

## RXLdp Ultra-Low Differential Pressure Transmitter

### FEATURES

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

### TYPICAL USES

- HVAC/R
- Fume Hood Control
- Clean Room/Lab Pressurization
- Laminar Flow
- Leak Detection
- Medical
- Fan Tracking
- Glovebox and Velocity Measurements

### PERFORMANCE SPECIFICATIONS

|                         |  |
|-------------------------|--|
| Reference Temperature:  | 70°F ±2°F (21°C ±1°F)  |
| Accuracy Class:         | ±1.0% of span<br>(Terminal Point Method: includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors) |
| Stability:              | ±0.5% of span/year at reference conditions   |
| Media Compatibility:    | Clean, dry and non-corrosive gas<br>NOT FOR USE ON LIQUIDS   |
| Standard Response Time: | 250ms  |

### ENVIRONMENTAL SPECIFICATIONS

|                     |  |
|---------------------|--|
| Temperature Limits: | Storage: -40°F to 180°F (-40°C to 82°C)<br>Operating: 0°F to 160°F (-18°C to 70°C)<br>Compensated: 40°F to 125°F (4.4°C to 52°C) |
|---------------------|--|

Thermal Coefficients: Zero and Span: ±0.025% 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: CE model compliant to EN61326: 1997 Annex A. Harmonized heavy industrial transmitter specification

### FUNCTIONAL SPECIFICATIONS

Mounting Position Effect: ≥0.5 IWC: ±0.1% of span/g  
<0.5 IWC: ±0.25% 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 |



**RXLdp**  
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<br>Zero: ±5% of span<br>Span: ±3% 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)<br>0-5 Vdc (3 wire)<br>1-5 Vdc (3 wire)<br>1-6 Vdc (3 wire)<br>0-10 Vdc (3 wire) | 12-36 Vdc<br>12-36 Vdc<br>12-36 Vdc<br>12-36 Vdc<br>12-36 Vdc |
| Output signal is independent of power supply changes: 12-36 Vdc range without effect on output signal |   |   |

