

† Patent Pending

APPLICATIONS:

A new Ashcroft pressure transducer to meet demanding requirements in applications involving:

- Off-road equipment
- Construction machinery
- Compressor control
- HVAC and refrigeration
- Agricultural implements
- Process automation and control
- Hydraulic and pneumatic sensing
- Pump monitoring

Important features include:

- 1% total error band accuracy^{††}
- Broad temperature capability
- All-welded pressure construction
- High EMI/RFI rating
- Ranges 30 psi through 20,000 psi
- Housing IP67 rating
- Diagnostic rails
- Polysilicon thin film sensor

†† Tighter accuracy performance available, consult factory.



PERFORMANCE CHARACTERISTICS

Ref. Condition 21°C ±1°C (72°F ±2°F)

Accuracy:

Total Error Band including non-linearity, hysteresis, non repeatability, and temperature error

±1% of Span: From -20 to 85°C (-4 to 185°F)

±1.5% of Span: From -40 to -20°C (-40 to -4°F)

±1.5% of Span: From 85 to 125°C (185 to 257°F)

Non-linearity: Less than ±0.1% of span typical (B.F.S.L.)

Non-repeatability: Less than ±0.03% of span typical

Hysteresis: Less than 0.01% of span typical

Stability: Less than ±0.25% span/year

Durability: Tested to 50 million cycles

FUNCTIONAL CHARACTERISTICS

Select from over 25 pressure ranges starting at 30 psi and running through 20,000 psi. Compound (vacuum & pressure) ranges are also available, see below.

Overpressure (F.S.):	Proof	Burst
750 psi & below	200% FS	1000% FS
1500 psi	200% FS	500% FS
3000 psi	200% FS	500% FS
5000 psi	150% FS	500% FS
7500 psi	120% FS	500% FS
10,000 psi	120% FS	240% FS
20,000 psi	120% FS	240% FS

Vibration: Random vibration (20 g) over temperature range (-40° to 125°C). Exceeds typical MIL. STD. requirements

Shock: 100gs, 6 ms

Drop Test: Withstands 1 meter on concrete 3 axis

Response Time: Less than 1 msec

Position Effect: Less than ±0.01% span, typical

ENVIRONMENTAL CHARACTERISTICS

Temperature:

Compensated -40 to 125°C (-40 to 257°F)

Operating -40 to 125°C (-40 to 257°F)

Storage -40 to 125°C (-40 to 257°F)

Humidity: 0 to 100% R.H., no effect

ELECTRICAL SPECIFICATIONS

Output Signals Available:

Voltage Output	Excitation	Supply Current
0-5 Vdc, 3 wire	9-36 Vdc	5mA
0-10 Vdc, 3 wire	14-36 Vdc	5mA
1-5 Vdc, 3 wire	9-36 Vdc	4mA
1-6 Vdc, 3 wire	9-36 Vdc	4mA

Ratiometric Output

0.5-4.5 Vdc, 3 wire 5 Vdc ±0.5 Vdc 3.5mA

Current Output

4-20mA, 2 wire 9-36 Vdc

Reverse Polarity & Miswired Protected: Yes

Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: Greater than 100 megohms at 100 Vdc

CE Compliance: Per EN 61326: 1997

+ A1: 1998 + A2: 2001, Annex A (Heavy Industrial)

PHYSICAL CHARACTERISTICS

Pressure Connection: 304 stainless steel

Sensor Material: 17-4PH SS

Housing: 20% Glass Reinforced Nylon,

Fire retardant to UL94 V1

Available Process Connections (Male):

½ NPT, ¼ BSP, ¼ NPT, G¼ B, 7/16-20 UNF-2A

For other connections consult factory

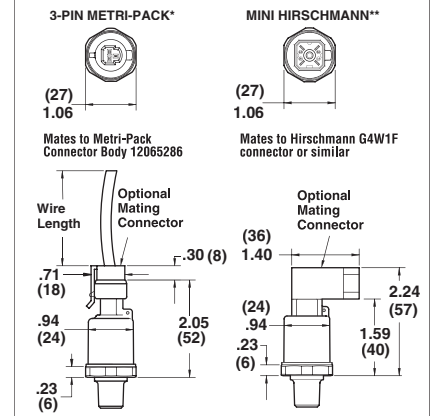
AVAILABLE ELECTRICAL TERMINATION

- Shielded Cable: 1 meter standard, 24 AWG, PVC Jacket
- Flying Lead: 1 meter standard, 18 AWG
- Metri-Pack 150 series*
- Hirschmann G series**

*Metri-Pack is a trademark of Delphi Packard Electric Systems

** Trade Mark of Richard Hirschmann of America, Inc.

DIMENSION DRAWINGS



Shielded cable and flying lead designs share similar dimensions to those shown.

TO ORDER THE G2 PRESSURE TRANSDUCER:

<div style="border: 1px solid black; padding: 2px; display: inline-block;">G 2</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">7</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">G</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">X</div>
<p>Type Configuration (G2)</p>	<p>Accuracy ±1.0% Total Error Band -20°C to 85°C ±1.5% Total Error Band -40°C to -20°C, 85 to 125°C</p>	<p>Pressure Connection M01 ½ NPT-male M02 ¼ NPT-male MEK 7/16-20 SAE-male MS2 ¼-19 BSP male MG2 G ¼ B male</p>	<p>Output Signal 05 = 0-5 Vdc 10 = 0-10 Vdc 15 = 1-5 Vdc 16 = 1-6 Vdc 42 = 4-20mA RM = 0.5-4.5 Vdc Ratio Metric to 5Vdc supply</p>	<p>Electrical Connection Metri-Pack GN = no mating conn. G2 = mating conn. 1m cable G1 = mating conn. w/customer specified length Hirschmann G Series HM = No mating conn. M1 = with mating conn. no cable M2 = mating conn. 1m cable P9 = mating conn. w/customer specified length Flying Leads W2 = 1m flying leads W9 = Customer specified length Shielded Cable F2 = 1m shielded cable P1 = customer specified length</p>	<p>Pressure Ranges psi Ranges 30# = 30 psi 45# = 45 psi 60# = 60 psi 100# = 100 psi 150# = 150 psi 200# = 200 psi 300# = 300 psi 500# = 500 psi 750# = 750 psi 1000# = 1000 psi 1500# = 1500 psi 2000# = 2000 psi 3000# = 3000 psi 5000# = 5000 psi 7500# = 7500 psi 10000# = 10000 psi 20000# = 20000 psi</p>	<p>Compound Ranges 30#&vac = 30 psi/-14.7 psi 45#&vac = 45 psi/-14.7 psi 60#&vac = 60 psi/-14.7 psi 85#&vac = 85 psi/-14.7 psi 100#&vac = 100 psi/-14.7 psi 150#&vac = 150 psi/-14.7 psi 200#&vac = 200 psi/-14.7 psi 300#&vac = 300 psi/-14.7 psi</p>	<p>Measurement Type G = Gauge Pressure</p>	<p>Optional X-Variations Consult Factory for Available Options</p>
Consult Factory for Other Connections								

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

Refer to Bulletin G2-1

