ASHCROFT®

Reduced Cost RXLdp Ultra-Low Variable Capacitance Transducer/Transmitter

APPLICATIONS:
HVAC, fume hood control, lab/clean room pressurization, laminar flow, furnace/stack draft, leak detection, medical, fan tracking, glovebox and velocity measurements

BENEFITS & FEATURES:
- ***0.1˝-50˝-H_2O pressure ranges***
- ***Certified 1% accuracy***
- ***CE approval***
- ***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, non-precise, unregulated power supply***

The Ashcroft® RXLdp transmitter introduces a variable-capacitance sensor using a glass-clad silicon chip. The patented Si-Glas™ technology combines the inherent 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 ultra-thin silicon 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 CHARACTERISTICS

Accuracy Class (F.S.): 1%

Non-linearity	
Terminal point*	±0.8%
Best fit straight line (BFSL)	±0.6%
Hysteresis	±0.05%
Non-repeatability	±0.10%

*Includes Hysteresis

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

Standard Ranges (Inches W.C.)

Unidirectional Ranges:

Differential or Gage

0/0.1	0/1.0	0/3.0	0/50.0
0/0.25	0/1.5	0/5.0	
0/0.5	0/2.0	0/10.0	
0/0.75	0/2.5	0/25.0	

Bidirectional Ranges:

Compound

±0.05	±0.5	±5.0
±0.1	±1.0	±10.0
±0.25	±2.5	±25.0

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

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

ENVIRONMENTAL CHARACTERISTICS

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%F.S./°F
SPAN	±0.025%F.S./°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 CHARACTERISTICS

Overpressure Limits:

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

Mounting Position Effect:

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

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

ELECTRICAL SPECIFICATIONS

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

*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%F.S.
SPAN	±3%F.S.

Supply Current: <6mA for voltage output

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

PHYSICAL CHARACTERISTICS

Pressure Connections:
Stainless steel 1/8 NPF, 1/4˝ and 1/8˝ 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
  Follow part number with XRK, XCL or XRH when ordering, additional charge, see price list
- (XCE) CE compliant 4-20mA only

NOTES:

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

TO ORDER THIS TYPE RXLdp TRANSDUCER/TRANSMITTER:

R	X	7						S	T										

Select:

1. **Type Configuration (RXLdp)**
2. **Accuracy/TC**
   (7) 1.0%, ±0.025%/°F
3. **Pressure Connection**
   (MB2) 1/4 Barbed **(MB1)** No Case OEM Option **(MB8)** 1/8 Barbed
4. **Output Signal**
   (05) 0/5 Vdc **(10)** 0/10 Vdc **(15)** 1/5 Vdc **(16)** 1/6 Vdc **(42)** 4-20mA
5. **Output Connection**
   (ST) Screw Terminal
6. **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)** 1.5˝W.C. **(2IW)** 2.00˝W.C. **(2P5IW)** 2.50˝W.C. **(2IW)** 2.00˝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: (P1WL) ±0.10˝W.C. **(P25IWL)** ±0.25˝W.C. **(P5IWL)** ±0.5˝W.C. **(1IWL)** ±1.0˝W.C. **(2P5IWL)** ±2.5˝W.C. **(5IWL)** ±5.00˝W.C. **(10IWL)** ±10.00˝W.C. **(25IWL)** ±25.00˝W.C.
7. **Optional X-Variation**
   (XRK) Back Plate Adapter **(XRH)** Calibration Report **(XCE)** CE Approval Option (Includes all options in list)

Consult factory for guidance in product selection
Phone (203) 385-0217, Fax (203) 385-0602 or
visit our web site at www.ashcroft.com

DRESSER Instruments