

Series DT19XX

Differential Pressure Transducers and Transmitters



Description

The Series DT19XX differential pressure transducers and differential pressure transmitters are compact, reliable, and rugged, wet-wet differential pressure sensors with high differential pressure capability. In addition, the DT19XX 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. The Series DT19XX differential pressure sensors are constructed of all welded stainless steel and are more robust than fluid filled differential pressure transducers with bolted construction. The DT19XX 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 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

DT19XX

Series DT19XX Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available

Performance

Static Accuracy

± 0.25% FSO by BFSL.
± 0.10% FSO by BFSL (optional).

Resolution

Analog: Infinite.
Digital: .025% FSO.

Thermal Error

< ± 0.020% FS/°F typical.

Insulation Resistance

> 100 megohms at 50 Vdc at 70°F.

Zero Balance

±1% FSO at 70°F.

Mechanical Characteristics

Standard Ranges

0-15, 25, 50, 75, 100, 150, 250, 500,
1000, 2000, 5000, 10,000, 20,000 PSID
Bidirectional or Unidirectional.

Maximum Line Pressure

5X differential pressure range or
60,000 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 pressure 15 psi thru 10,000 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 pressure 15,000 psi thru 60,000 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 for 2-wire.
9-36 Vdc for 3-wire.
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.

Environmental Characteristics

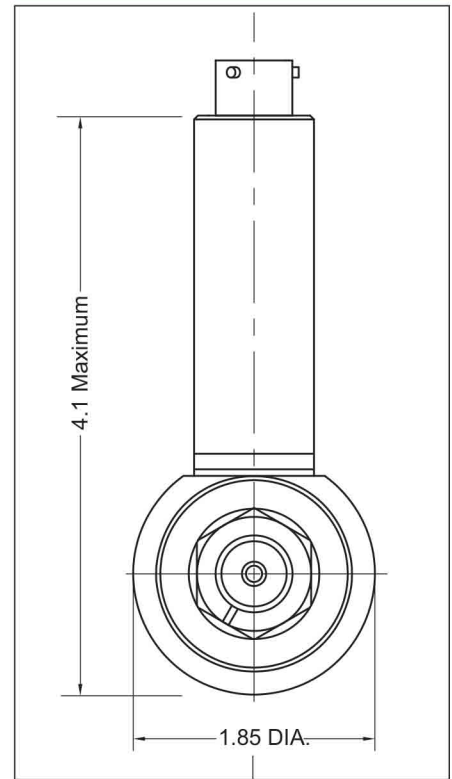
Compensated Temperature Range

+30°F to +130°F.
Options available.

Operating Temperature Range

-40°F to +185°F.

Dimensions (inches)



MODEL IDENTIFICATION

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SERIES		ANALOG OUTPUT		DIGITAL OUTPUT	
		0 = Isolated Voltage		0 = None	
		1 = None		1 = RS-485	
		2 = Non-Isolated Voltage		2 = RS-232	
		5 = 4-20 mA 2-wire Loop (not available with Digital Output)		4 = CANbus	
		6 = 4-20 mA 3-wire			

Modifications and Warranty

MODIFICATIONS: We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.

WARRANTY: Stellar Technology warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Stellar Technology's obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.

LORD
Stellar Technology

ISO 9001/AS9100

Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.
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