

Model G3 Pressure Transducer



LOOK FOR THESE AGENCY MARKS ON OUR PRODUCTS

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

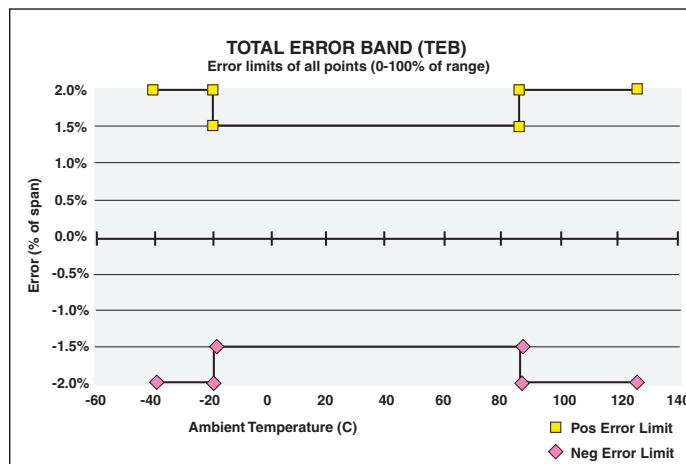
FEATURES

- 1.5% Total Error Band Accuracy
- Broad Temperature Capability
- All-welded 316L SS Wetted Parts
- High EMI/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.

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PHYSICAL SPECIFICATIONS

Wetted Materials: 316L SS pressure connection and sensor diaphragm

Housing: 20% Glass Reinforced Nylon, Fire retardant to UL94 V1

Available Process Connections (Male):

See "How To Order" section below. For other connections consult factory.

Ingress Rating:

- IP67, NEMA 4X:
 - Metri-Pack I50 series*
 - Shielded cable
 - Flying leads
 - Deutsch DT Series DT04-3P
 - Deutsch DTM Series DTM04-3P
 - AMP Superseal
 - M12 - Mates to Hirschmann 933 172-100 or similar

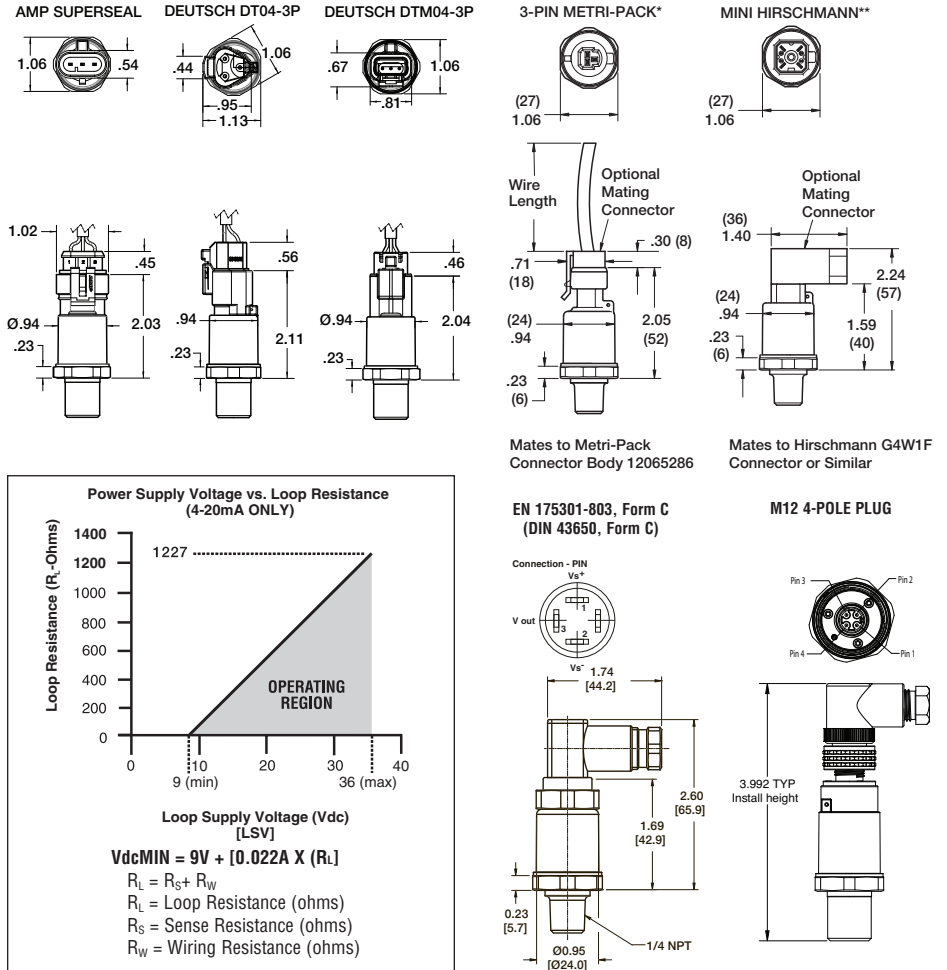
• IP65, NEMA 4X:

