US300

- **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 10mV/V, 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 015	•	•	0 to 001	•	•
0 to 030	•	•	0 to 002	•	•
0 to 050	•	•	0 to 3.5	•	•
0 to 100	•	•	0 to 007	•	•
0 to 300	•	•	0 to 020	•	•
0 to 500	•	•	0 to 035	•	•
0 to 01k	•	•	0 to 070	•	•
0 to 03k	•	•	0 to 200	•	•
0 to 05k	•	•	0 to 350	•	•

Intermediate ranges available

PERFORMANCE SPECIFICATIONS (AMPLIFIED OUTPUT)

Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Accuracy (combined non linearity, hysteresis, and repeatability)	-0.15	±0.1	0.15	%Span	FS<1kpsi @25°C
	-0.25	±0.2	0.25	%Span	FS≥1kpsi @25°C
Span Tolerance	-1.0	±0.5	1.0	%Span	@25°C
Zero Offset	-1.0	±0.5	1.0	%Span	@25°C
Temperature Error – Span	-1.5	±0.75	1.5	%Span	
Temperature Error – Offset	-1.5	±0.75	1.5	%Span	
Thermal Hysteresis – Span		±0.05		%Span	
Thermal Hysteresis – Offset		±0.05		%Span	
Long Term Stability – Span		±0.10		%Span/year	
Long Term Stability – Offset		±0.10		%Span/year	
Insulation Resistance (50Vdc)	50			MΩ	
Response Time	1		1	Ms	
Proof Pressure			3X	Rated	
Burst Pressure			4X	Rated	
Compensated Temperature	-20		+85	°C	Except cable -20~80°C
Operating Temperature	-40		+105	°C	Except cable -20~80°C
Storage Temperature	-40		+125	°C	Except cable -20~80°C
Media Compatibility	Liquids and gases compatible with 316/316L Stainless Steel				
Vibration	±20g MIL-STD-810C, Procedure 514.2, Figure 514-2, Curve L				
Shock (11ms)	100g 11mS				
Pressure Cycles (Zero to Full Scale)	1 million cycles 0 to full scale				
Environmental Protection	IP67 (Cable Version)				

For custom configurations, consult factory.

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PERFORMANCE SPECIFICATIONS (mv OUTPUT)

Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Span	99	100	101	mV	FS≥15psi
	98	100	102	mV	FS≥1kpsi
Zero Pressure Output	-1.0		1.0	mV	
Pressure Non Linearity	-0.10		0.10	%Span	FS≥15psi
	-0.25		0.25	%Span	FS≥1kpsi
Pressure Hysteresis	-0.05	±0.02	0.05	%Span	FS≥15psi
	-0.1		0.1	%Span	FS≥1kpsi
Repeatability		±0.02		%Span	FS≥15psi
Input Resistance	6.0	10.0	19.0	kΩ	
Output Resistance	4.0		6.0	kΩ	
Temperature Error – Span	-1.0		1.0	%Span	
Temperature Error – Offset	-1.0		1.0	%Span	
Thermal Hysteresis – Span	-0.25		0.25	%Span	FS≤15psi over -20°~85°C
	-0.15		0.15	%Span	FS>15psi over -20°~85°C
Thermal Hysteresis – Offset	-0.25		0.25	%Span	FS≤15psi over -20°~85°C
	-0.15		0.15	%Span	FS>15psi over -20°~85°C
Long Term Stability – Span		±0.10		%Span/year	
Long Term Stability – Offset		±0.10		%Span/year	
Supply Voltage	2.5	10	14	Vdc	
Output Load Resistance	5			MΩ	
Insulation Resistance (50Vdc)	50			MΩ	
Output Noise (10Hz to 1kHz		1.0		uV p-p	
Response Time (10% to 90%)			0.1	ms	
Proof Pressure			3X	Rated	
Burst Pressure			4X	Rated	
Compensated Temperature	-20		+85	°C	Except cable -20~80°C
Operating Temperature	-40		+125	°C	Except cable -20~80°C
Storage Temperature	-40		+125	°C	Except cable -20~80°C
Media Compatibility	Liquids and gases compatible with 316/316L Stainless Steel				
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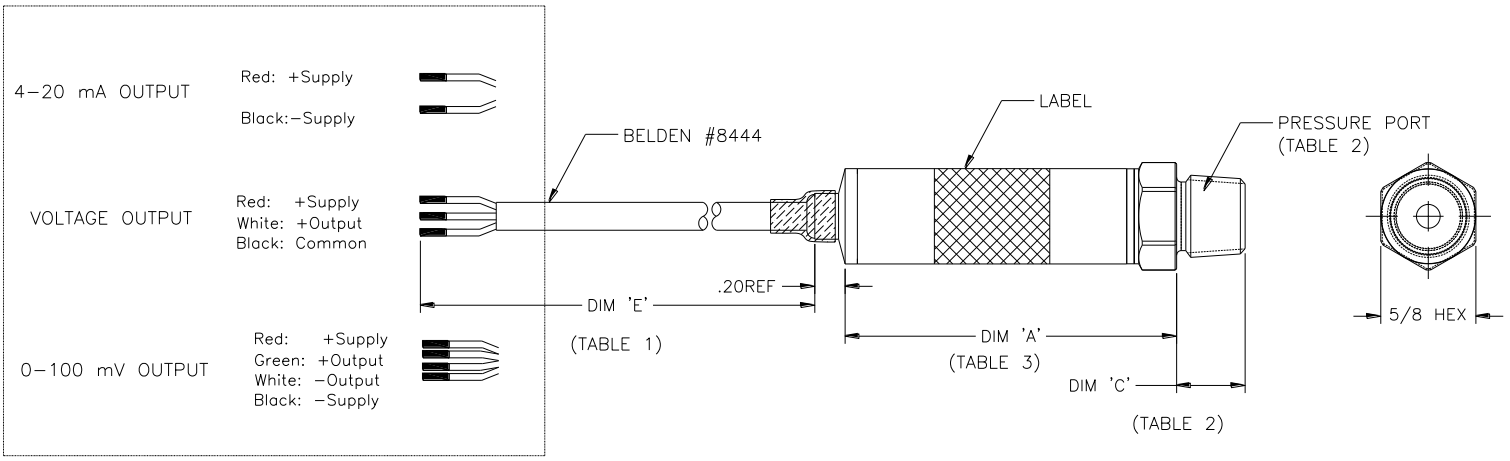
DIMENSIONS



