

Type G2 Pressure Transducer Affordable Performance in a Durable, Compact Package

Important G2 Features

- 1% Total Error Band Accuracy
- Broad Temperature Capability
- All-welded Pressure Construction
- High EMI/RFI Rating
- Ranges 30 psi Through 20,000 psi
- Housing IP 67 Rated
- Diagnostic Rails

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 & Pneumatic Sensing
- Pump Monitoring

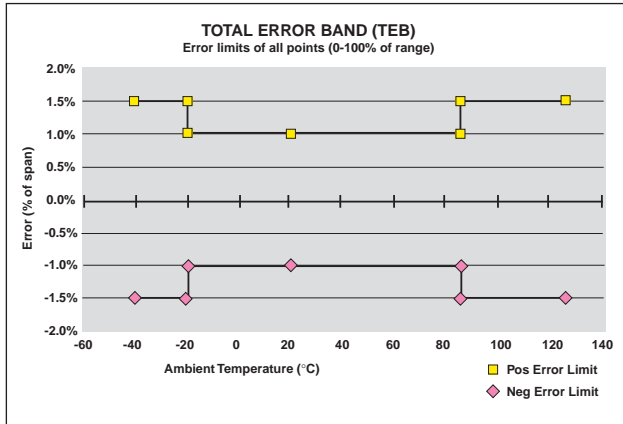


NEW



Ashcroft® Type G2[†] Pressure Transducer

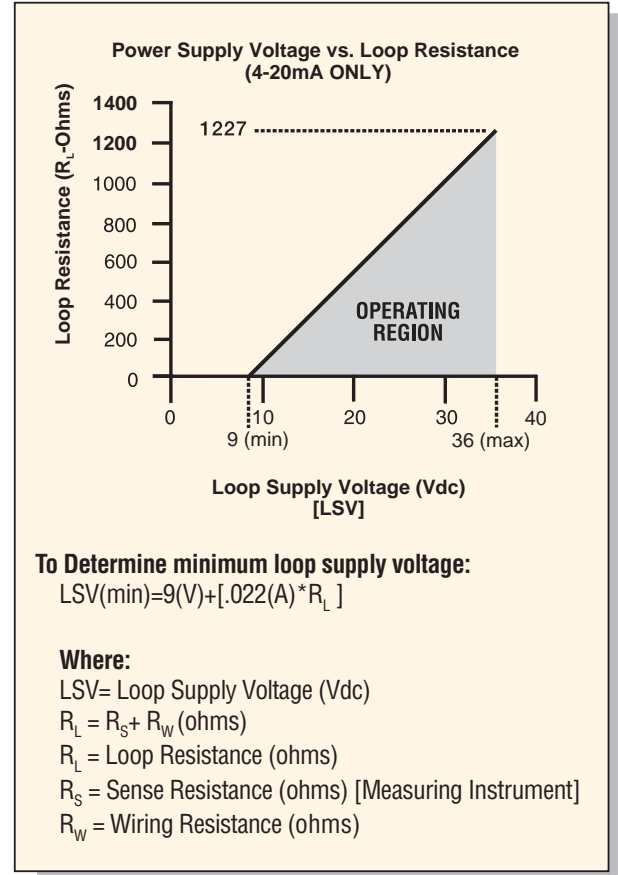
The Ashcroft Type G2[†] pressure transducer has been specifically designed with the high volume OEM in mind.



A $\pm 1\%$ Total Error Band accuracy is accomplished by marrying a high performance ASIC to a very stable, field proven polysilicon thin film pressure sensor. The sensor is electron beam welded to a pressure fitting of stainless steel, which provides excellent overpressure capability and outstanding durability in the presence of shock and vibration.

The integrity of the G2 is further enhanced by circuitry which is held securely within an internal cage and housed in a durable enclosure of reinforced Nylon.

To address a wide variety of applications, the Ashcroft G2 offers the OEM designer a broad choice of output signals, electrical terminations and process connections.



