

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	•	•



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 Materia	ls Compatible	with 316 Stai	nless Steel	
Environmental Protection	IP 67 (Cab	le Version)			

measureme

For custom configurations, consult factory.

Notes

1. Output loading may affect performance.

2. For low level (100mV) sensors span is ratiometric to supply (10mV/volt output).

3. Best fit straight line.

4. For pressures > 1k psi, 0.25% Best fit straight line.

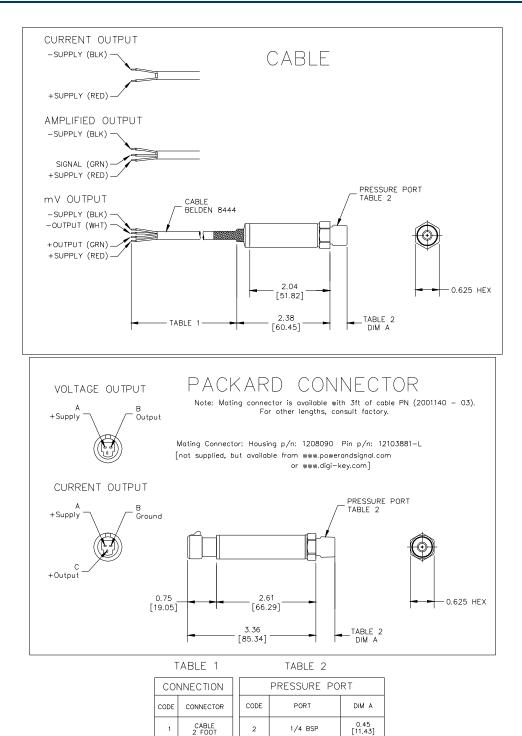
5. Per MIL-STD-810C, Procedure 514.2, Figure 514.2-2, Curve L.

6. 1/2 sine per MIL-STD 202F Method 213B condition A.



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DIMENSIONS



4

5

6

CABLE 4 FOOT

CABLE 10 FOOT

PACKARD CONNECTOR

2

3

4

7/16-20 MALE 0-RING

1/4 NPT

1/8 NPT

0.33 [8.38]

0.50 [12.7]

0.475 [12.07]



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OUTPUT OPTIONS

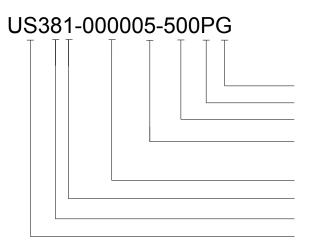
		Supply (V)		
Code Output	MIN	TYP	MAX	
2 0 – 100 mV (ratiometric)	2.5	5	12	
3 0.5 – 4.5 V (ratiometric)	4.75	5	5.25	
4 1 – 5 V	8		30	
3 4 – 20 mA	9		30	

Packard connector not available with mV output.

Wiring Code

J					
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



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

Model

ASIA

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)

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

Type (A = Absolute, G = Gage) Units (P = psi, B = Bar)

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

Options (nnnnn = Custom Drawing)

6 = 1/8-27NPT)

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