

Bulletin 2412-91

Model 2412

Bonded Strain Gage Differential Pressure Transducer

*High Differential Overload Pressure,
High Line Pressure Capability*

Features:

- All austenitic materials -case and wetted cavity.
- Removable pressure caps facilitate inspection and cleaning of pressure media cavity.
- 1200 PSI differential overload pressure.
- 20-36 Vdc unregulated excitation.
- DC isolation from signal output to excitation.
- Output short circuit protected.
- True differential pressure measurement.

Options:

- Pressure fitting per MS33656-4.
- Internal shunt.
- Special electrical receptacles.



Pressure Ranges:

PSID	BAR
0-1	0-689m
0-2	0-138m
0-3	0-207m
0-5	0-345m
0-10	0-689m
0-15	0-1.03
0-20	0-1.38
0-25	0-1.72
0-30	0-2.07
0-50	0-3.45
0-75	0-5.17
0-100	0-6.89
0-150	0-10.3
0-200	0-13.8
0-250	0-17.2
0-300	0-20.7
0-400	0-27.6
0-500	0-34.5

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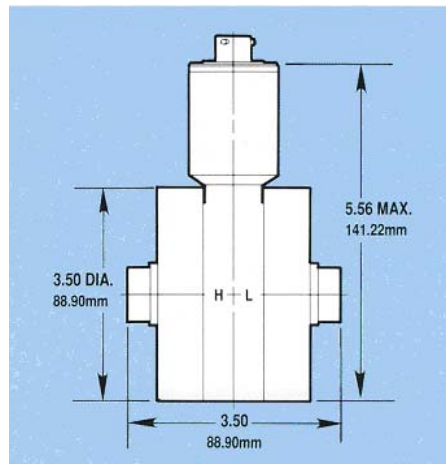
Bonded Strain Gage Differential Pressure Transducer

Specifications:

Materials of Construction	Case and Pressure Caps: 316 Stainless Steel Diaphragms: 347 Stainless Steel Pressure Cap O-Ring: Teflon® Fill Fluid: Krytox® Oil
Full Scale Output	5.000 ±0.050 Vdc for a 50k ohm load or greater for high side.
Zero Balance	0.000 ±0.50Vdc at +70°F (+21°C). 0.000 ±0.10Vdc for 1 PSID range.
Zero Shift with Line Pressure	Within ±1% FSO typical. Within ±3% FSO typical for 1, 2 and 3 PSID ranges.
Linearity	Within ±0.25% FSO. Within ±0.50% FSO for 1 PSID range.
Hysteresis	Within 0.25% FSO. Within 0.50% FSO for 1, 2 and 3 PSID ranges.
Repeatability	Within 0.20% FSO.
Resolution	Infinite.
Differential Overload Pressure (Toggle)	1200 PSID may be applied to either port without causing a zero shift greater than ±1% FSO, ±2% FSO for 1 PSID range.
Rated Line Pressure	1200 PSIG maximum.
Compensated Temperature Range	-10°F to + 160°F (-23°C to +71°C).
Operating Temperature Range	-40°F to +185°F (-40°C to +85°C).
Thermal Sensitivity Shift	Less than ±0.020% FSO per °F over compensated temperature range (±0.036% FSO per °C).
Thermal Zero Shift	Less than ±0.010% FSO per °F over compensated temperature range. Less than ±0.020% FSO per °F for 1, 2 and 3 PSID ranges. (±0.018% FSO per °C and ±0.036% FSO per °C).
Excitation	20 to 36 volts dc unregulated. Reverse polarity protected. ±100 volts 10 microsecond spikes will not cause permanent damage.

Specifications:

Current Drain	35 mAdc typical.
Output Impedance	25 ohms typical.
Output Noise	Less than 15 millivolts peak to peak at less than 300 kHz.
Insulation Resistance	Greater than 1000 megohms at 50 Vdc between all terminals in parallel and case at +70°F (+21°C).
DC Isolation	Greater than 1000 megohms at 50 Vdc from excitation to signal output terminals at +70°F (+21°C).
Pressure Connection	7/16-20 internal thread per MS33649-4. Options available.
Pressure Cavity Volume	.50 in ³ (8.2 ml) excluding MS33649-4 fitting.
Electrical Receptacle	Stainless steel hermetic receptacle to mate with MS3116-10-6S. Standard wiring: Excitation +A, -D; Signal +B, -C; No Connection E, F. Options available.
Enclosure	Entirely welded and hermetically sealed stainless steel.
Weight	Approximately 6.5 pounds (3.0 kg).



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