

## Data Sheet

# CXLdp Differential Pressure Transducer

### FEATURES

- TruAccuracy™- Terminal Point Accuracy method includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors.
- Rugged ABS package capable of DIN rail or panel mounting
- LED power status indicator
- Detachable Euro style terminal block
- Pressure ranges available down to  $\pm 0.05$  in. H<sub>2</sub>O differential
- Unidirectional and Bidirectional ranges

### TYPICAL USES

- Fume Hood Control
- Building/Comfort Control System
- Building Energy Management Systems
- HVAC/R
- Critical Environments
- Fan Monitoring
- Duct Flow
- Clean Room
- Filter Monitoring

### PERFORMANCE SPECIFICATIONS

Reference Temperature:	70 °F $\pm 2$ °F (21 °C $\pm 1$ °C)
Accuracy:	$\pm 0.25\%$ , $\pm 0.4\%$ , $\pm 0.8\%$ of span ( <b>Terminal Point Method:</b> includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors)
Stability:	$\leq \pm 0.25\%$ of span/year at reference conditions
Media Compatibility:	Clean, dry and non-corrosive gas NOT FOR USE WITH LIQUIDS
Standard Response Time:	250 ms

### ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:	Storage:	-40 °F to 180 °F (-40 °C to 82 °C)
	Operating:	0 °F to 160 °F (-17 °C to 71 °C)
	Compensated:	35 °F to 130 °F (1.6 °C to 54 °C)
Thermal Coefficients:	Zero: $\pm 0.03\%$ of span/°F Span: $\pm 0.03\%$ of span/°F (From 70 °F reference temperature)	
Humidity Effects:	No performance effect at 10-95% R.H. noncondensing	
CE Marked:	Per DoC EMC Directive 2014/30/EU IEC/EN 61326-1: Edition 1.0 Industrial IEC/EN 61326-2-3: Edition 1.0 Annex BB Industrial RoHS: 2011/65/EU	



CXLdp  
Pressure Transducer



### KEY BENEFITS

- Broad temperature capability
- High performance ASIC based electronics
- Superior long-term stability and repeatability
- 3 year warranty

### FUNCTIONAL SPECIFICATIONS

Max. Static (Line) Pressure:	Proof:	Burst:
25 psi	15 psid	25 psid
Mounting Position Effect:	$\pm 1\%$ of span/g (Calibration in vertical position is STD.)	

### ELECTRICAL SPECIFICATIONS

Circuit Protection:	Reverse polarity and miswire protected	
Potentiometers:	Zero & Span: $\pm 5\%$ of span (externally accessible)	
Voltage Output:	Supply Voltage:	Supply Current:
4-20 mA (2 wire)	12-36 Vdc	21.5 mA
0-5 Vdc (3 wire)	11.5-36 Vdc or 24 Vac ( $\pm 20\%$ )	4.5 mA
0-10 Vdc (3 wire)	14-36 Vdc or 24 Vac ( $\pm 20\%$ )	6 mA

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### PHYSICAL SPECIFICATIONS

Pressure Connections:	¼ brass barbed fittings (male) ½ NPT Female brass
Electrical Connection:	Euro style pluggable terminal block accepts 12-26 gauge wire
Visual Indicator:	LED
Weight:	Approx. 2.5 oz
Mounting:	Threaded fastener and 35 mm DIN rail mount
Enclosure Rating:	NEMA 1, Fire-retardant ABS (meets UL94-5VA)

### WETTED MATERIAL

Media

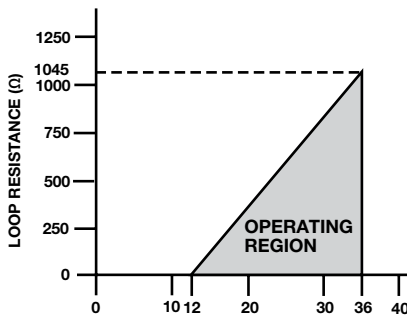
Clean, dry air/gases compatible with Aluminum, Titanium, PBT, Buna, Glass, Gold, Silicone Rubber, Silicon, Silicone RTV and Brass  
NOT FOR USE WITH LIQUIDS

### NON-WETTED

Housing

Fire-retardant ABS (Meets UL 94-5VA)

### LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



LOOP SUPPLY VOLTAGE (Vdc)

$$V_{min} = 12V + [0.022A * (R_L)]$$

\*includes a 10% safety factor

$$R_L = R_S + R_W$$

$R_L$  = Loop Resistance (ohms)

$R_S$  = Sense Resistance (ohms)

$R_W$  = Wire Resistance (ohms)

### TruAccuracy

### What Does It Mean?

Ashcroft's TruAccuracy™ specification is exclusively based on terminal point methodology instead of statistically derived schemes like 'best fit straight line'.

TruAccuracy™ means the Ashcroft CXLdp has ±0.25% of span accuracy out of the box. Zero and span setting errors are already included in the ±0.25% of span accuracy spec.

The CXLdp is ready to be installed with no additional calibration adjustments required.

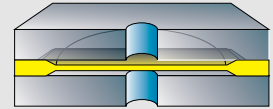
A unit from another manufacturer advertised as ±0.25% best fit straight line may actually be a ±1.25% to ±2.25% device. Using best fit straight line method, the accuracy spec does not include zero and span setting errors, which can be as much as ±1.00% each.

