ASHCROFT®
Trust the shield.®

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

XLdp
Pressure Transmitter

PERFORMANCE SPECIFICATIONS

Reference Temperature:	70°F ±2ºF (21°C ±1ºC)
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

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

RoHS COMPLIANT

CE

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) Output signal is independent of power supply changes: 12-36 Vdc range without effect on output signal	12-36 Vdc 12-36 Vdc 12-36 Vdc

ASHCROFT®
Trust the shield.®

XLdp Ultra-Low Differential Pressure Transmitter

PHYSICAL SPECIFICATIONS

Electrical Connection:	Screw Termination
Pressure Connections:	¼ barbed Male, ⅛ 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

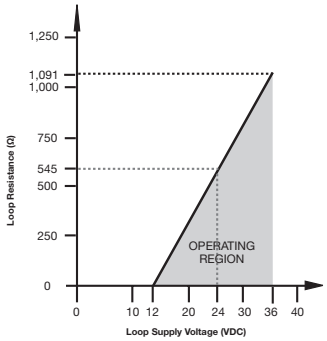
NON-WETTED MATERIAL

Housing:	300 Series Stainless steel / Lexan

APPROVALS

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

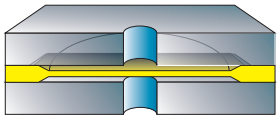
LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



V_{min} = 12V+ (0.022A x R_L)
R_L = R_s +R_w
R_L = Loop Resistance (ohms)
R_s = Sense Resistance (ohms)
R_w = 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

ASHCROFT®
Trust the shield.®

XLdp Ultra-Low Differential Pressure Transmitter

ORDERING CODE Example:	XL3	F02	42	ST	2IW	–XNH
Model						
XL3 - XLdp Series, ±0.25% of span, ±0.015% of span T.C. /°F	XL3					
XL5 - XLdp Series, ±0.5% of span, ±0.015% of span T.C. /°F						
Pressure Connection						
F02 - ¼ NPT Female		F02				
MB1 - Board level/No case						
MB2 - ¼ Barbed Male						
MB8 - ⅛ Barbed Male						
Output Signal						
15 - 1-5 Vdc						
16 - 1-6 Vdc						
42 - 4-20 mA			42			
Eletrical 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")						–X__
CE - CE Approval (with 4-20 mA only)						
CL - Custom pressure range calibration						
NH - SS tag						NH
NN - Paper tag						
V9 - Calibrated vertically						
X1 - Fast response time						
X2 - Slow response time						

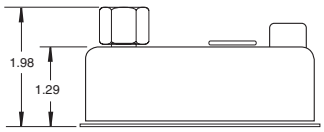
ASHCROFT®
Trust the shield.®

XLdp Ultra-Low Differential Pressure Transmitter

DIMENSIONS

For reference only, consult Ashcroft for specific dimensional drawings

F02



MB2