To Determine minimum loop supply voltage:

$$LSV(\min) = 9(V) + [0.022(A) * R_L]$$

Where:

LSV = Loop Supply Voltage (Vdc)

$R_L = R_S + R_W$ (ohms)

R_L = Loop Resistance (ohms)

R_S = Sense Resistance (ohms) [Measuring Instrument]

R_W = Wiring Resistance (ohms)



PERFORMANCE SPECIFICATIONS

Reference Condition 21°C ± 1°C (72°F, ±2°F)

Accuracy:

Total Error Band: including non-linearity, hysteresis, non-repeatability, and temperature error (see table)

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

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

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

Tighter accuracy performance available, consult factory

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

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

Shock: 100g, 6ms

Drop Test: Withstands 1 meter on concrete, 3 axis

Response time: Less than 1 msec

Position effect: Less than ±0.01% span, typical

Enclosure meets Nema 4X, IP65, & IP 67

FUNCTIONAL SPECIFICATIONS

Standard Ranges and Performance:

Range (psig)	Proof (psig)	Burst (psig)
0-30	90	450
0-45	90	450
0-60	120	600
0-100	200	1000
0-150	300	1500
0-200	400	2000
0-300	600	3000
0-500	1000	5000
0-750	1500	7500
0-1000	2000	7500
0-1500	3000	7500
0-2000	4000	10000
0-3000	6000	15000
0-5000	7500	25000
0-7500	9000	37500
0-10000	12000	24000
0-20000	24000	48000
Compound (psig)		
30 psi & vacuum	90	450
45 psi & vacuum	90	450
60 psi & vacuum	120	600
85 psi & vacuum	200	1000
100 psi & vacuum	200	1000
150 psi & vacuum	300	1500
200 psi & vacuum	400	2000
300 psi & vacuum	600	3000

Consult factory for additional pressure ranges and measurement units.

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:

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: 0-100% R.H. no effect

ELECTRICAL SPECIFICATIONS

Available Output Signals

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	5mA
1-6 Vdc, 3 Wire	11-36 Vdc	5mA

Ratiometric Output

0.5–4.5 Vdc, 3 Wire 5Vdc ± 0.5 Vdc 3.5mA

Current Output

4-20mA, 2 Wire 9–36 Vdc

Circuit Protection: Reverse polarity & miswire protected.

Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: greater than

100 megohms @ 100 Vdc

CE Compliance: Per EN61326: 1997

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

For higher radiated immunity capability, consult factory

PHYSICAL SPECIFICATIONS

Pressure Connections: 304 stainless steel

Housing: 20% Glass reinforced nylon, fire retardant to UL94 V1

Sensor Material: 17-4PH stainless steel

Sensor Type: Polysilicon thin film bridge

Available Pressure Connections (Male):

½ NPT, ¼ NPT, ¼ BSP, ⅞ - 20 SAE, G¼ B

For other connections consult factory.

