DT19XX Series

Differential Pressure Transducers and Transmitters

Request a Quote

Description

DT19XX Series differential pressure transducers and transmitters are compact, reliable, and rugged wet-wet differential pressure sensors with high differential pressure capability. In addition, DT19XX Series differential pressure transmitters are designed with internal signal conditioning. Customers can select 4-20 mA current outputs, numerous voltage outputs, as well as digital outputs including RS232, RS485, and CANbus. DT19XX Series differential pressure sensors are constructed of all welded stainless steel and are more robust than fluid filled differential pressure transducers with bolted construction. DT19XX Series is free of any fluid fill and thus has expanded temperature ranges. The smaller size and all welded construction make these units ideal for applications exhibiting higher levels of shock and vibration. Other key design features include long term stability, and both bidirectional and unidirectional outputs. Each DT19XX Series unit is shipped with a 15 point calibration record traceable to NIST as standard.

Standard Features

- All Welded Stainless Steel
- Compact Size
- Amplified Output (Analog and Digital)
- No Fluid Fill
- Ranges From 15 to 20,000 psid
- Unidirectional and Bidirectional Operation
- 15 Point Calibration Record Traceable to NIST

Optional Features

- Customer Specified Electrical Termination
- Customer Specified Pressure Ports
- Submersible Versions
- Alternative Materials
- Special Calibrations

LORD SENSING
Stellar Technology

LORD DATA SHEET

PERFORMANCE

Static Accuracy
± 0.25% FSO by BFSL
± 0.10% FSO by BFSL (optional)
Resolution
Analog: Infinite
Digital: 0.025% FSO
Thermal Error
< ± 0.020% FSO/°F (typical)
Zero Balance
±1.0% FSO at 70°F
Zero Shift with Line Pressure
±1.0% FSO at 70°F

MECHANICAL CHARACTERISTICS

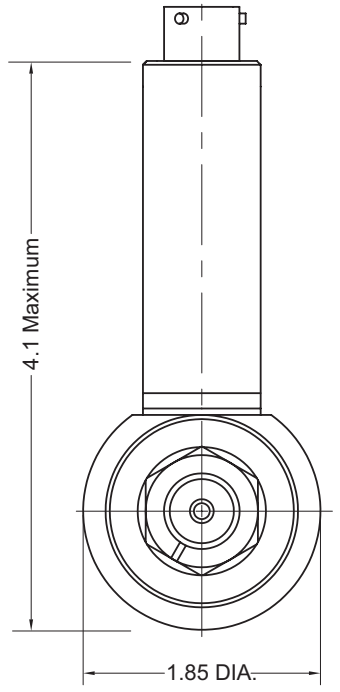
Standard Ranges
0-15, 25, 50, 75, 100, 150, 250, 500, 1000, 2000, 5000, 10000, 20000 psid
Bidirectional or Unidirectional
Maximum Line Pressure
5X differential pressure range or 60000 psi, whichever is less
Safe Overload Pressure
Safe overload pressure = maximum line pressure on either side.
(Note: When selecting a DT19XX, it is important to state what the maximum pressure is on either side.)
Operating Media
Fluids and gases compatible with 17-4 stainless steel
(Inconel and other materials optional)
Pressure Fitting
For line pressures 15 psi thru 10000 psi:
1/4" NPT Male (Standard)
1/4" NPT Female (No charge option)
7/16"-20 per AS4395E4 / MS33656-4 (Male) – (No charge option)
7/16"-20 per AS5202E4 / MS33649-4 (Female) – (No charge option)
For line pressures >10000 psi thru 60000 psi:
AE F250-C, 9/16"-18 UNF, or equivalent (Standard)
For additional pressure fittings, please consult factory.

Enclosure
Body and pressure cavity of stainless steel, environmentally sealed
Weight
Approximately 16 oz.

ELECTRICAL CHARACTERISTICS

ANALOG OUTPUTS
Excitation
4-20mA Current Loop: 9-36 Vdc
Isolated Voltage Output (0-5 Vdc, 0-10 Vdc):
14-32 Vdc (standard)
8-18 Vdc (No charge option)
Non-Isolated Voltage Output:
8-40 Vdc for 1-5 Vdc, 3-wire (standard)
8-40 Vdc for 1-6 Vdc, 3-wire (No charge option)
8-40 Vdc for 0-5 Vdc, 4-wire (No charge option)
Additional outputs and related excitations available.
DIGITAL OUTPUTS
Excitation
RS-232, RS-485: 8-30 Vdc
CANbus:
4-18 Vdc (standard)
14-32 Vdc (optional)
Programming
PC
DUAL OUTPUTS (Analog & Digital)
Excitation
3-wire Current plus Digital: 12-32 Vdc
Isolated Voltage plus Digital: 14-32 Vdc
Non-Isolated Voltage plus Digital: 8-30 Vdc
COMMON
Insulation Resistance
> 100 megohms at 50 Vdc at 70°F
Electrical Termination
PTIH-10-6P stainless steel connector or equivalent
Optional electrical terminations available.
Electrical Protection
- EMI Protected (Optional for Isolated Voltage)
- Surge Protection to 500 Vdc (Optional for Isolated Voltage)
- Reverse Polarity Protected
- Short Circuit Protected

DIMENSIONS (inches)



MODEL IDENTIFICATION

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	Series		Analog Output		Digital Output

Analog Output:
0 = Isolated Voltage
1 = None
2 = Non-Isolated Voltage
5 = 4-20 mA, 2-wire Loop (not available with Digital Output)
6 = 4-20 mA, 3-wire

Digital Output:
0 = None
1 = RS-485
2 = RS-232
4 = CANbus

ENVIRONMENTAL CHARACTERISTICS

Compensated Temperature Range
+30°F to +130°F
Options available
Operating Temperature Range
-40°F to +185°F

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