

Bulletin 2417-91

Model 2417

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 |
| 0-1000 | 0-68.9 |

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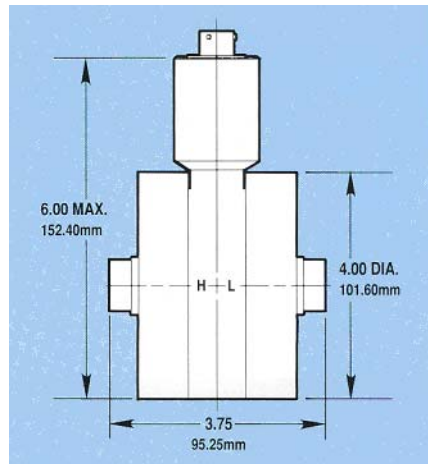
Bonded Strain Gage Differential Pressure Transducer

Specifications:

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|---|--|
| 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 ±0.50 Vdc at +70°F (+21°C). 0.000 ±0.100 Vdc for 1 PSID range. |
| Zero Shift with Line Pressure | Within ±0.5% FSO per 1000 PSI typical. Within ±1.0% FSO per 1000 PSI 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 | 5000 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 9.5 pounds (4.3 kg). |



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