

MODEL CXLdp DIFFERENTIAL PRESSURE TRANSDUCER (4-20mA) INSTALLATION & MAINTENANCE SHEET

ASHCROFT®

DESCRIPTION

The Ashcroft® Model CXLdp is a low differential pressure transmitter to be used on clean, dry, non-corrosive gases. It is available in two accuracy classes and its performance is traceable to the U. S. National Institute of Standards and Technology (NIST). The 8 or 4 located in the third position of the product code distinguishes a 0.8% from a 0.4% accuracy transmitter. Both unidirectional (e.g. 0 to +1.0 IW) or bi-directional (e.g. ±2.0 IW) models are available. A green LED located on the front of the transmitter indicates power and operational status. The LED light intensity increases as pressure increases.

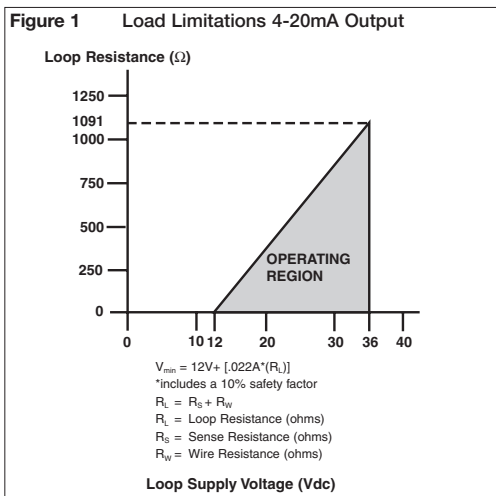
Specifications

Accuracy: ±0.8% F.S.* or ±0.128 mA,
±0.4% F.S. or ±0.064 mA

Output Signal: 4-20 mA, For Bidirectional Ranges 0 IW = 12 mA

Safe Overpressure: 15 psi

Supply Voltage: 12-36 VDC (no regulation required (see Figure 1))



Reverse Wiring Protected

Electrical Connection: unpluggable terminal block accepts 12-26 AWG

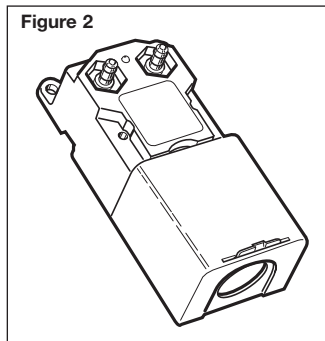
Operating Temperature: 0-160°F

Enclosure: NEMA 1 Fire-retardant ABS Meets UL 94-5VA

Weight: Approx. 2.5 oz.

Pressure Connection Options: 1/8" Brass Barbs or 1/8" NPT Female Brass

Optional: 1/2" conduit or plenum mounting bracket and cover available as separately ordered kit – part number 101A213-01. (see Figure 2)

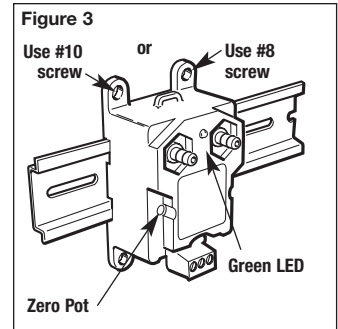


* F.S. pressure is equivalent to the span of the transmitter (16mA).

INSTALLATION

Mounting:

The transmitter can be mounted on a 35 mm DIN rail or with #8 or #10 screws using the 4 mounting holes provided. Torque limits on the mounting holes provided is 6 inch-pounds. (see Figure 3)



Electrical Wiring:

1. Remove the black terminal block on the front of the transmitter.
2. Following the markings on the transmitter label to identify the left, negative (-) and right, positive (+) terminals. (**Ignore the center terminal which is not used.**) Connect the power supply positive lead to the positive terminal on the plug. Connect the negative power supply lead to the negative terminal BCS 4-20 mA input. Last, connect the (-) negative terminal on the CXLdp to the (+) positive BCS input.
3. Firmly reinstall the terminal block plug to its mating connector.

Set Up:

The transmitters are calibrated at the factory in the vertical position. Mounting in the horizontal position can cause a zero shift of as much as ±1% F.S. in ranges below 1 IW dp. Any minor zero offset can be minimized using the zero adjust potentiometer located on the front, left side of the instrument.

