

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	•

M5100 Heavy Industrial Pressure Transducer

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

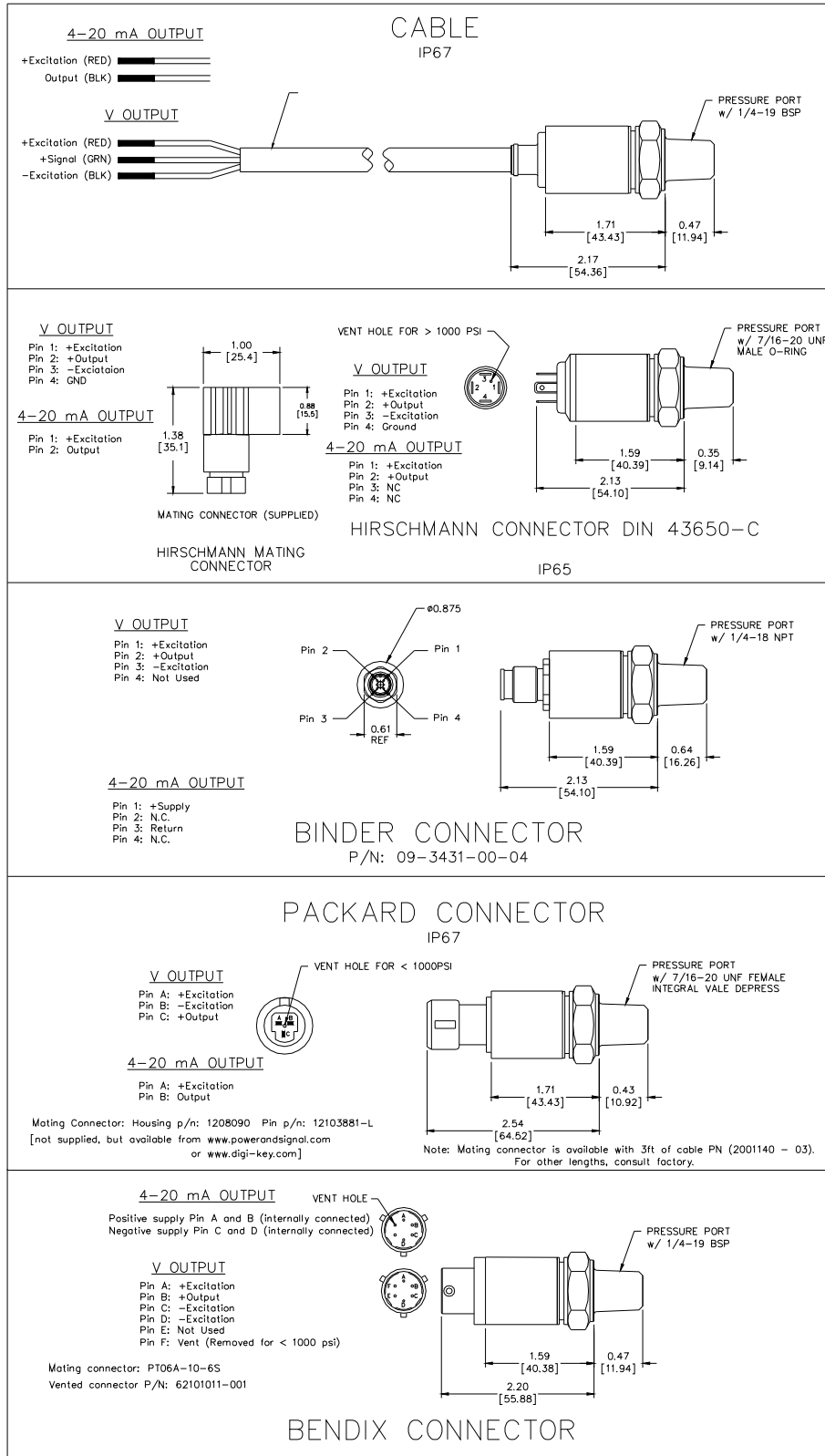
1. Best fit straight line.
2. TEB includes all accuracy errors, thermal errors, span and zero tolerances.
3. Per MIL-STD-810C, Procedure 514.2, Figure 514.2-2, Curve L.
4. 1/2 sine per MIL-STD 202F Method 213B condition A.

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)

M5100 Heavy Industrial Pressure Transducer

DIMENSIONS



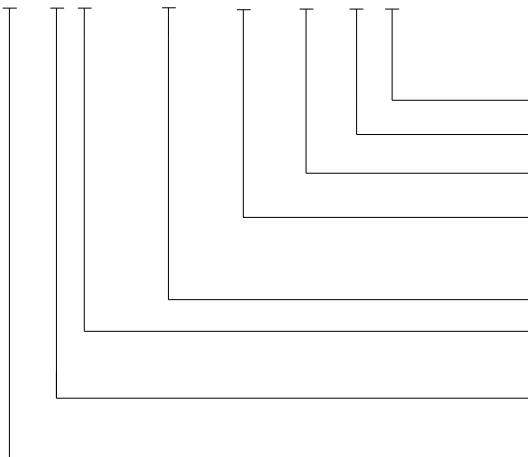
M5100 Heavy Industrial Pressure Transducer

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

NORTH AMERICA

Measurement Specialties
 45738 Northport Loop West
 Fremont, CA 94538
 Tel: 1-800-767-1888
 Fax: 1-510-498-1578
 Sales: pfg.cs.amer@meas-spec.com

EUROPE

Measurement Specialties
 (Europe), Ltd.
 26 Rue des Dames
 78340 Les Clayes-sous-Bois, France
 Tel: +33 (0) 130 79 33 00
 Fax: +33 (0) 134 81 03 59
 Sales: pfg.cs.emea@meas-spec.com

ASIA

Measurement Specialties
 (China), Ltd.
 F1.6-4D, Tian An Development
 Compound
 Shenzhen, China 518048
 Tel: +86 755 8330 1004
 Fax: +86 755 8330 6797
 Sales: pfg.cs.asia@meas-spec.com

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.