

XLdp Ultra-Low Differential Pressure Transmitter

FEATURES

- Current and voltage output signals available
- Custom ranges available
- Si-Glass™ technology enables precise measurement and control of very low pressures

TYPICAL USES

- HVAC/R
- Fume Hood Control
- Lab/Clean/Hospital Room Pressurization
- Medical Lung Function/Breathing Equipment
- Fan Tracking
- Filter Monitoring
- Ultra-Low Velocity Measurements
- Leak Detection
- Laminar Flow
- Building Energy Management/Comfort Control Systems

PERFORMANCE SPECIFICATIONS

Reference Temperature:	70°F ±2°F (21°C ±1°C)
Accuracy Class:	±0.25% of span, ±0.5% of span (Terminal Point Method: includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors)
Stability:	±0.25% of span/year at reference conditions
Media Compatibility:	Clean, dry and non-corrosive gas NOT FOR USE ON LIQUIDS
Standard Response Time:	250ms

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:	Storage:	-40°F to 180°F (-40°C to 82°C)
	Operating:	-20°F to 160°F (-29°C to 71°C)
	Compensated:	35°F to 135°F (1.7°C to 57°C)
Thermal Coefficients:	Zero & Span: ±0.015% of span/°F (From 70°F (21°C) reference temperature)	
Vibration Sweep:	<0.05% span/g temporary effect 0-60Hz	
Humidity Effects:	No performance effect at 10-95% R.H. noncondensing	
EMC:	Directive 2004/108/EC IEC/EN 61326-1: Edition 1.0 Industrial IEC/EN 61326-2-3: Edition 1.0 Annex BB Industrial	

FUNCTIONAL SPECIFICATIONS

Mounting Position Effect:	≥0.5 IWC: ±0.1% of span/g 0.25 IWC: ±0.25% of span/g 0.1 IWC: ±0.5% of span/g Calibrated horizontally (STD.), unless otherwise specified. Mounting Position Effect easily corrected with zero potentiometer	
Max. Static (Line) Pressure:	Proof:	Burst:
25 psi	15 psid	25 psid



XLdp
Pressure Transmitter

*See Approvals on page 2 regarding CE and RoHS certifications.



KEY BENEFITS

- Broad temperature capability
- Superior long-term stability and repeatability
- High overpressure protection
- On board voltage regulation allows use of low cost unregulated power supply
- 3 year warranty

ELECTRICAL SPECIFICATIONS

Circuit Protection:	Reverse Wiring Protected	
Potentiometers:	Externally accessible, non-interactive Zero: ±10% of span Span: ±10% of span	
Supply Current:	<6 mA for Voltage output	
Warm-up Time:	5sec Max. to meet stated specifications from initial Power-up	
Output Signal:	4-20 mA (2 wire) 1-5 Vdc (3 wire) 1-6 Vdc (3 wire)	12-36 Vdc 12-36 Vdc 12-36 Vdc
	Output signal is independent of power supply changes: 12-36 Vdc range without effect on output signal	

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PHYSICAL SPECIFICATIONS

Electrical Connection:	Screw Termination
Pressure Connections:	¼ barbed Male, ⅜ barbed Male and ¼ NPT Female
Weight:	14 oz
Environmental Rating:	NEMA 2

WETTED MATERIAL

Media:	Clean, dry air/gases compatible with Aluminum, Titanium, PBT, Buna, Silicon, Glass, Gold, Silicone Rubber, Silicone RTV and Stainless steel NOT FOT USE ON LIQUIDS
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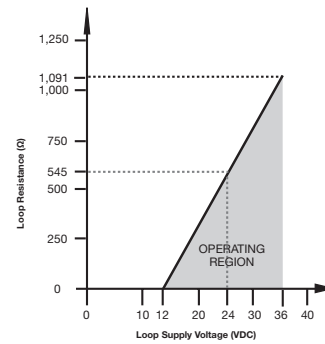
NON-WETTED MATERIAL

Housing:	300 Series Stainless steel / Lexan
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APPROVALS

*Only units with 4-20 mA output and the 'XCE' option are CE and ROHS compliant.
 CE Marked: Per DoC

LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



$$V_{loop} = 12V + (0.022A \times R_L)$$

$$R_L = R_s + R_w$$

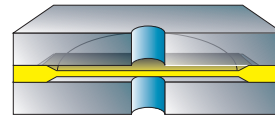
$$R_L = \text{Loop Resistance (ohms)}$$

$$R_s = \text{Sense Resistance (ohms)}$$

$$R_w = \text{Wire Resistance (ohms)}$$

Featuring a highly reliable variable capacitance sensor using the patented Ashcroft® Si-Glass™ 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:	XL3	F02	42	ST	2IW	-XNH
Model							
XL3 - XLdp Series, $\pm 0.25\%$ of span, $\pm 0.015\%$ of span T.C. /°F		XL3					
XL5 - XLdp Series, $\pm 0.5\%$ of span, $\pm 0.015\%$ of span T.C. /°F							
Pressure Connection							
F02 - ¼ NPT Female			F02				
MB1 - Board level/No case							
MB2 - ¼ Barbed Male							
MB8 - ½ Barbed Male							
Output Signal							
15 - 1-5 Vdc							
16 - 1-6 Vdc							
42 - 4-20 mA				42			
Electrical Termination							
ST - Screw Terminal					ST		
Pressure Range							
Unidirectional Ranges (differential)							
P1IW - 0.10 IWD							
P25IW - 0.25 IWD							
P5IW - 0.50 IWD							
P75IW - 0.75 IWD							
1IW - 1.00 IWD							
1P5IW - 1.50 IWD							
2IW - 2.00 IWD						2IW	
2P5IW - 2.50 IWD							
3IW - 3.00 IWD							
5IW - 5.00 IWD							
10IW - 10.00 IWD							
15IW - 15.00 IWD							
25IW - 25.00 IWD							
50IW - 50.00 IWD							
Bi-directional Ranges							
P05IWL - ± 0.05 IWD							
P1IWL - ± 0.10 IWD							
P25IWL - ± 0.25 IWD							
P5IWL - ± 0.50 IWD							
1IWL - ± 1.00 IWD							
2IWL - ± 2.00 IWD							
2P5IWL - ± 2.50 IWD							
3IWL - ± 3.00 IWD							
5IWL - ± 5.00 IWD							
10IWL - ± 10.00 IWD							
25IWL - ± 25.00 IWD							
50IWL - ± 50.00 IWD							
Option (if indicating an option(s) must include an "X")							
CE - CE Approval (with 4-20 mA only)							-X__
CL - Custom pressure range calibration							
NH - SS tag							NH
NN - Paper tag							
V9 - Calibrated vertically							
X1 - Fast response time							
X2 - Slow response time							

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DIMENSIONS

For reference only, consult Ashcroft for specific dimensional drawings

