Model RXLdp Ultra-Low Differential Pressure Transmitter

3 WARRANTY YEAR

LOOK FOR THIS AGENCY MARK ON OUR PRODUCTS

APPLICATIONS:

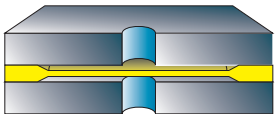
HVAC, fume hood control, lab/clean room pressurization, laminar flow, leak detection, medical, fan tracking, glove-box and velocity measurements

FEATURES:

- *0.1˝-50˝ H_2O pressure ranges*
- *CE approval option*
- *High overpressure protection*
- *Stainless steel & Lexan NEMA 1 construction*
- *Five types of output signals available*
- *Mounts inside standard 3½˝ electrical box*
- *Board level OEM versions available*
- *On-board voltage regulation allows use of lower cost unregulated power supply*

Featuring a highly reliable variable capacitance sensor using the patented Ashcroft® SiGlas™ 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.

The patented Si-Glas™ technology combines the high sensitivity of a variable capacitance transducer with the repeatability of a micro machined, ultra-thin single crystal silicon diaphragm.

The Ashcroft Si-Glas sensor enables precise measurement and control of very low pressure. Although the diaphragm deflects only a micron, the sensor is 100 times more sensitive to pressure than available silicon piezo-resistive pressure sensors. The Si-Glas sensor is composed of sputtered metals and glass molecularly bonded to silicon. There are no epoxies or other organics in the sensor to contribute to drift or mechanical degradation over time.

PERFORMANCE SPECIFICATIONS

Ref. Temperature: 70°F ±2°F (21°C ±1°C)

Accuracy Class (of Span): 1.0%

Includes non-linearity (Terminal Point Method), hysteresis, non-repeatability, zero offset and span setting errors.

Stability – Max. Change (Span/year): ±0.5 %

Standard Ranges (Inches W.C.)

Unidirectional Ranges:

Differential or Gauge

0/0.10	0/1.00	0/3.00	0/50.00
0/0.25	0/1.50	0/5.00	
0/0.50	0/2.00	0/10.0	
0/0.75	0/2.50	0/25.0	

Bidirectional Ranges:

Compound

±0.10	±1.00	±10.00
±0.25	±2.50	±25.00
±0.50	±5.00	±50.00

Custom Ranges: Special range calibration, (XCL) – Consult factory

Response Time Standard: 250ms (factory set) (Consult factory for dampening options)

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:

Storage:	–40 to 180°F
Operating:	0 to 160°F

(10-95% R.H. noncondensing)

Compensated Range: 40 to 125°F

Thermal Coefficients:

ZERO	±0.025% Span/°F
SPAN	±0.025% Span/°F

Vibration Sweep: Less than ±0.05%F.S. temporary effect with 5 g's 0-60Hz

EMC: CE model compliant to EN61326: 1997 Annex A. Harmonized heavy industrial transmitter specification

FUNCTIONAL SPECIFICATIONS

Overpressure Limits:

Proof	15 psid
Burst	25 psid
Max. Static Line Pressure:	25 psi

Mounting Position Effect:

0.5˝ W.C. and higher	0.1% Span/g
Below 0.5˝ W.C.	0.25% Span/g

Note: Calibrated horizontally standard, unless otherwise specified. Mounting Position Effect easily corrected with zero potentiometer.

ELECTRICAL SPECIFICATIONS

Output Signal:	**Power:**
4-20 mA* (2 wire)	12-36Vdc
0-5 Vdc (3 wire)	12-36Vdc
1-5 Vdc (3 wire)	12-36Vdc
1-6 Vdc (3 wire)	12-36Vdc
0-10 Vdc (3 wire)	12-36Vdc

*Optional CE versions available

Output signal is independent of power supply changes:

12-36 Vdc range without effect on output signal

Reverse Wiring Protected

Zero Span Potentiometers: Externally accessible; non-interactive

ZERO	±5% Span
SPAN	±3% Span

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ELECTRICAL SPECIFICATIONS (cont.)

