

Data Sheet

IXLdp Ultra-Low Differential Pressure Transmitter

FEATURES

- TruAccuracy™ - Terminal Point Accuracy method includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors.
- Current and voltage output signals available
- Custom ranges available
- FM approval for hazardous locations (optional)
- 5:1 turndown option
- Si-Glas™ technology enables precise measurement and control of very low pressures

TYPICAL USES

- HVAC
- Fume Hood Control
- Lab/Clean/Hospital Room Pressurization
- Laminar Flow
- Furnace/Stack Draft
- Leak Detection
- Pollution/Filtering Monitoring
- Medical Equipment
- Fan Tracking
- Filter Monitoring
- Velocity Measurements
- Building Energy Management/Comfort Control Systems

PERFORMANCE SPECIFICATIONS

Reference Temperature:	70°F ±2°F (21°C ±1°F)
Accuracy:	±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 WITH LIQUIDS

Standard Response Time: 250ms

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:	Storage:	-40°F to 210°F (-40°C to 99°C)
	Operating:	-20°F to 185°F (-29°C to 85°C)
	Operating (FM):	-4°F to 104°F (-20°C to 40°C)
	Compensated:	0°F to 160°F (-18°C to 71°C)

Thermal Coefficients
0.25% Accuracy: Zero: ±0.01% of span/°F
Span: ±0.01% of span/°F

Thermal Coefficients
0.5% Accuracy: Zero: ±0.02% of span/°F
Span: ±0.02% of span/°F

Vibration Sweep: <0.2% span/g temporary effect 10-130Hz

Humidity Effects: No performance effect at 0-95% R.H. noncondensing



IXLdp Pressure Transmitter



KEY BENEFITS

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

FUNCTIONAL SPECIFICATIONS

Mounting Position Effect: ≥1 in H₂O: ±0.1% of span/g
0.25 in H₂O to 0.5 in H₂O: ±0.5% of span/g
0.1 in H₂O: ±0.8% of span/g
Calibrated horizontally standard unless otherwise specified. Mounting position effect easily corrected with zero potentiometer

Max. Static (Line) Pressure:	Proof:	Burst:
	100 psi	20 psid 50 psid

ELECTRICAL SPECIFICATIONS

Circuit Protection: Reverse wiring protected

Potentiometers: Internal
Zero: ±10% of span
Span: ±10% of span

Supply Current: 2.6 mA typical for Voltage output

Warm-up Time: <1 second

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Output Signal: 4-20 mA (2-wire) 12-36 Vdc
 0-5 Vdc (3-wire) 12-36 Vdc
 1-5 Vdc (3-wire) 12-36 Vdc
 1-6 Vdc (3-wire) 12-36 Vdc
 ±2.5 Vdc (3-wire) 12-36 Vdc
 ±5 Vdc (3-wire) 12-36 Vdc
 Output signal is independent of power supply changes: 12-36 Vdc range without effect on output signal

PHYSICAL SPECIFICATIONS

Electrical Connection: ½" female electrical conduit connections isolated from the electronics. Separate access cover for terminal connections

Environmental Rating: NEMA 4X

Process Connection: ¼ NPT Female

HAZARDOUS SPECIFICATIONS

FM (OPT.) Approval: Intrinsically Safe: Class I, II, III Div. 1 Groups A, B, C, D, E, F and G when properly installed with an approved FM intrinsically safe barrier.
 Non-incendive: Class I, II and III Div. 2, Groups A, B, C, D, E, F and G (4-20 mA output only)
 The output signal is limited to 12-30 Vdc for FM version units.

