

- * **LARGE 1 INCH DISPLAY**
- * **ENGINEERING UNIT READOUT**
- * **LOW 1.00 VDC DROP**
- * **BUILT-IN CALIBRATOR**
- * **OPTIONAL 24 VDC LOOP SUPPLY**



GENERAL DESCRIPTION

The Model LD-LPIX is a two-wire digital indicator that provides local process indication of a 4-20mA signal on a 3-1/2 digit liquid crystal display. The Indicator features 3-1/2, easy to read, 1 inch high active digits plus an optional inactive (dummy) zero. It is powered directly from the 4 to 20mA input loop, dropping less than 1 volt across the input terminals.

The LD-LPIX provides a digital readout directly proportional to the current input. It may be calibrated to read 0 to 100% for a 4 to 20mA input or to read directly in engineering units. Labels of commonly used engineering units such as °F, °C, GAL, PSIG, etc. are provided with each indicator.

Recalibration of the LD-LPIX is easily accomplished through the use of switches and trim pots. The span may be adjusted from 0 to 3998 counts in three switch selectable ranges and the zero offset adjusted from -1999 to +1999 counts also in the three switch selectable ranges. Fine adjustment of span and zero is made on two noninteractive 15 turn trim pots.

Another feature of the LD-LPIX is a nonactive (dummy) zero, which can be enabled or disabled by means of a DIP switch position. This allows display of values up to +19,990. One to four decimal point positions or no decimal point is also DIP switch selectable.

The LD-LPIX provides negative polarity indication, which appears when displaying ranges such as -300 to 1000 °F. The negative sign can also be disabled by means of the DIP switch. An additional feature of the LD-LPIX is the internal calibrator. The indicator can be field calibrated while installed in a working 4 to 20mA loop, simply by switching to the calibrate mode, adjusting the span and zero pots and switches, and then switching back to operate, all without disturbing the loop wiring. The indicator may also be calibrated using a conventional calibrator or by connecting a 1 to 1.5 volt D.C. power source (flashlight battery) across the input terminals and switching to the calibrate mode.

The LD-LPIX is housed in a copper free, cast aluminum, NEMA 4, enclosure with a corrosion resistant blue polyester powder coating. The enclosure is explosion proof and dust tight and Approved for use in Class I, Groups C & D, Class II, Groups E, F & G and Class III hazardous locations.

Loop Power Supply Option

At times it is required to provide power for a two wire, milliamp, field transmitter. Option -LPS provides a 24 VDC, 25 mA source that may be used to power the 4 to 20 mA loop.

SPECIFICATIONS

INPUT

- a. Range: 4 to 20mA
- b. Voltage Drop: 0.98V @ 20mA, 25 °C
- c. Forward current overrange: 100mA max.
- d. Reverse current: 100mA max.

PERFORMANCE

- a. Accuracy: +0.1% of span counts, +1 count
- b. Temperature effect (zero): +0.1 count/°C
- c. Temperature effect (span): +.01% of span count/°C
- d. Operating temperature: -30 to +70 °C
- e. Ripple rejection: less than 1 count with 1 mA peak-to-peak, 60 Hz ripple at input
- f. Sample rate: 2 per second

DISPLAY

- a. Type: 3-1/2 digit LCD, with dummy zero, 1" high
- b. Range: -1999 to 1999 counts (-19990 to 19990 display)
- c. Decimal point: four positions or absent, switch selectable
- d. Polarity sign: negative polarity indication or none, switch selectable
- e. Action: forward acting (count increases with current), normal calibration; reverse acting (count decrease with current)

CALIBRATION

- a. Span range: 0 to 3998 counts, 3 ranges switch selectable, fine adjustment on 15 turn trim pot, noninteractive with zero pot.
- b. Offset range: -1999 to +1999 counts, 3 ranges switch selectable, fine adjustment on 15 turn trim pot, noninteractive with span pot.
- c. Resolution: better than 1 count