- Hirschmann G series**
- EN 175301-803, Form C (DIN 43650, Form C)

ELECTRICAL TERMINATION

See "How To Order" section below for electrical termination options.

DIMENSIONS



How To Order

G 3	7								X	
Type Configuration (G3)	Accuracy	Output Signal	Electrical Termination	Pressure Ranges	Measurement Type	Optional X-Variations				
	1.5% Total Error Band -20°C/+85°C 2.0% Total Error Band -40°C/-20°C, 85/125°C	05 = 0-5 Vdc 10 = 0-10 Vdc 15 = 1-5 Vdc 16 = 1-6 Vdc 42 = 4-20mA 45 = 0.5-4.5Vdc 9-36Vdc supply RM = 0.5-4.5 Vdc Ratio Metric to 5Vdc supply	Metri-Pack* GN = no mating conn. G2 = mating conn. 3' cable G3 = mating conn. 10' cable G1 = mating conn. w/customer specified length Hirschmann G Series** HM = no mating conn. M1 = with mating conn. no cable M2 = mating conn. 3' cable P9 = mating conn. w/customer specified length Flying Leads W2 = 3' flying leads W9 = customer specified length Shielded Cable F2 = 3' shielded cable F3 = 10' shielded cable P1 = customer specified length M12 - Mates to Hirschmann 933 172-100 or similar EW = w/o mating conn. E0 = w/mating conn. no cable E2 = w/mating conn. & 3' shielded cable E1 = w/mating conn. & customer defined length	Deutsch DT Series DT04-3P DT = w/out mating conn. T2 = w/1m, 3' cable T3 = w/3m, 10' cable T1 = w/mating conn. cable customer defined length Deutsch DTM Series DTM04-3P DS = w/out mating conn. S2 = w/1m, 3' cable S3 = w/3m, 10' cable S1 = w/mating conn. cable customer defined length AMP Superseal AP = w/out mating conn. A2 = w/1m, 3' cable A3 = w/3m, 10' cable A1 = w/mating conn. cable customer defined length EN 175301-803, Form C (DIN 43650, Form C) DC = no mating conn. N1 = with mating conn. no cable N2 = mating conn. 3' cable N3 = mating conn. 10' cable N9 = mating conn. w/customer specified length	psi Ranges 5# = 5 psi*** 15# = 15 psi 30# = 30 psi 50# = 50 psi 60# = 60 psi 100# = 100 psi 150# = 150 psi 200# = 200 psi 300# = 300 psi Compound Ranges*** 0#&vac = 0 psi/-14.7 psi 15#&vac = 15 psi/-14.7 psi 30#&vac = 30 psi/-14.7 psi 60#&vac = 60 psi/-14.7 psi 100#&vac = 100 psi/-14.7 psi 150#&vac = 150 psi/-14.7 psi 300#&vac = 300 psi/-14.7 psi	G = Gauge Pressure A = Absolute Pressure	Consult Factory for Available Options			
<p>Consult factory for other connections</p> <p>*Metri-Pack is a trademark of Delphi Packard Electric Systems. **Trademark of Richard Hirschmann of America, Inc. ***Not available in absolute pressure</p>										

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