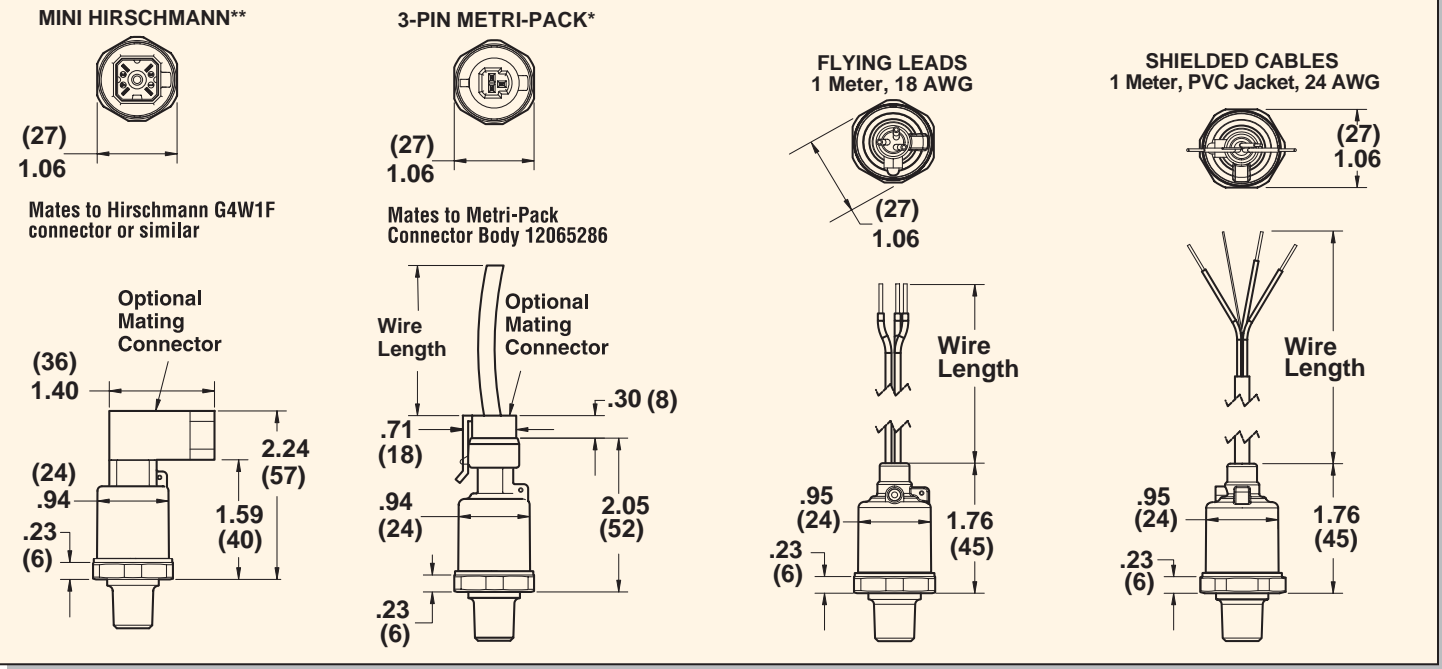
Available Electrical Terminations:

- Shielded cable, 1 meter standard
- Flying leads 1 meter standard
- Metri-Pack* 150 Series
- Hirschmann*** G Series

OPTIONAL FEATURES

- Consult factory for available options

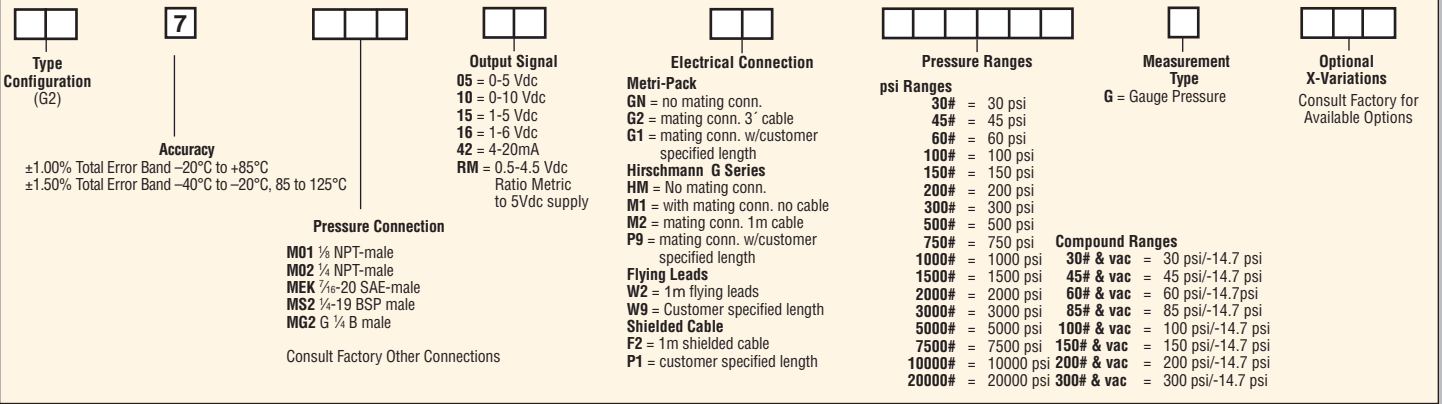
GENERAL DIMENSIONS () dimension in mm



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

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

HOW TO ORDER THE TYPE G2 PRESSURE TRANSDUCERS



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