

Data Sheet

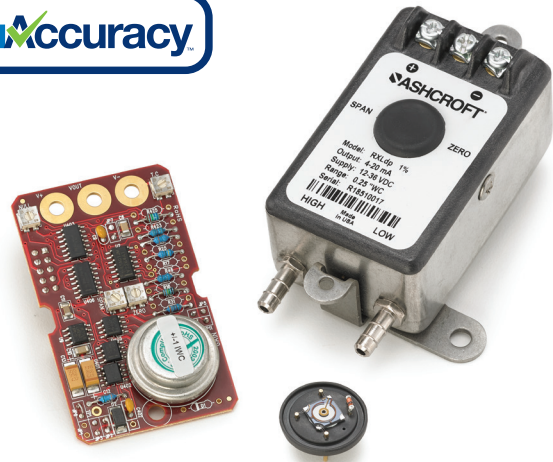
RXLdp Ultra-Low Differential Pressure Transducer

FEATURES

- Current and voltage output signals available
- Custom ranges available
- Board level OEM versions available
- Si-Glas™ 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



RXLdp
Pressure Transducer

PERFORMANCE SPECIFICATIONS

Reference Temperature:	70 °F ±2 °F (21 °C ±1 °F)
Accuracy Class:	±1.0% of span (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 NOT FOR USE ON LIQUIDS
Standard Response Time:	250 ms

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:	Storage: -40 °F to 180 °F (-40 °C to 82 °C) Operating: 0 °F to 160 °F (-18 °C to 70 °C) Compensated: 40 °F to 125 °F (4.4 °C to 52 °C)
Thermal Coefficients:	Zero: ±0.025% of span/°F Span: ±0.025% of span/°F (from 70 °F/21 °C reference temperature)
Vibration Sweep:	<0.05% span/g temporary effect 0-60 Hz
Humidity Effects:	No performance effect at 10-95% R.H. noncondensing
EMC:	CE model compliant to EN61326:1997 Annex A. Harmonized heavy industrial transducer 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
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*See Approvals on page 2 regarding CE, UKCA 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

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

ELECTRICAL SPECIFICATIONS

Circuit Protection:	Reverse Wiring Protected
Potentiometers:	Externally accessible, non-interactive Zero: ±5% of span Span: ±3% of span
Supply Current:	<6 mA for Voltage output
Warm-up Time:	5sec (Max.) to meet stated specifications from initial Power-up

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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
	0-10 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:	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

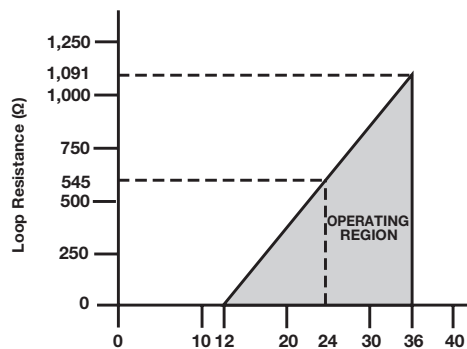
NON-WETTED MATERIAL

Housing: Stainless steel/Lexan®

APPROVALS:

*Only units with 4-20 mA output and a housing (MB1 = no housing) are available with the 'XCE' option and are CE, UKCA and ROHS compliant. CE Marked: Per DoC

LOAD LIMITATIONS 4-20 mA OUTPUT



LOOP SUPPLY VOLTAGE (Vdc)

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

*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)

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 RXLdp has ±1.00% of span accuracy out of the box. Zero and span setting errors are already included in the ±1.00% of span accuracy spec.

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

A unit from another manufacturer advertised as ±1.00% best fit straight line may actually be a ±2.00% to ±3.00% 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:	RX7	F01	42	ST	2IW	-XNH
Model							
RX7 - RXLdp Series, ±1.00% of span, ±0.025% of span T.C. /°F		RX7					
Pressure Connection							
F01 - 1/8 NPT Female			F01				
MB1 - Board level/No case							
MB2 - 1/4 Barbed male							
MB8 - 1/8 Barbed male							
Output Signal							
05 - 0-5 Vdc							
10 - 0-10 Vdc							
15 - 1-5 Vdc							
16 - 1-6 Vdc							
42 - 4-20 mA				42			
Electrical Termination							
ST - Screw Terminal					ST		
Pressure Range (Differential)							
Unidirectional Ranges							
P1IW - 0.10 in. H ₂ O							
P25IW - 0.25 in. H ₂ O							
P5IW - 0.50 in. H ₂ O							
P75IW - 0.75 in. H ₂ O							
1IW - 1.00 in. H ₂ O							
1P5IW - 1.50 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							
25IW - 25.00 in. H ₂ O							
50IW - 50.00 in. H ₂ O							
Bi-directional Ranges							
P05IWL - ±0.05 in. H ₂ O							
P1IWL - ±0.10 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							
5IWL - ±5.00 in. H ₂ O							
10IWL - ±10.00 in. H ₂ O							
25IWL - ±25.00 in. H ₂ O							
50IWL - ±50.00 in. H ₂ O							
Option (if indicating an option(s) must include an "X")							
CE - CE/UKCA Approval (with 4-20 mA only)							-X__
CL - Custom pressure range calibration							
NH - Stainless steel tag							NH
NN - Paper tag							
RH - 9 pt. Traceable calibration report							
RK - Back plate adapter							
V9 - Vertical calibration							
X1 - Fast response time							
X2 - Slow response time							

All specifications are subject to change without notice. All sales subject to standard terms and conditions.

Ashcroft®, Si-Glas™, TruAccuracy™, Trust the Shield® are trademarks of Ashcroft Inc.

The following non-Ashcroft trademarks are the property of their respective owners: Lexan®

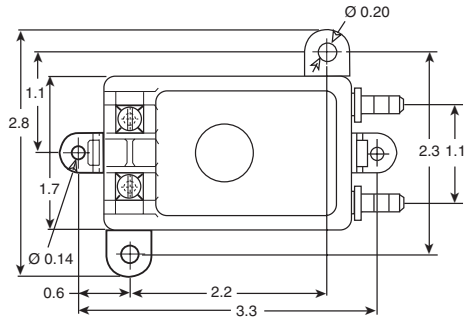
For more information, see [Ashcroft Brands & Trademarks](#) ©2022 Ashcroft Inc. RXLdp_transducer_ds_RevE_10-21-22

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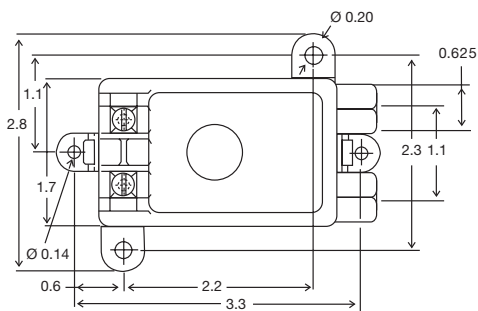
DIMENSIONS

For reference only, consult Ashcroft for specific dimensional drawings

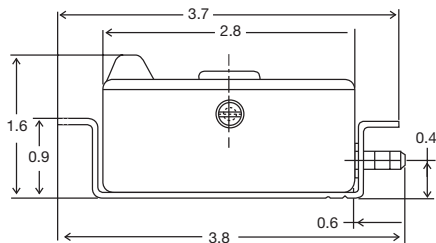
MB2 or MB8 Connection



F01 Connection



MB2 or MB8 Connection



MB1 Board Level