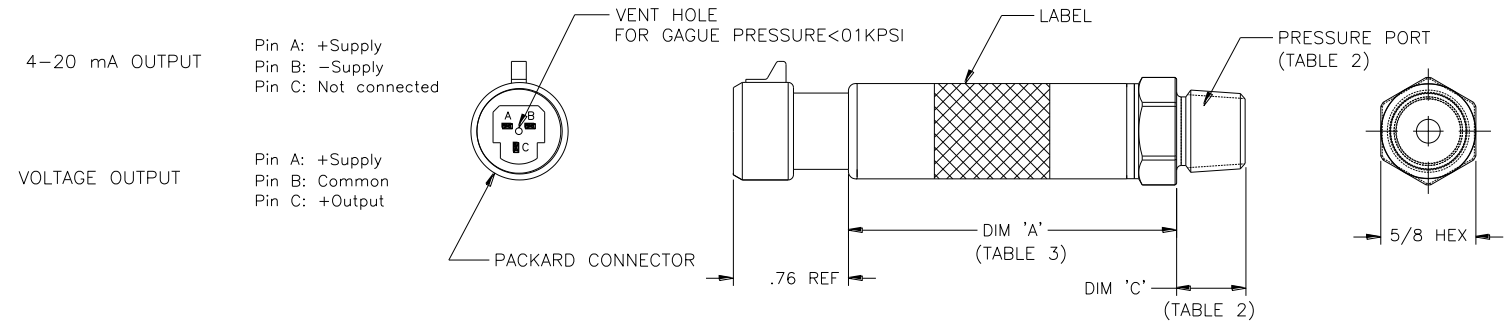


TABLE 1 : CONNECTION		
CODE	CONNECTION	DIM 'E'
1	CABLE,BELDEN #8444 2 FEET	24"±1"
2	CABLE,BELDEN #8444 4 FEET	48"±2"
3	CABLE,BELDEN #8444 10 FEET	120"±4"
4	PACKARD CONNECTOR	-

TABLE 2: PRESSURE PORT		
CODE	PRESSURE PORT	DIM 'C'
2	1/4-19 BSPP	0.45 [11.43]
4	7/16-20 UNF Male SAE J514 Straight Thread Boss O-Ring Buna-N 70SH -904, ID8.92mm X W1.83mm	0.33 [8.38]
5	1/4-18 NPT	0.45 [11.43]
6	1/8-27 NPT	0.32 [8.13]

DIM 'A'	TABLE 3			
	CONNECTION	V/mA OUTPUT		mV OUTPUT
		<1000 PSIG/A	≥1000 PSIG/A	
	CABLE	2.18" MAX	2.24" MAX	1.21"
	PACKARD	2.14" MAX	2.19 MAX	-

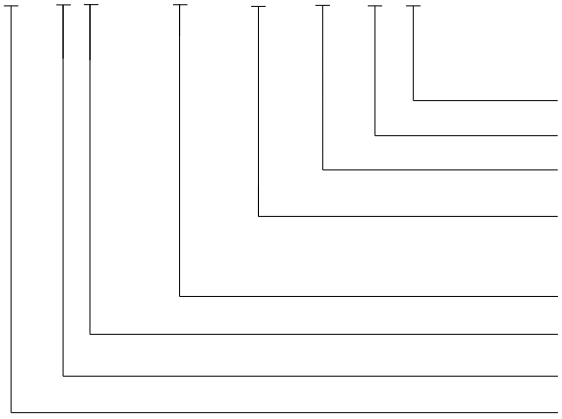
OUTPUT OPTIONS

Code	Output	Supply (V) MIN	TYP	MAX
2	0 – 100mV (Constant Voltage 10mV/V Output)	2.5	10	14
3	0.5 – 4.5 V (Ratiometric @ 5V)	4.75	5	5.25
4	1 – 5 V	8		30
8	4 – 20 mA	9		30

Packard connector not available with mV output

ORDERING INFORMATION

US381-000005-500PG



Type (A = Absolute, G = Gage)
Units (P = psi, B = Bar)
Pressure Range (See Pressure Range Table)
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 Ratiometric, 3 = 0.5 - 4.5V, 4 = 1 - 5V, 8 = 4 - 20mA)
Model

联系方式

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