Consult Factory for: Other pressure range, temperature compensation, packaging variations or response times

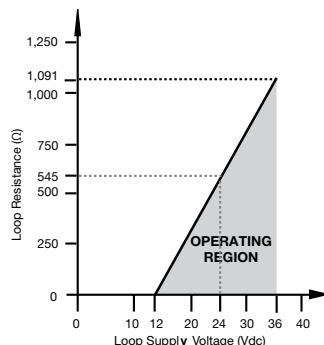
WETTED MATERIAL

Media: Clean, dry air/gases compatible with Aluminum, Titanium, PBT, Buna, Silicon, Glass, Gold, Silicone RTV and Stainless steel
 NOT FOR USE WITH LIQUIDS

NON-WETTED

Housing: 300 series SS

LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



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

$$R_L = R_s + R_w$$

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

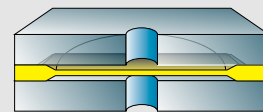
A unit from another manufacturer advertised as ±0.25% best fit straight line may actually be a ±1.25% to ±2.25% device. Using best fit straight line method, the accuracy spec does not include zero and span setting errors, which can be as much as ±1.00% each.

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:	IX3	F02	42	ST	2IW	-XNH
Model							
IX3 - IXLdp Series, $\pm 0.25\%$ of span, $\pm 0.01\%$ of span T.C. /°F		IX3					
IX5 - IXLdp Series, $\pm 0.5\%$ of span, $\pm 0.02\%$ of span T.C. /°F							
Pressure Connection							
F02 - 1/4 NPT Female			F02				
Output Signal							
05 - 0-5 Vdc							
15 - 1-5 Vdc							
16 - 1-6 Vdc							
25 - ± 2.5 Vdc							
42 - 4-20 mA				42			
50 - ± 5.0 Vdc							
Electrical Termination							
ST - Screw Terminal					ST		
Pressure Range							
Unidirectional Ranges (differential)							
P1IW - 0.10 in. H ₂ O							
P2IW - 0.20 in. H ₂ O							
P25IW - 0.25 in. H ₂ O							
P5IW - 0.50 in. H ₂ O							
1IW - 1.00 in. H ₂ O							
2IW - 2.00 in. H ₂ O						2IW	
2P5IW - 2.50 in. H ₂ O							
3IW - 3.00 in. H ₂ O							
5IW - 5.00 in. H ₂ O							
10IW - 10.00 in. H ₂ O							
15IW - 15.00 in. H ₂ O							
20IW - 20.00 in. H ₂ O							
25IW - 25.00 in. H ₂ O							
50IW - 50.00 in. H ₂ O							
100IW - 100.00 in. H ₂ O							
150IW - 150.00 in. H ₂ O							
200IW - 200.00 in. H ₂ O							
Bi-directional Ranges							
P05IWL - ± 0.05 in. H ₂ O							
P1IWL - ± 0.10 in. H ₂ O							
P2IWL - ± 0.20 in. H ₂ O							
P25IWL - ± 0.25 in. H ₂ O							
P5IWL - ± 0.50 in. H ₂ O							
1IWL - ± 1.00 in. H ₂ O							
2IWL - ± 2.00 in. H ₂ O							
2P5IWL - ± 2.50 in. H ₂ O							
3IWL - ± 3.00 in. H ₂ O							
5IWL - ± 5.00 in. H ₂ O							
10IWL - ± 10.00 in. H ₂ O							
15IWL - ± 15.00 in. H ₂ O							
20IWL - ± 20.00 in. H ₂ O							
25IWL - ± 25.00 in. H ₂ O							
50IWL - ± 50.00 in. H ₂ O							
100IWL - ± 100.00 in. H ₂ O							
Option (if indicating an option(s) must include an "X")							
1D - Variable dampening, 0-30 sec							-X__
41 - 5:1 Turndown							
CL - Custom pressure range calibration							
FM - FM Approval (with 4-20 mA output only. FM cannot be offered with options X1D or XX2)							
NH - Stainless steel tag							NH
NN - Paper tag							
X1 - Fast response time (8 msec)							
X2 - Slow response time (1 sec)							

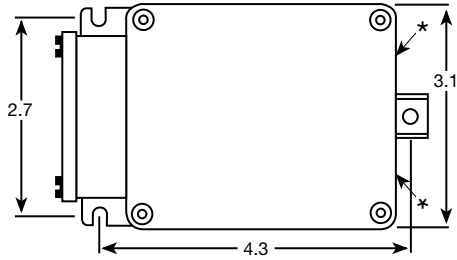
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DIMENSIONS

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

Front View



* - 1/4 NPT Female pressure connection

Side View

