

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

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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	•

DIN Range	Barg
0 to 4	•
0 to 6	•
0 to 10	•
0 to 16	•
0 to 25	•
0 to 40	•
0 to 60	•
0 to 100	•
0 to 160	•
0 to 250	•
0 to 400	•
0 to 600	•
0 to 1000	•

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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)

Pressure Port Options

2 = 1/4"-19 BSP Male

4 = 7/16-20 UNF Male O-ring

5 = 1/4"-18 NPT Male

F = 1/4"-19 BSP Female

P = 7/16-20 UNF Female w/ Integral Vale Depressor

Q = M10x1

S = M12x1.5

U = G1/4B DIN 3852

V = M14x1.5

Electrical Connection Options

1 = 2 ft cable

4 = Packard Metripak 150

5 = Bendix PTIH-10-6P

6 = Hirschmann DIN 43650-C

D = 4-pin Binder Connector

M = 1 metres cable

P = 5 metres cable

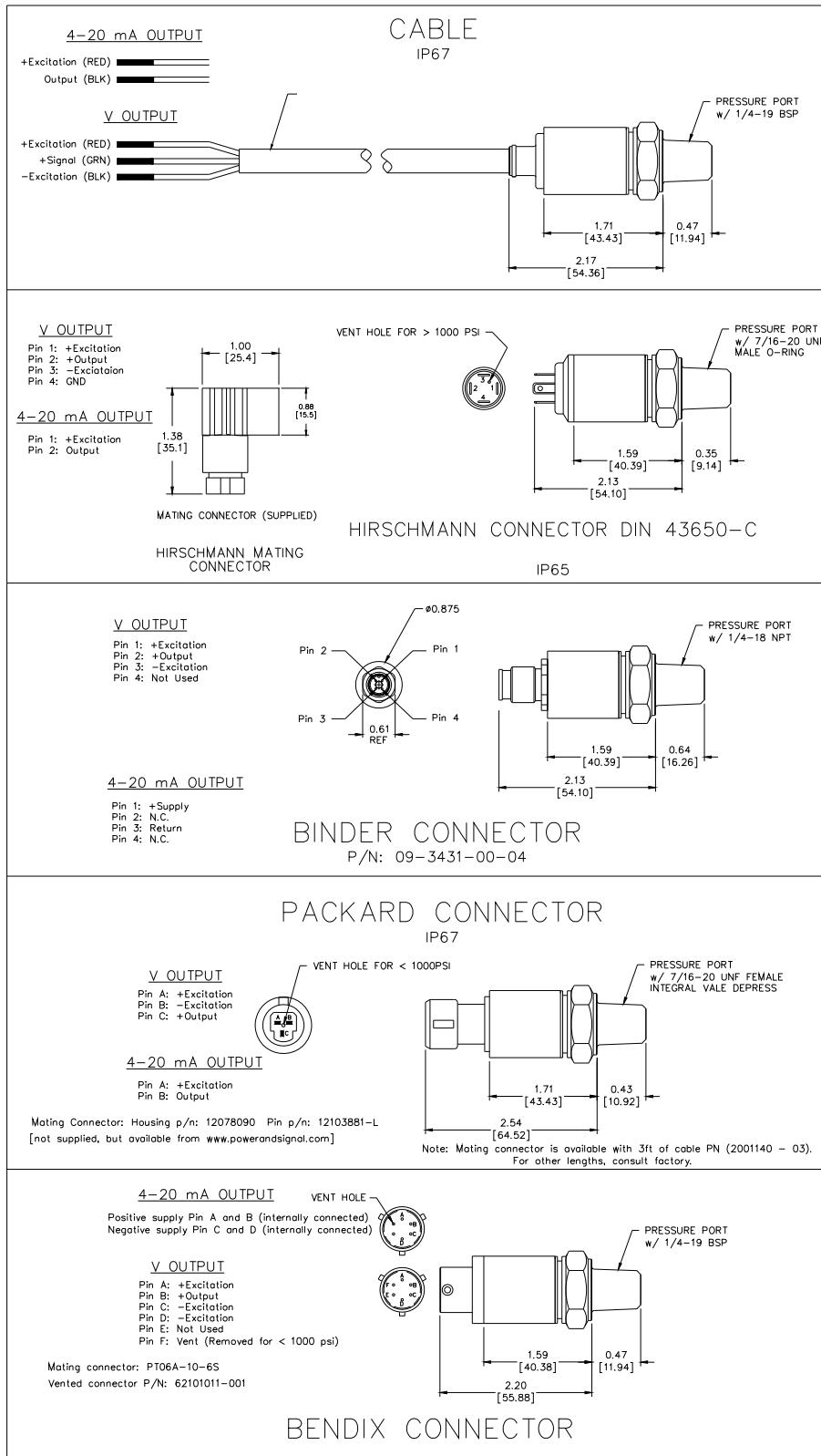
R = 10 metres cable

Others available on request

Others available on request

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DIMENSIONS

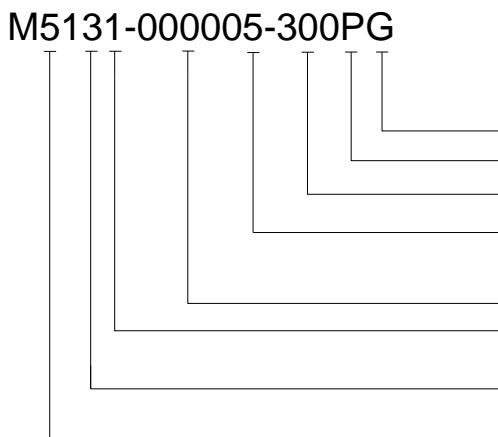


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OUTPUT OPTIONS

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



Type (G = Gage)

Units (P = psi, B = Bar)

Pressure Range (300 = 300, 05K = 5000, 3.5 = 3.5)

Pressure Port (2 = 1/4-19BSP, V = M14 x 1.5)

See Pressure Port Options Table)

Specials (nnnn = Custom Drawing)

Connection (4 = Packard Metripak 150, R = 10 metres cable)

See Electrical Connection Options Table)

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.
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518107
China
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
Sales: pfg.cs.asia@meas-spec.com

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