

Model G3 Pressure Transducer



APPLICATIONS

The G3 pressure transducer combines performance with value to meet the demanding needs of the original equipment manufacturer in applications found in:

- Performance Racing
- Railroad/Transportation
- Compressor Control
- HVAC and Refrigeration
- Agricultural Implements
- Process Automation and Control
- Hydraulic & Pneumatic Sensing
- Pump Monitoring

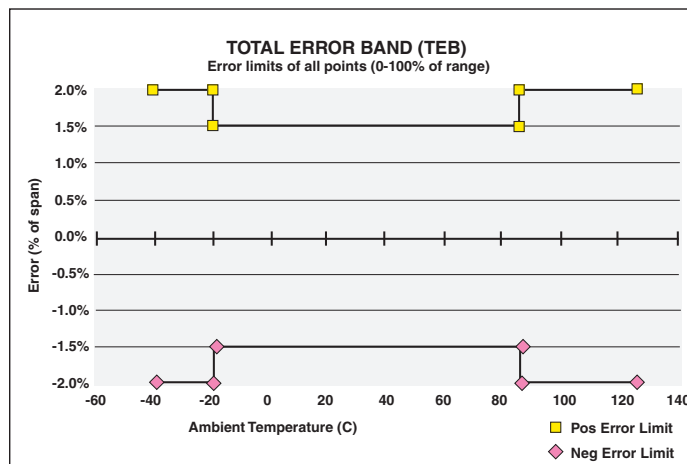
FEATURES

- 1.5% Total Error Band Accuracy
- Broad Temperature Capability
- All-welded 316L SS Wetted Parts
- High EM/RFI rating
- Ranges vacuum through 300 psi
- Up to IP 67 Ingress rating
- Diagnostic rails

The Ashcroft® Type G3⁺ pressure transducer has been specifically designed with the high volume OEM in mind.

The Ashcroft® Type G3 pressure transducer combines a high stability isolated piezoresistive sensor with our proven ASIC technology to provide a highly accurate and repeatable transducer for both gauge and absolute pressure ranges. Calibration via digital compensation results in an extremely accurate instrument over a wide temperature range. The G3 design is well suited for demanding, high cycle applications.

The circuitry is held within an internal cage and housed in an enclosure of reinforced Nylon.



PERFORMANCE SPECIFICATIONS

Ref. Condition 21°C ±1°C (72°F ±2°F)

Accuracy:

Total Error Band includes combined effects of temperature, non-linearity (Terminal Point Method), hysteresis, non repeatability, zero offset and span setting errors

±1.5% of Span: From -20 to 85°C (-4 to 185°F)

±2.0% of Span: From -40 to -20°C (-40 to -4°F)

±2.0% of Span: From 85 to 125°C (185 to 257°F)

Note: Static accuracy ±0.50% of span BFSL (Best Fit Straight Line Method); includes non-linearity, hysteresis and non-repeatable effects at reference temperature 72°F (21°C)

Stability: Less than ±0.25% span/year

Durability: Tested to 10 million cycles

ENVIRONMENTAL SPECIFICATIONS

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

FUNCTIONAL SPECIFICATIONS

Select from several pressure ranges starting at vacuum and running through 300 psi gauge.

Absolute, compound (vacuum & pressure) ranges are also available, see "To Order" on back.

Overpressure (F.S.): Proof Burst

200 psi & below 200% F.S. 500% F.S.

300 psi 200% F.S. 300% F.S.

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 2 msec

Warm-up Time: Less than 500 msec typical

Position Effect: Less than ±0.01% span, typical

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
0.5-4.5Vdc, 3 wire	9-36Vdc	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 Marked: Per DoC

EMC Directive 2004/108/EC

IEC/EN 61326-1: Edition 1.0 Industrial

IEC/EN 61326-2-3: Edition 1.0 Annex BB Industrial

PED Directive

UL Recognized component per UL-61010-1, CSA 22.2 6101-1 Electrical Equipment for Measurement, Control and Laboratory use.

BULLETIN G3