

US300 Stainless Steel Pressure Transducer



- OEM and End User
- High Accuracy
- Compact Package
- Wide Temperature Range

DESCRIPTION

The low cost US300 Series incorporates stainless steel isolation, and provides a wide choice of standard pressure ranges and electrical outputs in a very compact package. This product uses MEAS' UltraStable™ technology that provides stability over a wide temperature range, performance previously available only in much higher priced sensors. The modular design is adaptable to a wide variety of pressure ports and electrical connectors. Standard outputs include 0 to 100mV, 0.5 to 4.5V ratiometric, 1 to 5V regulated and 4 to 20mA current loop.

FEATURES

- 0.1% Accuracy
- -40°C to +105°C Operating Temperature Range
- 100% Stainless Steel 316L Isolation
- Wide Variety of Pressure Ranges and Electrical Outputs
- Low Cost and Compact Package
- UltraStable™ Technology

APPLICATIONS

- Refrigeration and HVAC Controls
- Compressed Gases
- Process Control
- Water Pressure Monitoring

STANDARD RANGES

Range	psig	psia	Range	Barg	Bara
0 to 15	•	•	0 to 1	•	•
0 to 30	•	•	0 to 2	•	•
0 to 50	•	•			
			0 to 5	•	•
0 to 100	•	•	0 to 7	•	•
			0 to 10	•	•
0 to 300	•	•	0 to 20	•	•
0 to 500	•	•	0 to 35	•	•
0 to 1k	•	•	0 to 70	•	•
			0 to 100	•	•
0 to 3k	•	•	0 to 200	•	•
0 to 5k	•	•	0 to 350	•	•

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PERFORMANCE SPECIFICATIONS

Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Offset	-1	±0.5	1	%Span	1
Span	-1	±0.5	1	%Span	1,2
Accuracy (combined non linearity, hysteresis, and repeatability)	-0.15	±0.1	0.15	%Span	2,3
Output Resistance (0 - 100mV)	4	12	30	kΩ	1
Temperature Error – Offset	-1.5	±0.75	1.5	%Span	4
Temperature Error – Span	-1.5	±0.75	1.5	%Span	4
Supply Current (0 – 100mV)		1	2	mA	
Supply Current (0.5 – 4.5V, 1 – 5V)	2.5	3	5	mA	
Long Term Stability (1 year)	-0.1		0.1	%Span	
Frequency Response (-3dB)			1	kHz	
Compensated Temperature	-20		+85	°C	
Operating Temperature	-40		+105	°C	
Storage Temperature	-40		+125	°C	
Proof Pressure	3X			Rated	
Burst Pressure	4X			Rated	
Vibration	±20			g	5
Shock (11ms)	100			g	6
Pressure Cycles (Zero to Full Scale)	1			Million	
Isolation Resistance (50Vdc)	50			MΩ	
Weight				grams	
Media Compatibility	All Materials Compatible with 316 Stainless Steel				
Environmental Protection	IP 67 (Cable Version)				

For custom configurations, consult factory.

Notes

- Output loading may affect performance.
- For low level (100mV) sensors span is ratiometric to supply (10mV/volt output).
- Best fit straight line.
- For pressures > 1k psi, 0.25% Best fit straight line.
- Per MIL-STD-810C, Procedure 514.2, Figure 514.2-2, Curve L.
- 1/2 sine per MIL-STD 202F Method 213B condition A.

