

M5100 Heavy Industrial Pressure Transducer



- CE Compliance
- Wide Temperature Range
- Compact

DESCRIPTION

The M5100 series pressure transducers from the Microfused™ line of MEAS, set a new price performance standard for demanding commercial and heavy industrial applications. This series is suitable for measurement of liquid or gas pressure, even for difficult media such as contaminated water, steam, and mildly corrosive fluids.

The transducer pressure cavity is machined from a solid piece of 17-4 PH stainless steel. The standard version includes a 1/4 NPT pipe thread allowing a leak-proof, all metal sealed system. There are no O-rings, welds or organics exposed to the pressure media. The durability is excellent. The M5100 exceeds the latest heavy industrial CE requirements including surge protection, and is over voltage protected to 16Vdc in both positive and reverse polarity.

This product is geared to the OEM customer who uses medium to high volumes. The standard version is suitable for many applications, but the dedicated design team at our Transducer Engineering Center stands ready to provide a semi-custom design where the volume and application warrants.

FEATURES

- Heavy Industrial CE Approval
- 100 V/m EMI Protection
- Reverse Polarity Protection
- Extended Temperature Range
- 1% Total Error Band
- Compact Outline
- -40°C to +125°C Operating Temperature Range

APPLICATIONS

- Advanced HVAC Systems
- Refrigeration Systems
- Automotive Test Stands
- Industrial Process Control
- Pumps and Compressors
- Hydraulic/Pneumatic Systems
- Agriculture Equipment
- Energy Generation and Management

STANDARD RANGES

| Range | psig | Range | Barg |
|----------|------|----------|------|
| 0 to 50 | • | 0 to 3.5 | • |
| 0 to 100 | • | 0 to 7 | • |
| 0 to 200 | • | 0 to 10 | • |
| 0 to 300 | • | 0 to 20 | • |
| 0 to 500 | • | 0 to 35 | • |
| 0 to 1k | • | 0 to 70 | • |
| 0 to 3k | • | 0 to 200 | • |
| 0 to 5k | • | 0 to 350 | • |
| 0 to 10k | • | 0 to 700 | • |

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PERFORMANCE SPECIFICATIONS

Supply Voltage: 5.0V, Ambient Temperature: 25°C (unless otherwise specified)

| PARAMETERS | MIN | TYP | MAX | UNITS | NOTES |
|--|--|------|------|---------|-------|
| Accuracy (combined non linearity, hysteresis, and repeatability) | -0.25 | | 0.25 | %Span | 1 |
| Long Term Stability (1 year) | -0.25 | | 0.25 | %Span | |
| Total Error Band (over compensated range) | | | ±1 | %Span | 2 |
| Compensated Temperature | -20 | | +85 | °C | |
| Operating Temperature | -40 | | +125 | °C | |
| Storage Temperature | -45 | | +125 | °C | |
| Burst Pressure | 5X | | | Rated | |
| Vibration (20 to 200Hz) | ±20 | | | g | 3 |
| Shock (11ms) | 50 | | | g | 4 |
| Pressure Cycles (Zero to Full Scale) | 10 | | | Million | |
| Pressure Overload | 2X | | | Rated | |
| Weight | | 82.2 | | grams | |
| Media Compatibility | All Materials Compatible with 17-4 Stainless Steel | | | | |

For custom configurations, consult factory.

