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

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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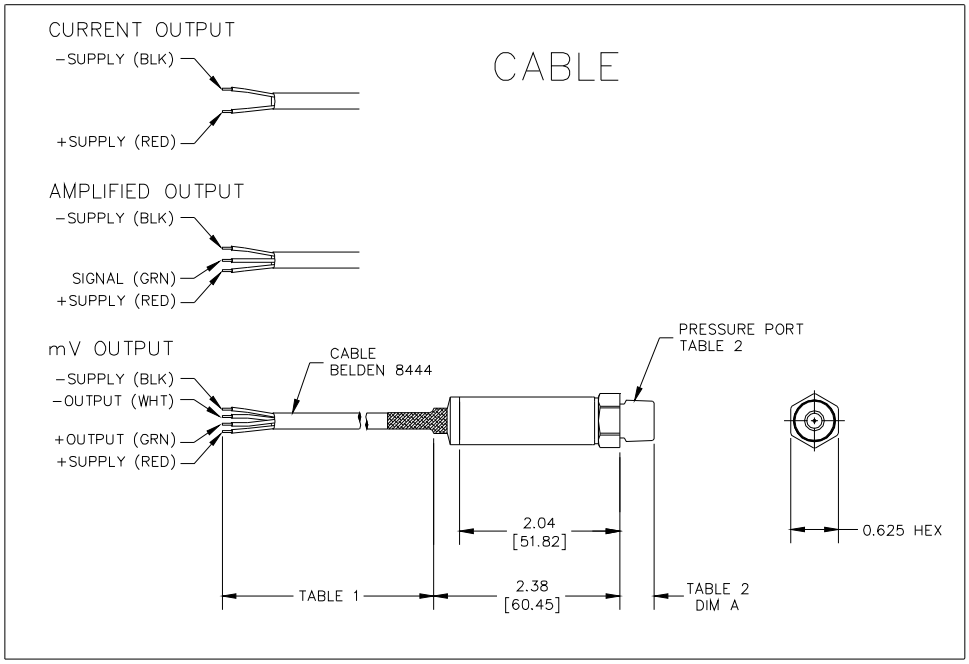
DIMENSIONS



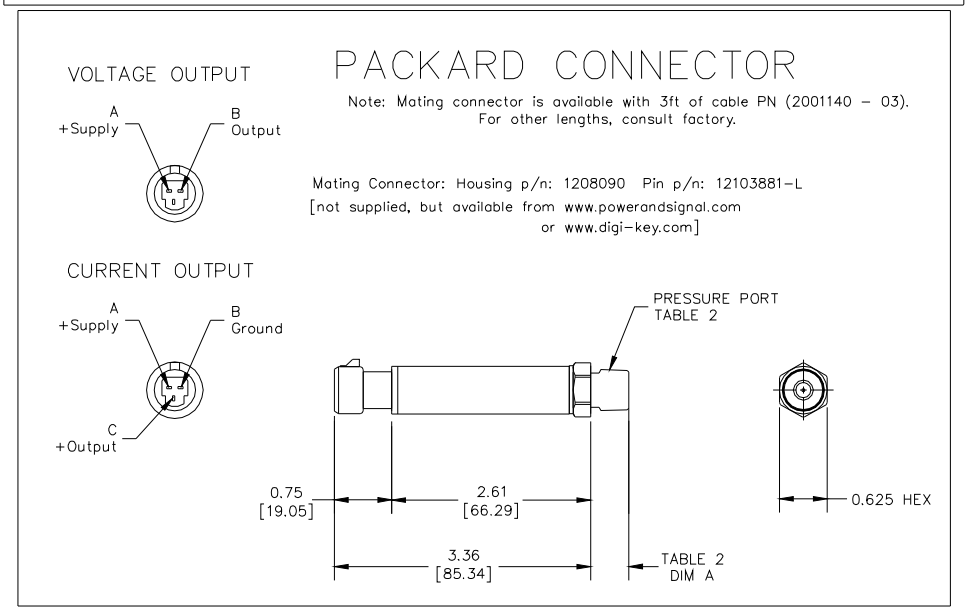


TABLE 1

CONNECTION	
CODE	CONNECTOR
1	CABLE 2 FOOT
2	CABLE 4 FOOT
3	CABLE 10 FOOT
4	PACKARD CONNECTOR

TABLE 2

PRESSURE PORT		
CODE	PORT	DIM A
2	1/4 BSP	0.45 [11.43]
4	7/16–20 MALE O–RING	0.33 [8.38]
5	1/4 NPT	0.50 [12.7]
6	1/8 NPT	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
8	4 – 20 mA	9		30

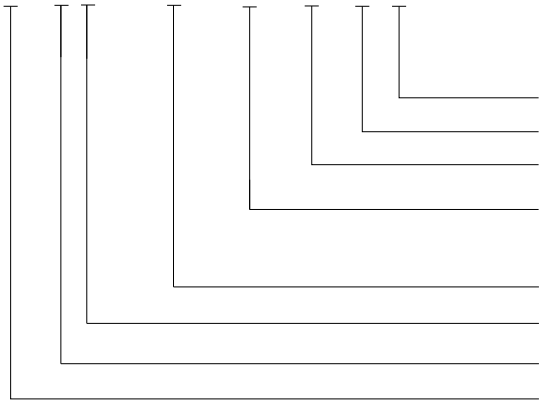
Packard connector not available with mV output.

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