ENCLOSURE

- a. Material: copper free, cast aluminum
- b. Finish: corrosion resistant blue polyester powder coating
- c. Ratings: explosion proof, dust tight, NEMA 4, Approved for use in Class I, Groups C & D, Class II, Groups E, F & G and Class III hazardous locations
- d. Weight: 7.5 lb

OPTION - LPS

- a. Power: 105 to 125 V, 50/60 Hz, 5 VA
- b. Output voltage: +24 VDC ±1 V
- c. Output current: 25 mA, Internally Limited
- d. Line Regulation: 0.004% per Volt Typ., 0.06% per Volt Max.
- e. Load Regulation: 0.004% Typ., 0.04% Max
- f. Ripple: 20 mV P-P, Max
- g. Temperature range: -40 to 85 degrees C
- h. Temperature effect: 0.008% per degrees C, Typ.

OPTION - BL

Add back lighting to the LD-LPI display. This option allows the meter to be easily viewed in low light conditions as well as in normal light conditions. The back lighting derives its power from the 4 to 20 mA loop and adds a 2 volt burden to the loop. The total input voltage drop for the LD-LPIX-BL is 3 volts at 20 mA.

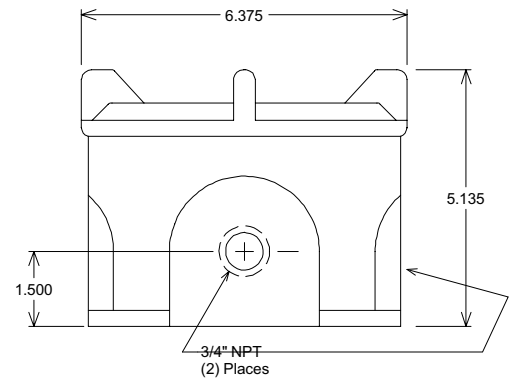
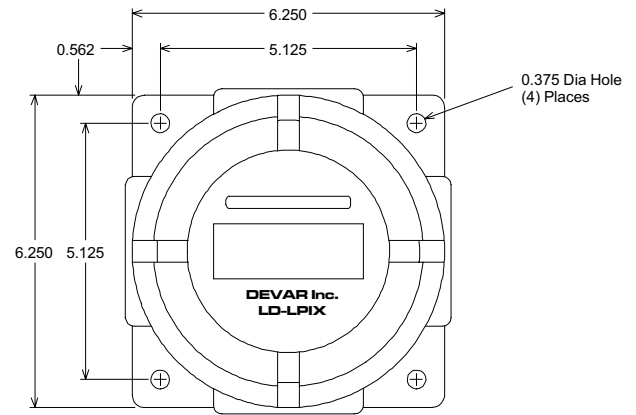


FIG. 1: GENERAL DIMENSIONS

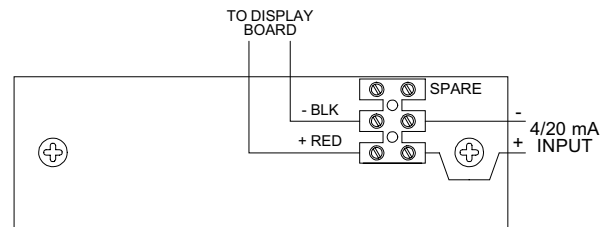


FIG. 2: FIELD WIRING

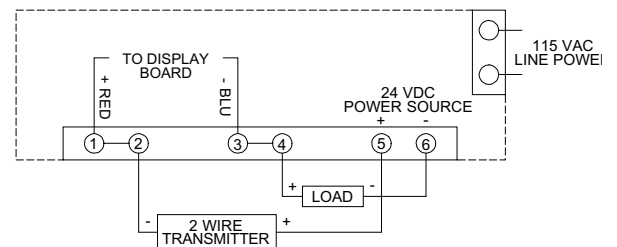


FIG. 3: FIELD WIRING FOR OPTION-LPS

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