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DIMENSIONS

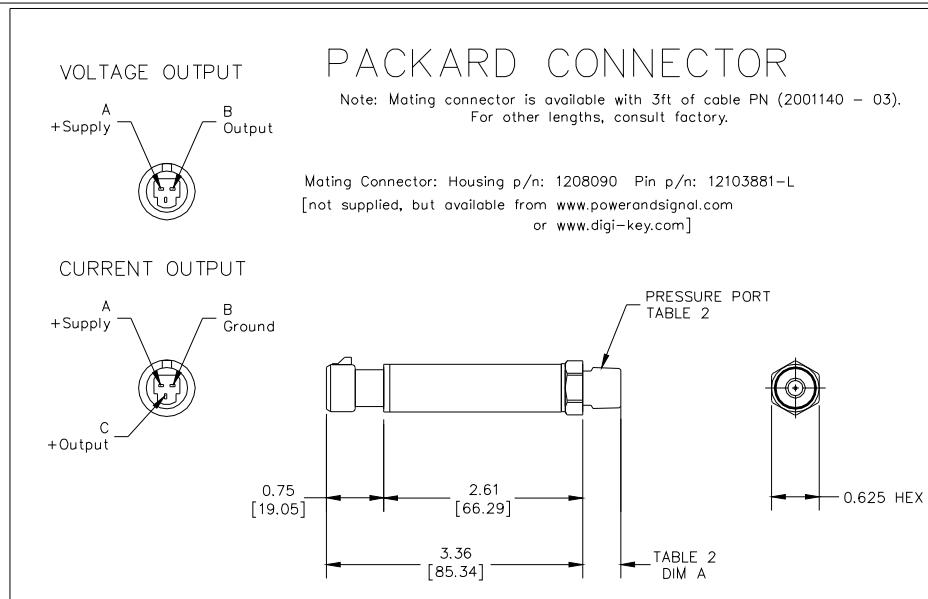
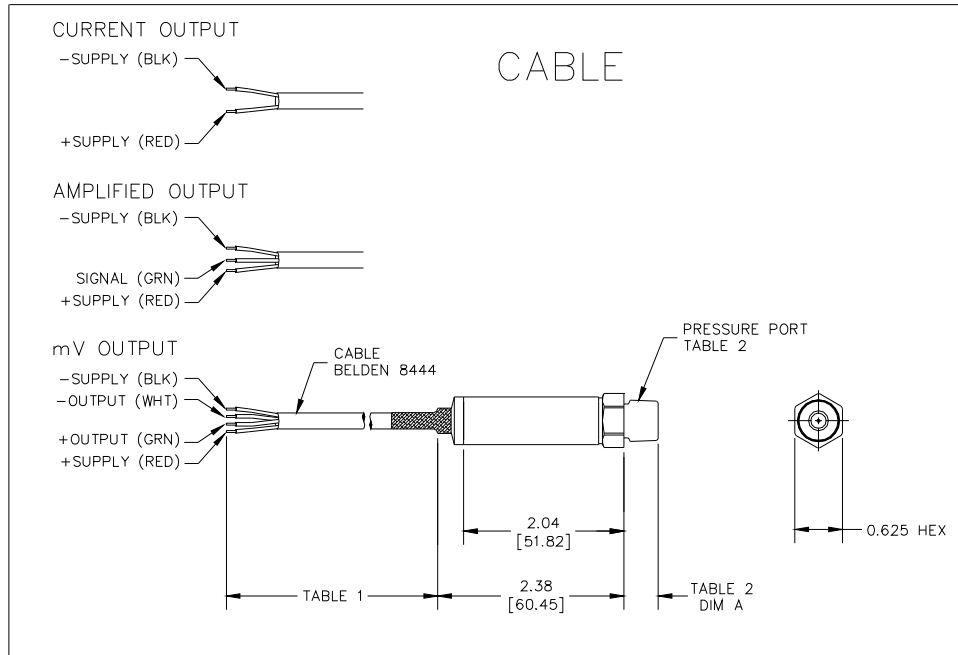


TABLE 1

TABLE 2

CONNECTION		PRESSURE PORT		
CODE	CONNECTOR	CODE	PORT	DIM A
1	CABLE 2 FOOT	2	1/4 BSP	0.45 [11.43]
2	CABLE 4 FOOT	4	7/16-20 MALE O-RING	0.33 [8.38]
3	CABLE 10 FOOT	5	1/4 NPT	0.50 [12.7]
4	PACKARD CONNECTOR	6	1/8 NPT	0.475 [12.07]

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OUTPUT OPTIONS

Code	Output	MIN	Supply (V)		MAX
			TYP		
2	0 – 100 mV (ratiometric)	2.5	5		12
3	0.5 – 4.5 V (ratiometric)	4.75	5		5.25
4	1 – 5 V	8			30
8	4 – 20 mA	9			30

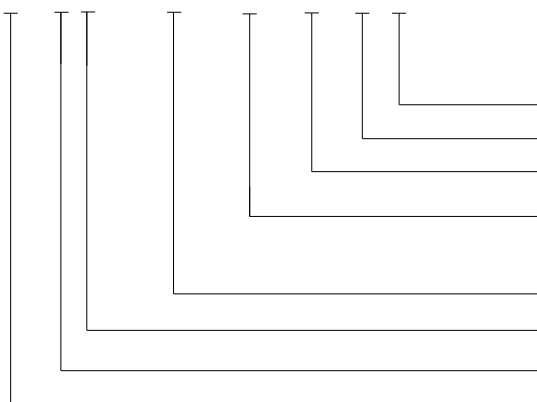
Packard connector not available with mV output.

Wiring Code

Code	Output	+Supply	-Supply	+Out	-Out
2	0 – 100 mV (ratiometric)	Red	Black	Green	White
3	0.5 – 4.5 V (ratiometric)	Red/Pin A	Black/Pin B	Green/Pin C	N/A
4	1 – 5 V	Red/Pin A	Black/ Pin B	Green/Pin C	N/A
8	4 – 20 mA	Red/Pin A	Black/Pin B	N/A	N/A

ORDERING INFORMATION

US381-000005-500PG



Type (A = Absolute, G = Gage)

Units (P = psi, B = Bar)

Pressure Range (500 = 500, 05K = 5000)

Pressure Port (2 = 1/4-19BSP, 4 = 7/16-20UNF, 5 = 1/4-18NPT, 6 = 1/8-27NPT)

Options (nnnnn = Custom Drawing)

Connection (1 = 2ft, 2 = 4ft, 3 = 10ft Cable, 4 = Packard)

Output (2 = 0 - 100mV, 3 = 0.5 - 4.5V, 4 - 1 - 5V, 8 = 4 - 20mA)

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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