

MSP300 Pressure Transducer



- OEM and End User
- One Piece Pressure Port Construction
- No O-Rings
- No Silicon Oil
- No Welds

DESCRIPTION

The MSP300 pressure transducer from the Microfused line of MEAS sets a new price performance standard for low cost, high volume, commercial and 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 or 316L 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.

MEAS' proprietary Microfused technology, derived from demanding aerospace applications, employs micromachined silicon piezoresistive strain gages fused with high temperature glass to a stainless steel diaphragm. This approach achieves media compatibility simply and elegantly while providing an exceptionally stable sensor without the PN junctions of conventional micromachined sensors.

This product is geared towards OEM customers in small to high volumes. Standard configurations are suitable for many applications. Please contact factory for your customization needs.

FEATURES

- One Piece Stainless Steel Construction
- Ranges up to 10kpsi or 700Bar
- mV or Amplified Outputs
- Excellent Accuracy
- Wide Operating Temperature Range

APPLICATIONS

- Pumps and Compressors
- Hydraulic/Pneumatic Systems
- Automotive Test Systems
- Energy and Water Management
- Agriculture – Sprayers and Dusters
- Refrigeration – Freon and Ammonia Based
- General Pressure Measurements

STANDARD RANGES (ALL INTERMEDIATE RANGES ARE STANDARD)

Range (psi)	Range (Bar)	Gage/Compound	Range (Bar DIN)	Gage/Compound
0 to 100	0 to 007	•	0 to 010	•
0 to 200	0 to 010	•	0 to 016	•
0 to 300	0 to 020	•	0 to 025	•
0 to 500	0 to 035	•	0 to 040	•
0 to 01k	0 to 070	•	0 to 060	•
0 to 03k	0 to 200	•	0 to 100	•
0 to 05k	0 to 350	•	0 to 160	•
0 to 10k	0 to 700	•	0 to 250	•
			0 to 400	•
			0 to 600	•
			0 to 01k	•

MSP300 Pressure Transducer

PERFORMANCE SPECIFICATIONS

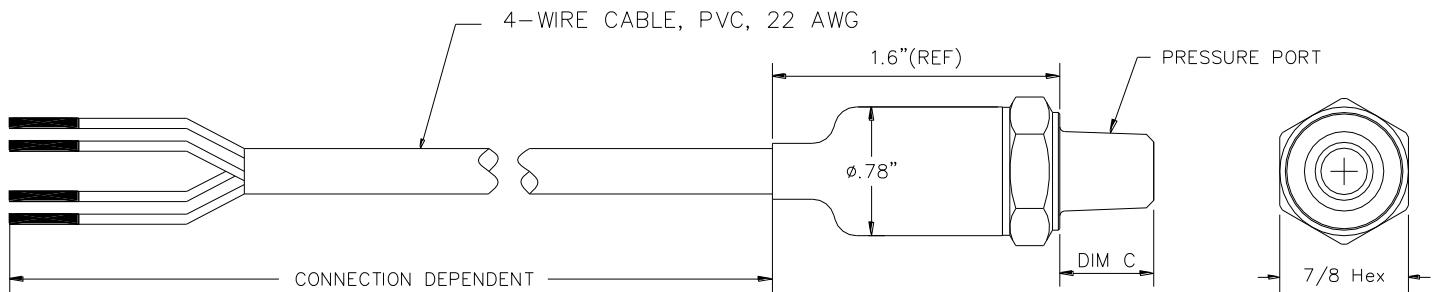
Supply Voltage: 5.0V, Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Accuracy (RSS combined Non Linearity, Hysteresis & Repeatability)	-1		1	% F.S.	BFSL @ 25°C
Pressure Cycles	1.00E+6			0~F.S. Cycles	
Proof Pressure	2X			F.S. Rated	
Burst Pressure	5X			F.S. Rated	
Isolation, Body to Any Lead	50			MΩ	@ 250Vdc
Long Term Stability (1 year)	-0.25		0.25	%F.S.	
Zero Thermal Error	-2.0		2.0	%F.S.	Over comp temp
Span Thermal Error	-2.0		2.0	%F.S.	Over comp temp
Zero Offset (mV Output)	-3.0		3.0	%F.S.	@ 25°C
Zero Offset (V Output)	-2.0		2.0	%F.S.	@ 25°C
Span Tolerance	-2.0		2.0	%F.S.	@ 25°C
Compensated Temperature	0		55	°C	
Operating Temperature	-20		+85	°C	
Storage Temperature	-40		+85	°C	
Load Resistance (R _L , mV Output)	1			MΩ	
Load Resistance (R _L , V Output)	5			KΩ	
Response Time		1		ms	
Bandwidth	DC to 1KHz (typical)				
Shock	50g, 11 msec Half Sine Shock per MIL-STD-202G, Method 213B, Condition A				
Vibration	±20g, MIL-STD-810C, Procedure 514.2-2, Curve L				
Wetted Material (except elastomer seal)	17-4PH or 316L Stainless Steel				

For custom configurations, consult factory.

