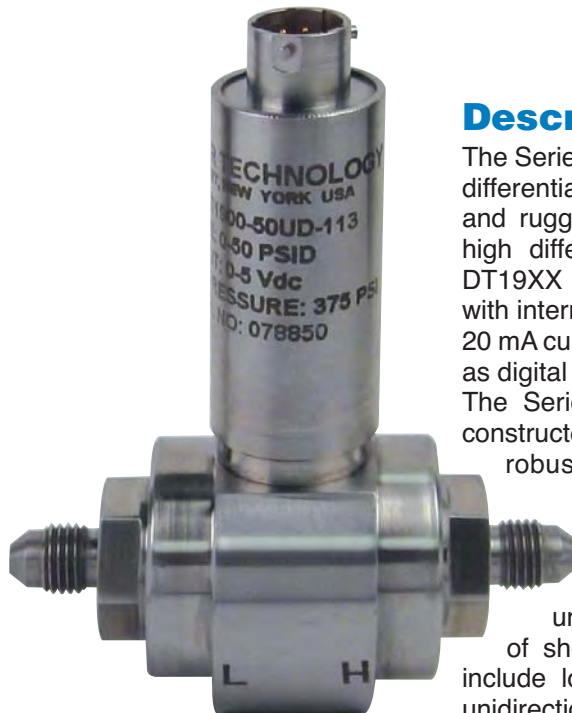


# Series DT19XX

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 19 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 50 to 40,000 psid
- Unidirectional and Bidirectional Operation
- 19 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.

### Zero Shift with Line Pressure

1X line pressure to 5X line pressure.  
±1% FSO at 70°F.  
>5X line pressure.  
±2% FSO at 70°F.

## Mechanical Characteristics

### Standard Ranges

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

### Line Pressure

Up to 5X differential pressure range  
(standard)

### Safe Overload Pressure

1.5 X Max line pressure

### Operating Media

Fluids and gases compatible with 17-4  
stainless steel. (Inconel and other  
materials optional).

### Pressure Fitting

(For line pressure 5 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 40,000 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, CANbus.  
8-30 Vdc.

#### 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

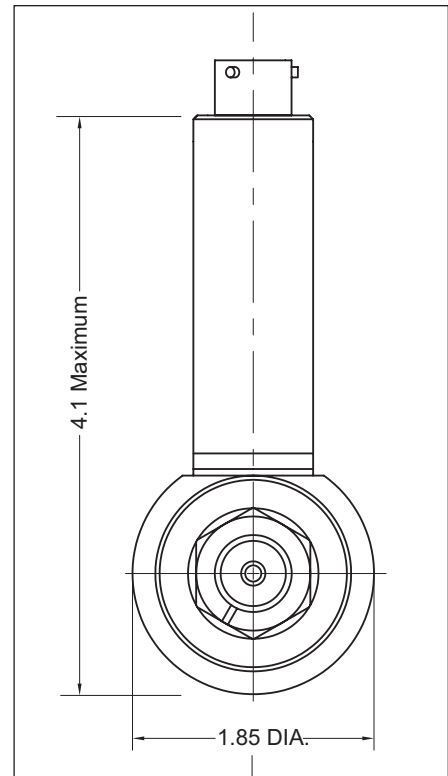
### Compensated Temperature Range

+30°F to +130°F.  
Options available.

### Operating Temperature Range

-40°F to +185°F.

## Dimensions (inches)



## MODEL IDENTIFICATION

D	T	1	9	X	X
SERIES					
			ANALOG OUTPUT		DIGITAL OUTPUT
			0 = Isolated Voltage	1 = RS-485	0 = None
			1 = None	2 = RS-232	1 = RS-485
			2 = Non-Isolated Voltage	4 = CANbus	2 = RS-232
			5 = 4-20 mA 2-wire Loop (not available with Digital Output)		4 = CANbus
			6 = 4-20 mA 3-wire		

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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.

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