Supply Current: <6mA for voltage output

Warm-up Time:
Five seconds max. to meet stated specifications

PHYSICAL SPECIFICATIONS

Pressure Connections:
Stainless steel ⅛ NPF, ¼˝ and ⅛˝ barbed connection

Electrical Connections: Terminal strip

Weight: 4.5 oz, NEMA 1 Case

MATERIALS:

Case/Cap: Stainless steel/Lexan

Media: Clean, dry and noncorrosive gas (consult factory for use on other media)
NOT FOR USE ON LIQUIDS

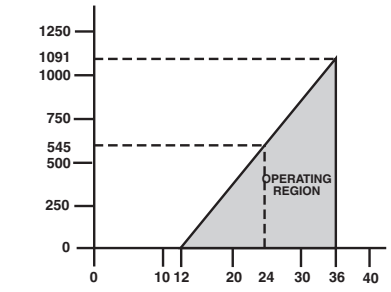
OPTIONS

- (XRK) Back plate adapter
- (XRH) Calibration report
- (XCL) Custom calibration
- (XZE) CE compliant 4-20mA only

NOTES:

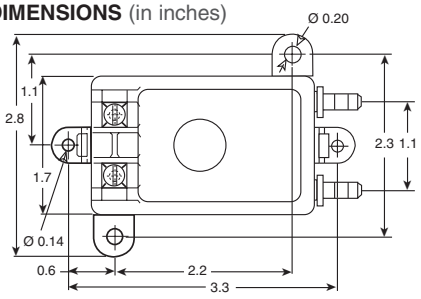
- Consult factory on other pressure range, temperature compensation, packagingvariations or response times available

Load Limitations 4-20mA Output

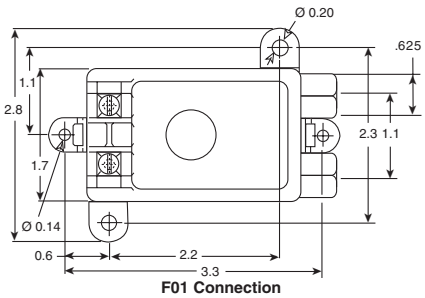


LOOP SUPPLY VOLTAGE (VDC)
V_{min} = 12V+ [.022A*(R_L)]
*includes a 10% safety factor
$R_L = R_S + R_W$
R_L = Loop Resistance (ohms)
R_S = Sense Resistance (ohms)
R_W = Wire Resistance (ohms)

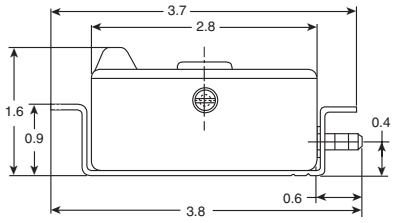
DIMENSIONS (in inches)



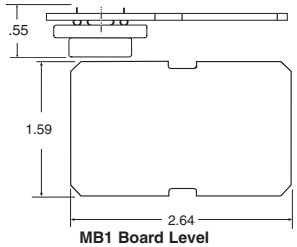
MB2 or MB8 Connection



F01 Connection



MB2 or MB8 Connection



MB1 Board Level

How To Order

R X	7			S T			X
Type Configuration (RXLdp)	**Accuracy/TC** (7) 1.00%, ±0.025%/°F	**Pressure Connection** (MB2) ¼ Barbed Male (MB8) ⅛ Barbed Male (MB1) Board Level/No Case (F01) ⅛ NPT Female	**Output Signal** (05) 0-5 Vdc (10) 0-10 Vdc (15) 1-5 Vdc (16) 1-6 Vdc (42) 4-20mA	**Electrical " Termination** (ST) Electric Terminal	**Pressure Range** Diff. or Gauge: (P1IW) 0.10˝W.C. (P25IW) 0.25˝W.C. (P5IW) 0.50˝W.C. (P75IW) 0.75˝W.C. (1IW) 1.00˝W.C. (1P5IW) 1.50˝W.C. (2IW) 2.00˝W.C. (2P5IW) 2.50˝W.C. (3IW) 3.00˝W.C. (5IW) 5.00˝W.C. (10IW) 10.00˝W.C. (25IW) 25.00˝W.C. (50IW) 50.00˝W.C. Compound: (P1IWL) ±0.10˝W.C. (P25IWL) ±0.25˝W.C. (P5IWL) ±0.50˝W.C. (1IWL) ±1.00˝W.C. (2P5IWL) ±2.50˝W.C. (5IWL) ±5.00˝W.C. (10IWL) ±10.00˝W.C. (25IWL) ±25.00˝W.C. (50IWL) ±50.00˝W.C.	**Optional X-Variation** **(XRK)** Back Plate Adapter **(XRH)** 9pt Calibration Report **(XZE)** CE Approval Option (4–20mA Output) **(XCL)** Custom calibration

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