To find true zero differential pressure, pneumatically connect the high and low pressure connections together using the tubing provided with the transmitter. The barbed connection accept 1/8" O.D. 1/8" I.D. tubing. (see Figure 4)

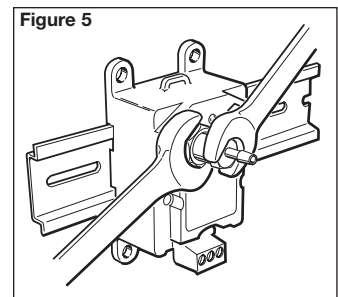
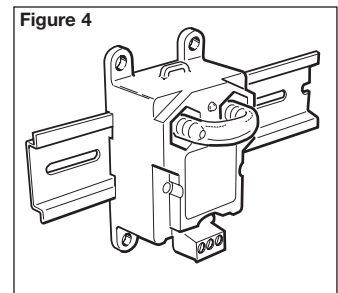
When 1/8" NPT female brass fittings are used, do not exceed 60 inch-pound torque force on female NPT fitting.

When connecting to the NPT fittings, do not apply torque to the CXLdp fitting. Use a 3/16" wrench to hold the CXLdp. (see Figure 5)

Zero potentiometer adjustment requires using a 3/32" or 2.5 mm slotted or phillips screwdriver. The tubing should remain in place until the transmitter is to be connected to the BCS tubing system.

Routine Maintenance:

The CXLdp is a very stable and reliable transmitter incorporating a proven, micro-machined silicon capacitive sensor and a new, state-of-the-art application specific integrated circuit (ASIC). All calibration and temperature compensation functions are done with a microprocessor and digital routines.



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To troubleshoot or verify performance, it is recommended to pneumatically connect the pressure ports to each other and establish a zero offset reading in the as-installed position. **Adjusting zero will not affect span calibration.**

Adjusting span should only be attempted when a high accuracy pressure standard and high quality electrical meter are able to be used.

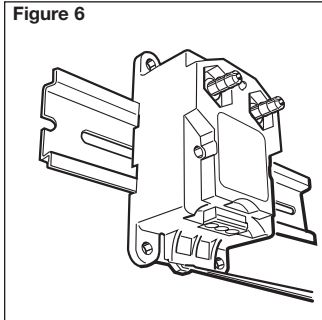
DIN Rail Transmitter Removal:

In order to remove the transmitter when it is installed on a DIN rail, it is necessary to first unplug the wiring terminal block from the transmitter.

Insert a small slotted screwdriver into the black plastic clip extending slightly below the transmitter case. (see Figure 6)

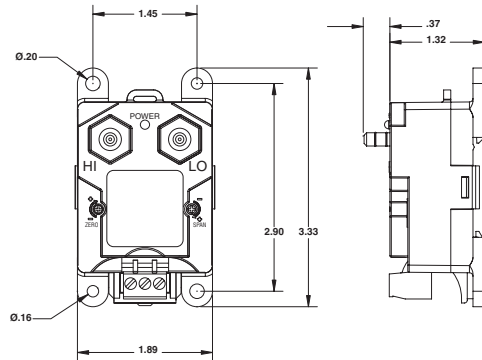
Next, raise the screwdriver handle up thereby forcing the spring clip down.

If questions or concerns need to be addressed, our low pressure Product Manager or Engineering Personnel can be contacted at (203) 378-8281 or visit our website at www.ashcroft.com.

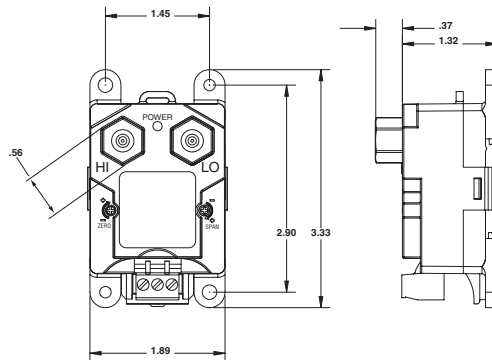


GENERAL DIMENSIONS FOR MODEL CXLdp (in inches)

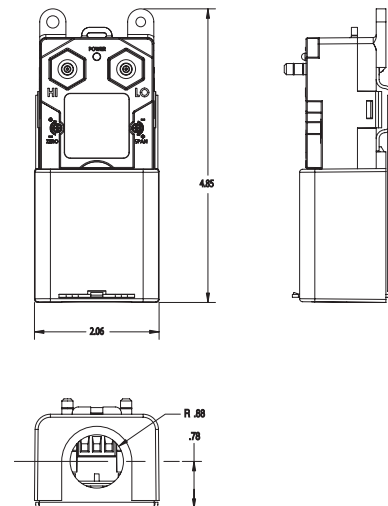
MB2 1/4" BARB FITTINGS



F01 1/8 NPT FEMALE FITTINGS



ASSEMBLED WITH 101A213-01 CONDUIT KIT



WIRING DIAGRAM FOR MODEL CXLdp

