

MSP 340

Stainless Steel Isolated Pressure Transducer

Low Cost OEM; 100% Leak Proof No "O" Rings, No Silicon Oil, No Welds

The MSP 340 series pressure transducers from the Microfused™ line of MEAS, 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 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 while elegantly providing an exceptionally stable sensor

without the p-n junctions of conventional micromachined sensors.

This product is geared to the OEM customer using medium to high volumes. The standard version is suitable for many applications, but the dedicated design team at our Transducer Engineering Center stands ready to provide a semi-custom design where the volume and application warrants.



FEATURES

- ◆ One-Piece Stainless Steel Construction
- ◆ Ranges up to 15,000 PSI or 1000 BAR
- ◆ Millivolt or Amplified Outputs
- ◆ Ultra Compact Construction
- ◆ Hermetically Isolated Sensor Technology

APPLICATIONS

- ◆ Pumps and Compressors
- ◆ Hydraulic/Pneumatic Systems
- ◆ After Market Automotive
- ◆ Tank Pressure in Breathing Apparatuses
- ◆ Pressure Instrumentation
- ◆ Refrigeration - Freon and Ammonia Based
- ◆ Agriculture - Sprayers and Dusters

Environmental Performance

Operating temperature range	-4 to 185°F (-20 to 85°C), (For other temperature ranges consult factory)
Compensated temperature range	30 to 130°F (0 to 55°C)
Zero thermal error	<±2% of FS
Span thermal error	<±2% of FS
Storage temperature range	-40 to 185°F (-40 to 85°C)
Shock	50g, 11msec half sine shock per MIL standard 202F, method 213B, condition A
Vibration	±20g MIL-STD-810C, Procedure 514.2, Figure 514.2-2, curve L

mechanical specifications

Performance at 77° F (25° C)

Pressure range	0 to 50, 100, 300, 500, 1000, 3000, 5000, 10000, 15000 PSI (3, 5, 7, 10, 20, 35, 70, 100, 200, 350, 500, 700, 1000 BAR)
Accuracy (combined linearity, hysteresis and repeatability)	<1% of FS (for higher accuracy consult factory)
Media compatibility	17-4 PH stainless steel (for 316L stainless steel consult factory)
Pressure ports*	7/16-20 UNF, 1/4 NPT, 1/8 BSP, 1/8 NPT (other options consult factory)
Pressure cycles	>10 ⁸ full pressure cycles
Pressure overload	2X rated pressure
Burst pressure	5X or 20000 PSI whichever is less
Long term stability (1 year)	±0.25% FS (Typical)

Electrical:

Supply voltage	5VDC	10-30VDC
Supply current	<10mA	<15mA
Outputs	0-100mVDC, ratiometric to supply	1-5VDC fixed
Interface	0.5-4.5VDC, ratiometric to supply 2 ft. of PVC jacketed cable or Packard connector (for other options consult factory)	
Output load	1M Ohm for millivolt output/5K Ohm min for high level voltage	
Noise	<2mVRMS - for amplified	
Bandwidth (-3dB)	DC to 1KHz - for amplified	

*some ports have range limits.

ordering information

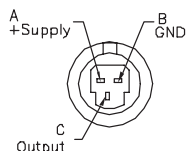
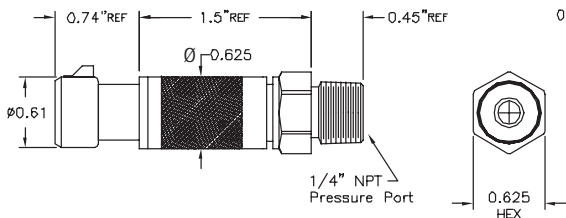
M34	Output	Electrical Connection	Specials/Options	Port type	Pressure Range	Pressure Unit
M34	X	X -	XXXXX	X	XXXX	X
	2= 0 to 100mV (1) 3=.5 to 4.5V ratio 4 = 1 to 5V	1= cable 2 feet 4 = Integral Packard	For non-standard the standard number of "00000" changes to a higher value i.e. 1XXXX Option: W=316L wetted material. Standard number "00000" changes to "W0000"	2=1/4-19 BSP (G1/4) 3=1/8 BSP (G1/8) 4= 7/16-20 UNF 5=1/4-18 NPT 6= 1/8-27 NPT	PSI Ranges 050P = 0 to 50psi 100P = 0 to 100psi 300P = 0 to 300psi 500P = 0 to 500psi 01KP = 0 to 1Kpsi 03KP = 0 to 3Kpsi 05KP = 0 to 5Kpsi 10KP = 0 to 10Kpsi 15KP = 0 to 15Kpsi	G = gauge Bar Ranges 003B = 0 to 3 Bar 005B = 0 to 5 Bar 007B = 0 to 7 Bar 0010B = 0 to 10 Bar 020B = 0 to 20 Bar 035B = 0 to 35 Bar 070B = 0 to 70 Bar 100B = 0 to 100 Bar 200B = 0 to 200 Bar 350B = 0 to 350 Bar 500B = 0 to 500 Bar 700B = 0 to 700 Bar 01KB = 0 to 1000 Bar
	X=Special output			X= special port		

Notes: 1) Millivolt versions can only be supplied with cable
2) Bold = Stocking standards 3) Some combinations may have minimum quantity requirements

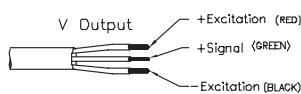
mechanical dimensions

Packard Connector Version

Model: M3434 -000005-100 PG

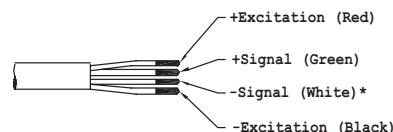
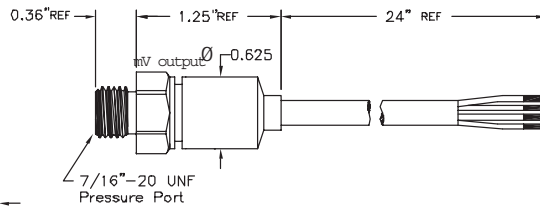


CONNECTIONS



Cable Version

Model: M3421-000004-100 PG



*Not used with output option 3