## RXLdp Ultra-Low Differential Pressure Transmitter

### PHYSICAL SPECIFICATIONS

Electrical Connection: Screw Termination

Weight: 4.5 oz

Environmental Rating: NEMA 1

Pressure Connections: 1/8 NPT Female, 1/4 and 1/8 barbed Male

### WETTED MATERIAL

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

### NON-WETTED MATERIAL

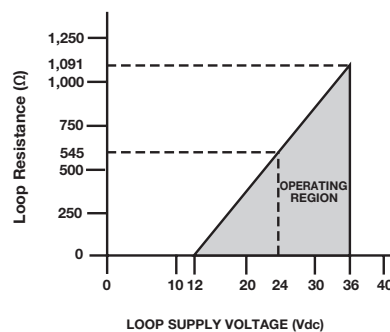
Housing: Stainless Steel/Lexan

### 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



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

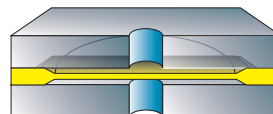
\*Includes a 10% safety factor

$$R_L = R_s + R_w$$

$R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

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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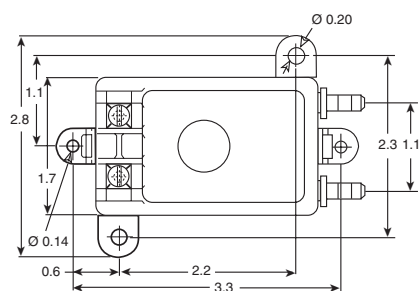
| ORDERING CODE  | Example: | RX7 | F01 | 42 | ST | 2IW | -XNH |
|--|----------|-----|-----|----|----|-----|------|
| <b>Model</b>   |          |     |     |    |    |     |      |
| RX7 - RXLdp Series, $\pm 1.00\%$ of span, $\pm 0.025\%$ of span T.C. /°F |          | RX7 |     |    |    |     |      |
| <b>Pressure Connection</b>   |          |     |     |    |    |     |      |
| F01 - 1/8" NPT Female  |          |     | F01 |    |    |     |      |
| MB1 - Board level/No case  |          |     |     |    |    |     |      |
| MB2 - 1/4" Barbed Male   |          |     |     |    |    |     |      |
| MB8 - 1/8" Barbed Male   |          |     |     |    |    |     |      |
| <b>Output Signal</b>   |          |     |     |    |    |     |      |
| 05 - 0-5 Vdc   |          |     |     |    |    |     |      |
| 10 - 0-10 Vdc  |          |     |     |    |    |     |      |
| 15 - 1-5 Vdc   |          |     |     |    |    |     |      |
| 16 - 1-6 Vdc   |          |     |     |    |    |     |      |
| 42 - 4-20 mA   |          |     |     | 42 |    |     |      |
| <b>Electrical Termination</b>  |          |     |     |    |    |     |      |
| ST - Screw Terminal  |          |     |     |    | ST |     |      |
| <b>Pressure Range</b>  |          |     |     |    |    |     |      |
| <b>Unidirectional Ranges (differential)</b>                              |          |     |     |    |    |     |      |
| 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   |          |     |     |    |    |     |      |
| 25IW - 25.00 IWD   |          |     |     |    |    |     |      |
| 50IW - 50.00 IWD   |          |     |     |    |    |     |      |
| <b>Bi-directional Ranges</b>   |          |     |     |    |    |     |      |
| P05IWL - $\pm 0.05$ IWD  |          |     |     |    |    |     |      |
| P1IWL - $\pm 0.10$ IWD   |          |     |     |    |    |     |      |
| P25IWL - $\pm 0.25$ IWD  |          |     |     |    |    |     |      |
| P5IWL - $\pm 0.50$ IWD   |          |     |     |    |    |     |      |
| 1IWL - $\pm 1.00$ IWD  |          |     |     |    |    |     |      |
| 2IWL - $\pm 2.00$ IWD  |          |     |     |    |    |     |      |
| 2P5IWL - $\pm 2.50$ IWD  |          |     |     |    |    |     |      |
| 5IWL - $\pm 5.00$ IWD  |          |     |     |    |    |     |      |
| 10IWL - $\pm 10.00$ IWD  |          |     |     |    |    |     |      |
| 25IWL - $\pm 25.00$ IWD  |          |     |     |    |    |     |      |
| 50IWL - $\pm 50.00$ IWD  |          |     |     |    |    |     |      |
| <b>Option (if indicating an option(s) must include an "X")</b>           |          |     |     |    |    |     |      |
| CE - CE Approval (with 4-20 mA only)                                     |          |     |     |    |    |     | -X__ |
| CL - Custom pressure range calibration                                   |          |     |     |    |    |     |      |
| NH - SS tag  |          |     |     |    |    |     | NH   |
| NN - Paper tag   |          |     |     |    |    |     |      |
| RH - 9 pt. NIST Traceable calibration report                             |          |     |     |    |    |     |      |
| RK - Back plate adapter  |          |     |     |    |    |     |      |
| V9 - Vertical Calibration  |          |     |     |    |    |     |      |
| X1 - Fast response time  |          |     |     |    |    |     |      |
| X2 - Slow response time  |          |     |     |    |    |     |      |

## RXLdp Ultra-Low Differential Pressure Transmitter

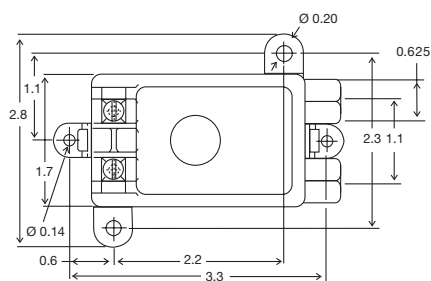
### DIMENSIONS

For reference only, consult Ashcroft for specific dimensional drawings

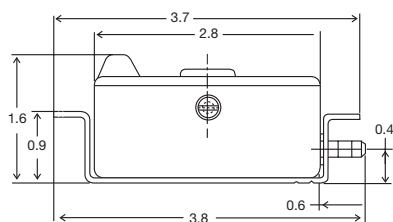
#### MB2 or MB8 Connection



#### F01 Connection



#### MB2 or MB8 Connection



#### MB1 Board Level

