

## DT190 Series

### Differential Pressure Transducers

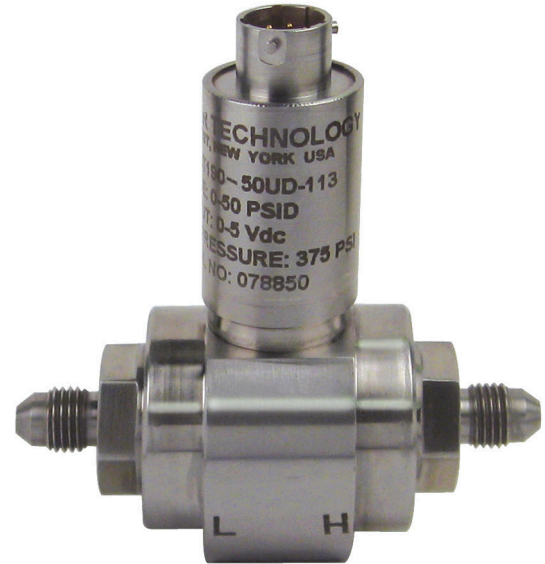
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#### Description

DT190 Series differential pressure transducers are compact, reliable, and rugged wet-wet differential pressure sensors with high differential pressure capability. DT190 Series differential pressure sensors are constructed of all welded stainless steel and are more robust than fluid filled differential pressure transducers with bolted construction. DT190 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 DT190 Series transducer is shipped with a 15 point calibration record traceable to NIST as standard.

#### Standard Features

- All Welded Stainless Steel
- Compact Size
- Wide Temperature Capabilities
- No Fluid Fill
- Ranges From 50 to 40,000 psid
- Unidirectional and Bidirectional Operation
- 0.25% Accuracy
- 15 Point Calibration Record Traceable to NIST



#### Optional Features

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

# LORD DATA SHEET

## PERFORMANCE

### Static Accuracy

± 0.25% FSO by BFSL

### Resolution

Infinite

### Thermal Error

< ± 0.020% FSO/°F typical

### Zero Balance

± 1% FSO at 70°F

### Full Scale Output

1.5 ± 0.008 mV/V at 70°F

### Zero Shift with Line Pressure

± 1% FSO at 70°F

## MECHANICAL CHARACTERISTICS

### Standard Ranges

50, 75, 100, 150, 250, 500, 1000, 2000,  
5000, 10000, 30000 to 40000 psid  
Bidirectional or Unidirectional

### Maximum Line Pressure

1.5 X differential pressure range

### Safe Overload Pressure

Safe overload pressure = maximum line  
pressure on either side

(Note: When selecting a DT190, 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)

### Enclosure

Body and pressure cavity of stainless  
steel, environmentally sealed

## Pressure Fitting

*For line pressures 50 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, (Female) or  
equivalent (Standard)

*For additional pressure fittings, please  
consult factory.*

### Weight

Approximately 16 oz.

## ELECTRICAL CHARACTERISTICS

### Excitation

10 Vdc recommended, 15 Vdc max.

### Input/Output Resistance

350 ohms (nominal)

### Insulation Resistance

> 100 megaohms at 50 Vdc at 70°F

### Electrical Termination

PTIH-10-6P stainless steel connector or  
equivalent

*Optional electrical terminations available.*

### Wiring

PIN A (+) Excitation

PIN B (+) Signal

PIN C (-) Signal

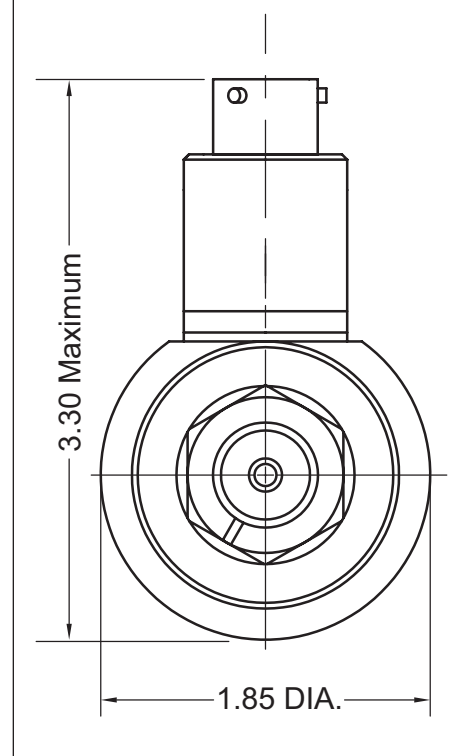
PIN D (-) Excitation

PIN E, F No Connection  
Shunt Available

*Standard configuration shown.*

*Options available.*

## DIMENSIONS (inches)



## ENVIRONMENTAL CHARACTERISTICS

### Compensated Temperature Range

+30°F to +130°F

*Options available*

### Operating Temperature Range

-100°F to +300°F

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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