### Ashcroft® Si-Glas™ Sensor Technology

Featuring a highly reliable variable capacitance sensor using the patented Ashcroft® Si-Glas™ sensor. This ultra-thin single crystal diaphragm provides inherent sensor repeatability and stability.

### Sensor Cross Section

The silicon diaphragm sensor has no glues or other organics to contribute to drift or mechanical degradation over time.



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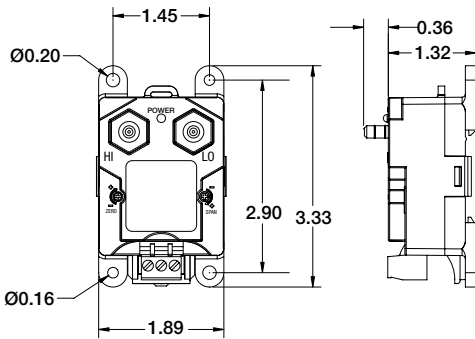
ORDERING CODE	Example:	CX4	MB2	42	P25IW	-XRH
<b>Model</b>						
CX3 - CXLdp Series, ±0.25% of span, ± 0.03% of span T.C. /°F						
CX4 - CXLdp Series, ±0.40% of span, ± 0.03% of span T.C. /°F		CX4				
CX8 - CXLdp Series, ±0.80% of span, ± 0.03% of span T.C. /°F						
<b>Pressure Connection</b>						
F01 - ½ NPT Female						
MB1 - Board level only, no housing (consult factory)						
MB2 - ¼ Barbed Male			MB2			
<b>Output Signal</b>						
10 - 0-10 Vdc (includes user selectable 0-5 Vdc output)						
42 - 4-20 mA				42		
<b>Pressure Range Differential</b>						
<b>Unidirectional Ranges</b>						
P1IW - 0.1 in. H <sub>2</sub> O						
P2IW - 0.20 in. H <sub>2</sub> O						
P25IW - 0.25 in. H <sub>2</sub> O					P25IW	
P4IW - 0.40 in. H <sub>2</sub> O						
P5IW - 0.50 in. H <sub>2</sub> O						
P6IW - 0.60 in. H <sub>2</sub> O						
P75IW - 0.75 in. H <sub>2</sub> O						
1IW - 1.00 in. H <sub>2</sub> O						
2IW - 2.00 in. H <sub>2</sub> O						
2P5IW - 2.50 in. H <sub>2</sub> O						
3IW - 3.00 in. H <sub>2</sub> O						
5IW - 5.00 in. H <sub>2</sub> O						
10IW - 10.00 in. H <sub>2</sub> O						
15IW - 15.00 in. H <sub>2</sub> O						
20IW - 20.00 in. H <sub>2</sub> O						
25IW - 25.00 in. H <sub>2</sub> O						
50IW - 50.00 in. H <sub>2</sub> O						
100IW - 100.00 in. H <sub>2</sub> O						
<b>Bi-directional Ranges</b>						
P05IWL - ±0.05 in. H <sub>2</sub> O						
P1IWL - ±0.10 in. H <sub>2</sub> O						
P25IWL - ±0.25 in. H <sub>2</sub> O						
P5IWL - ±0.50 in. H <sub>2</sub> O						
1IWL - ±1.00 in. H <sub>2</sub> O						
2IWL - ±2.00 in. H <sub>2</sub> O						
2P5IWL - ±2.50 in. H <sub>2</sub> O						
3IWL - ±3.00 in. H <sub>2</sub> O						
5IWL - ±5.00 in. H <sub>2</sub> O						
8IWL - ±8.00 in. H <sub>2</sub> O						
10IWL - ±10.00 in. H <sub>2</sub> O						
15IWL - ±15.00 in. H <sub>2</sub> O						
25IWL - ±25.00 in. H <sub>2</sub> O						
50IWL - ±50.00 in. H <sub>2</sub> O						
<b>Option (if including an option(s) must include an "X")</b>						
3P - 3 Point calibration data (for CX4 and CX8 only)						-X__
AH - Plenum/conduit kit packaged with CXLdp						
NH - Stainless steel tag						
NN - Paper tag						
RH - 9 pt. <a href="#">Traceable calibration certificate</a> (OPT. for CX4 and CX8 only, standard for CX3)						RH

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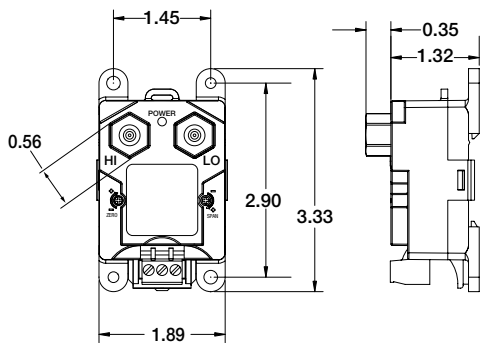
## DIMENSIONS

For reference only, consult Ashcroft for specific dimensional drawings.  
All dimensions are identified in inches.

### “MB2” ¼ BARBED FITTINGS



### “F01” ⅛ NPT FEMALE FITTINGS



### ASSEMBLED WITH 101A213-01 ½" PLENUM/CONDUIT KIT

