

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



APPROVED

GENERAL DESCRIPTION

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

The LD-LPI 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. A selection of stick-on labels for commonly used engineering units such as GPM, PSI, °F, etc. is provided with each indicator.

Recalibration of the LD-LPI 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 **non-interactive** 15 turn trim pots.

Another feature of the LD-LPI is a non-active (dummy) zero, which can be turned on or off by means of a DIP switch setting. This allows the display of numbers such as 19,990. One to four decimal point positions or no decimal point is also DIP switch selectable. The LD-LPI provides negative polarity indication, which appears when displaying quantities such as -50 to 150°F. The negative sign can also be disabled by means of the DIP switch.



An additional feature of the LD-LPI 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. The indicator may also be calibrated on the bench by 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-LPI is housed in a rugged, indoor/outdoor NEMA 4X, polycarbonate housing. This housing is corrosion resistant and dust-tight, and will withstand direct water spray under hose pressure. Options available include a 1/2 inch NPT water-tight conduit hub, a water-tight panel mounting bezel, a bracket for 2 inch pipe mounting, a 3-inch snap-track mounting bracket, and a DIN rail mounting bracket.

The unit carries Intrinsically Safe Approval from Factory Mutual for Class I, Division 1, Groups A, B, C, & D.

Loop Power Supply Option

At times the need to provide power for an operating loop is required. Option -LPS provides a 24Vdc @ 25mA source that may be used to power a field transmitter.

SPECIFICATIONS MODEL LD-LPI

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): ±0.01% of span count/°C
- d. Operating temperature: -30 to +85°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 decreases 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, non-interactive with span pot.
- c. Resolution: better than 1 count

ENCLOSURE

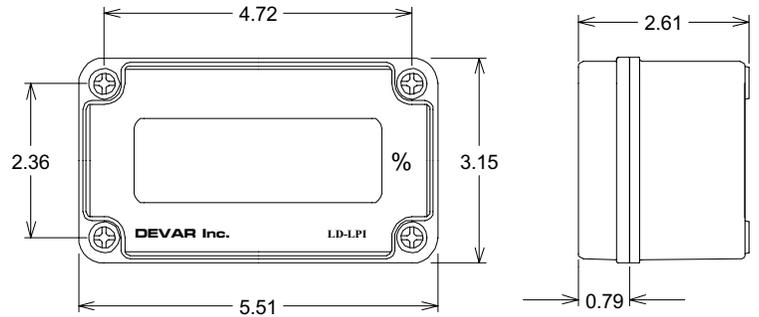
- a. Material: Polycarbonate
- b. Ratings: NEMA 4X, Flammability UL 94-5V
- c. Weight: 1 lb

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 Typical, 0.06% per Volt Max.
- e. Load Regulation: 0.004% Typical, 0.04% Max
- f. Ripple: 20 mV P-P, Max
- g. Temperature range: -40 to 85°C
- h. Temperature effect: 0.008% per °C, Typical

ORDERING INFORMATION

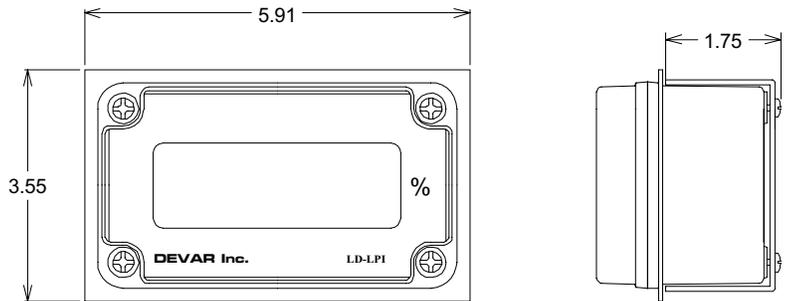
Specify Model No. LD-LPI (Option)
 Add desired Option(s) below
 -LPS Loop Power Supply
 -M36 Pipe Mounting Kit
 -M31D Din Rail Bracket
 -M31S SnapTrack Bracket
 -M42 Conduit Hub
 -M46 Panel Mount (NEMA 4)



GENERAL DIMENSIONS

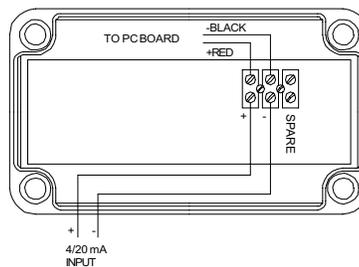
Notes:

1. Four mounting holes for #6 screws are located directly below the cover screws.
2. Access to the enclosure can be made by drilling, punching or sawing holes into the long sides of the enclosure. Locate center of access holes 7/8 of an inch from the back side of the enclosure.

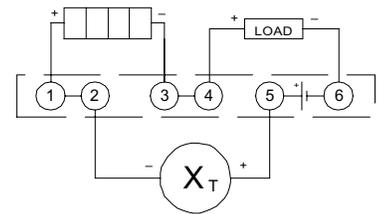


Panel Mount Dimensions

Panel Cutout: 5.45 × 3.07"



Field Wiring



Wiring/Option LD-LPI-LPS

DEVAR Inc.

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