MSP300 Pressure Transducer

DIMENSIONS



CODE	PORT	DIM C
2	1/4-19 BSPP	0.453 [11.50]
4	7/16-20UNF MALE SAE J1926-2 STRAIGHT THREAD O-RING BUNA-N 90SH-904	0.435 [11.05]
5	1/4-18 NPT	0.596 [15.14]
6	1/8-27 NPT	0.475 [12.06]
E	1/4-19 BSPT	0.50 [12.70]
F	1/4-19 BSPP FEMALE	0.70 [17.78]
K	1/8-27 NPT FEMALE	0.70 [17.78]
P	7/16-20UNF FEMALE SAE J513 STRAIGHT THREAD WITH INTEGRAL VALVE DEPRESSOR	0.689 [17.50]
Q	M10 x 1.0 mm	0.42 [10.67]
S	M12 x 1.5 mm	0.53 [13.46]
U	G/14 DIN 3852 FORM E GASKET DIN3869-14 NBR	0.547 [13.90]
W	M20 x 1.5 mm	0.702 [17.83]

CODE	CONNECTION TYPE
1	CABLE 2 FT
2	CABLE 4 FT
3	CABLE 10 FT
M	CABLE 1 M
N	CABLE 2 M
P	CABLE 5 M
R	CABLE 10 M

OUTPUT OPTIONS

Code	Output	Supply	Ratiometricity	Red	Black	Green	White
1	0 – 10mV/V	5V	Yes	+Supply	-Supply	+Output	-Output
2	0 – 20mV/V	5V	Yes	+Supply	-Supply	+Output	-Output
3	0.5 – 4.5V	5 ± 0.25V	Yes	+Supply	Common	Cut Off	+Output
4	1 – 5V	8 – 30V	No	+Supply	Common	Cut Off	+Output
5	4 – 20mA	9 – 30V	No	+Supply	-Supply	Cut Off	Cut Off

MSP300 Pressure Transducer

ORDERING INFORMATION

M30	2	1	-	0	0000	5	-	100P			G
Model	Output	Connection Type	-	Port Material	0000	Pressure Port	-	Pressure Range			Pressure Type
M30	1 = 0 – 10mV/V 2 = 0 – 20mV/V 3 = 0.5 – 4.5V 4 = 1 – 5V 5 = 4 – 20mA	1 = Cable 2 ft 2 = Cable 4 ft 3 = Cable 10 ft M = Cable 1 m N = Cable 2 m P = Cable 5 m R = Cable 10 m	-	0 = 17-4PH W = 316L	0000	2 = 1/4-19 BSPP 4 = 7/16-20UNF Male SAE J1926-2 Straight Thread O-Ring BUNA-N 90SH-904 5 = 1/4-18 NPT 6 = 1/8-27 NPT E = 1/4-19 BSPT F = 1/4-19 BSPP Female K = 1/8-27 NPT Female P = 7/16-20UNF Female SAE J513 Straight Thread with Integral Valve Depressor Q = M10 x 1.0 mm S = M12 x 1.5 mm U = G1/4 DIN 3852 Form E Gasket DIN3869-14 NBR W = M20 x 1.5 mm	-	100P 200P 300P 500P 01KP 03KP 05KP 10KP	007B 010B 020B 035B 070B 200B 350B 700B	DIN 010B 016B 025B 040B 060B 100B 160B 250B 400B 600B 01KB	G = Gage C = Compound

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 518057
 China
 Tel: +86 755 3330 5088
 Fax: +86 755 3330 5099
 Sales: pfg.cs.asia@meas-spec.com

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TE Connectivity:

[MSP-300-2K5-P-4-N-1](#) [MSP-300-100-P-3-N-1](#) [MSP-300-05K-P-2-N-1](#) [MSP-300-250-P-3-N-1](#) [MSP-300-01K-P-5-N-1](#)
[MSP-300-100-P-2-N-1](#) [MSP-300-500-P-2-N-1](#) [MSP-300-2K5-P-2-N-1](#) [MSP-300-250-P-4-N-1](#) [MSP-300-01K-P-2-N-1](#)
[MSP-300-100-P-5-N-1](#) [MSP-300-500-P-5-N-1](#) [MSP-300-250-P-2-N-1](#) [MSP-300-05K-P-4-N-1](#) [MSP-300-500-P-4-N-1](#)
[MSP-300-100-P-4-N-1](#) [MSP-300-05K-P-5-N-1](#) [MSP-300-2K5-P-3-N-1](#) [MSP-300-01K-P-3-N-1](#) [MSP-300-250-P-5-N-1](#)
[MSP-300-2K5-P-5-N-1](#) [MSP-300-01K-P-4-N-1](#) [MSP-300-500-P-3-N-1](#) [MSP-300-250-P-4-N-A](#) [MSP-300-10K-P-5-N-1](#)
[M3031-000005-05KPG](#) [M3051-000005-250PG](#) [M3041-000005-250PG](#) [M3031-000005-250PG](#) [M3041-000005-](#)
[2K5PG](#) [M3041-000006-01KPG](#) [M3021-000005-05KPG](#) [M3031-000005-2K5PG](#) [M3041-000006-250PG](#) [M3031-](#)
[000005-100PG](#) [M3021-000005-2K5PG](#) [M3041-000005-100PG](#) [M3051-000005-01KPG](#) [M3021-000005-100PG](#)
[M3041-000006-500PG](#) [M3041-000006-100PG](#) [M3031-000005-10KPG](#) [M3031-000005-500PG](#) [M3041-000005-05KPG](#)
[M3051-000005-100PG](#) [M3041-000005-500PG](#) [M3031-000005-01KPG](#) [M3041-000005-01KPG](#) [M3051-000005-](#)
[500PG](#) [M3051-000006-100PG](#) [M3021-000005-10KPG](#) [M3021-000005-1K5PG](#) [M3021-000005-01KPG](#) [M3051-](#)
[000005-05KPG](#) [M3051-000002-007BG](#) [M3051-000002-017BG](#) [M3021-000002-070BG](#) [M3021-000002-017BG](#)
[M3021-000002-035BG](#)