the large LCD display makes the LI20 easy to read in all kinds of lighting from bright sunlight to dark shade.

#### ORDERING GUIDE

**MODEL  
NUMBER  
LI20-1001**

**DESCRIPTION:  
Loop Powered  
Panel Meter**

#### SPECIFICATIONS

**DISPLAY:** Sharp, large, 0.5" (12.7mm), high LCD.  
±1999(0), (0) may be switched on to display to 19,990.

**INPUTS:** User Selectable, 4-20mA, 1-5 V

**CALIBRATION RANGE:** 4 mA, (1V) input: -500(0) to +500(0); 20 mA, (5V) input: between 20(0) to 2000(0) counts greater than 4 mA display.

**POWER:** Two modes field selectable; loop power 4 to 20 mA with maximum voltage drop of 1 V and separate DC supply, 5 to 25 VDC at 6 mA. Transformer isolation between signal and power inputs is 500 V in the separate supply mode.

**MAXIMUM INPUT CURRENT:** 30 mA, DC

**MAXIMUM VOLTAGE DROP:** 1 V at 20 mA

**ACCURACY:** ±0.1% of span, ± 1 count

**CONVERSION RATE:** 1 Conversion/sec.

**OPERATING TEMPERATURE RANGE:** 0° to +70°C  
(32° to +158°F)

**ENCLOSURE:** 1/8 DIN

**WARRANTY:** One-year parts and labor

**CONNECTIONS:** Removable screw terminal block

# Model LI20

## APPLICATION INFORMATION

### SETUP:

The LI20 may be powered by either of two methods: directly from the 4-20 mA loop or by a separate DC supply of between 5 and 25 VDC at 6 mA. Transformer isolation between signal and power inputs is 500V in the DC supply mode. Refer to diagrams at right for connections.

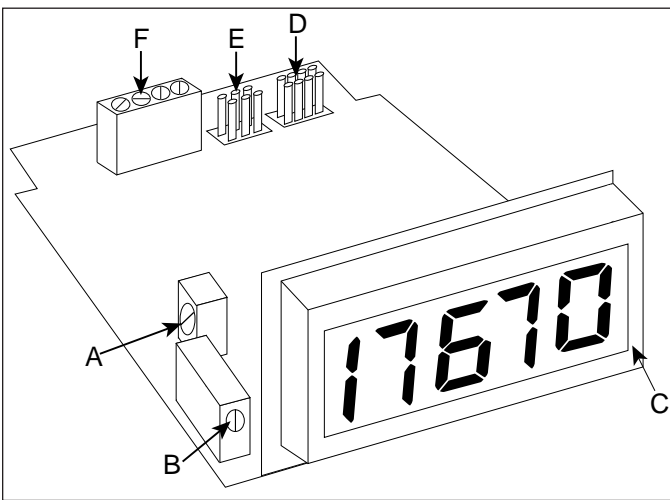
Decimal point or extra zero is activated by a pin array labeled Z 1 2 3 at the back of the instrument. Place the jumper over the "Z" pins to illuminate the extra zero, the "1" pins to illuminate a decimal point in the XXX.X position etc.

Input signal selection is made by a pin array labeled A B C at the back of the instrument. For a 4-20 mA control current input place jumpers over pins A B C. For 1-5 V input, remove all the jumpers, (to avoid losing the jumpers, place each jumper over 1 pin of pins A B C.)

### CALIBRATION:

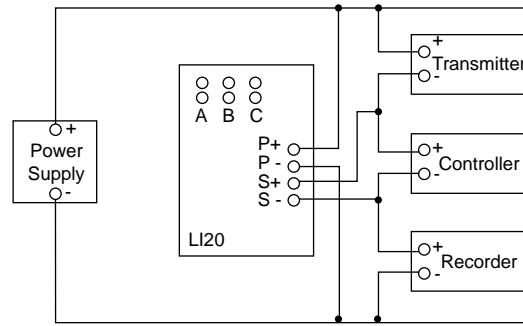
The LI20 may be calibrated in its case. The HI and LO controls are behind the faceplate with the HI control on the left and the LO control on the right. Remove the faceplate by inserting a stiff wire in the groove at the bottom edge of the bezel and prying off the faceplate. These controls are labeled on the PCB.

Apply 4 mA (1V) to the input and adjust the LO control for the desired reading. Then apply a signal between 16 and 20 mA (4 and 5V) and adjust the HI control for the desired reading. Complete the calibration by making any minor adjustments to the LO and HI displays.

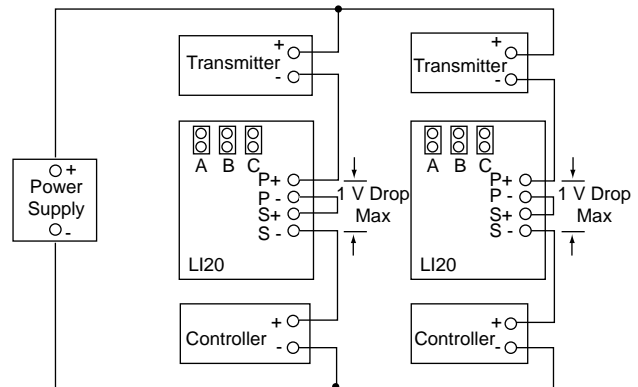


LI20

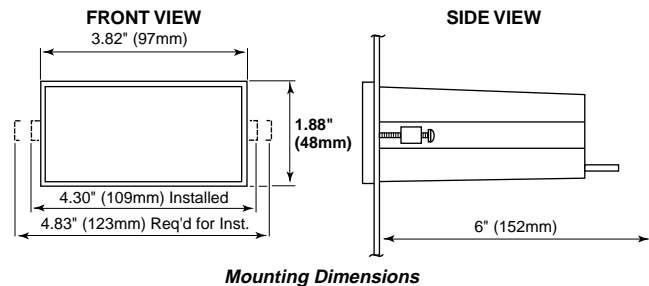
- A. Balanced control; (Factory adjusted only)
- B. HI calibration control
- C. LO calibration control
- D. Decimal point & extra zero pin array
- E. Input selection pin array
- F. Removable screw terminal block (supplied)



Circuit connection for LI20 monitoring loop current by measuring voltage across the controller input. LI20 powered by the system power supply. Power supply circuit (terminals P+ and P-) completely isolated from signal circuit (terminals S+ and S-). Here the LI20 adds no voltage drop to the loop.



Circuit connections for LI20 monitoring current loop and delivering its power from that loop.



Mounting Dimensions

### NOTES:

- A. Panel cutout required - 1.772" x 3.622" (45mm x 92mm) 1/8 DIM
- B. Panel thickness - .060" -.250" (1.52mm - 6.34mm)
- C. Allow 6 inches (152mm) behind panel
- D. Weight: 12 oz. (340 g)



LI20  
APPLICATION INFORMATION

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