Notes

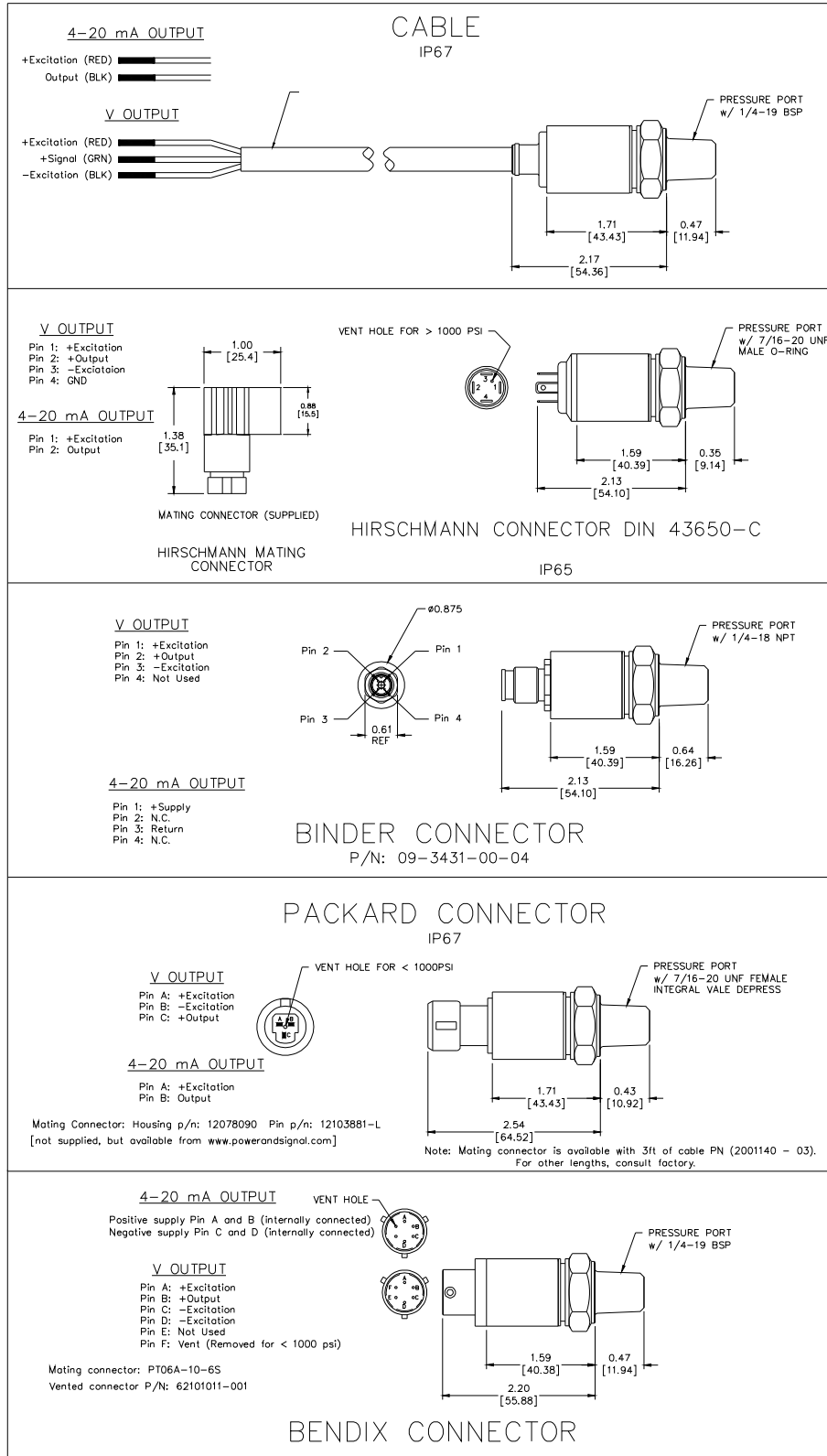
1. Best fit straight line.
2. TEB includes all accuracy errors, thermal errors, span and zero tolerances.
3. Per MIL-STD-810C, Procedure 514.2, Figure 514.2-2, Curve L.
4. 1/2 sine per MIL-STD 202F Method 213B condition A.

CE Compliance

EN55022 Emissions Class A & B
 IEC61000-4-2 Electrostatic Discharge Immunity (6kV contact/8kV air)
 IEC61000-4-3 EM Field Immunity (30V/m)
 IEC61000-4-4 Electrical Fast Transient Immunity (1kV)
 IEC61000-4-5 Surge (1kV)
 IEC61000-4-6 Conducted Immunity (10V)
 IEC61000-4-9 Pulsed Magnetic Field Immunity (100A/m)

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DIMENSIONS



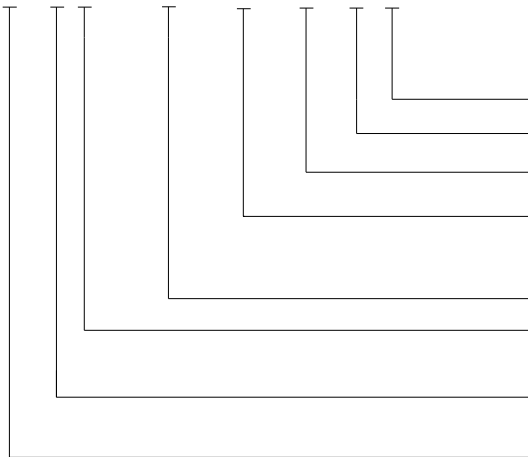
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OUTPUT OPTIONS

| Code | Output | Supply(V) | | |
|------|---------------------------|-----------|-----|------|
| | | MIN | TYP | MAX |
| 3 | 0.5 – 4.5 V (ratiometric) | 4.75 | 5 | 5.25 |
| 4 | 1 – 5 V | 8 | | 30 |
| 5 | 4 – 20 mA | 9 | | 30 |
| 6 | 0 – 5 V | 8 | | 30 |
| 7 | 0 – 10 V | 15 | | 30 |

ORDERING INFORMATION

M5131-000005-300PG



Type (G = Gage)
 Units (P = psi, B = Bar)
 Pressure Range (300 = 300, 05K = 5000, 3.5 = 3.5)
 Pressure Port (2 = 1/4BSP, 4 = 7/16-20UNF Male O-Ring, 5 = 1/4-18NPT, P = 7/16-20 Female with Integral Valve Depressor)
 Specials (nnnnn = Custom Drawing)
 Connection (1 = 2ft Cable, 4 = Packard Metripak 150, 5 = Bendix, 6 = Min-Hirschman DIN 43650 Ind C, D = Binder)
 Output (3 = 0.5 to 4.5V, 4 = 1 - 5V, 5 = 4 - 20mA, 6 = 0 - 5V, 7 = 0 - 10V)
 Model

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