

# Series DT140

Differential Pressure Transducers



**DT140**

## Description

The Series DT140 pressure transducer is a reliable, rugged, wet-wet differential pressure transducer with a high line pressure capability. The Series DT140 differential pressure sensors are ideal for measuring static differential pressures. The primary design feature is a high differential overload pressure capability. Other key design features include removable pressure ports for inspection and cleaning, long term stability, bidirectional and unidirectional outputs, low sensitivity to shock and vibration, infinite resolution and built in over pressure protection. Each DT140 is constructed of stainless steel. Each unit is shipped with a 19 point calibration record traceable to NIST as standard.

## Standard Features

- Low Differential Pressure Range
- High Line Pressure Overload Protection
- Removable/Cleanable Pressure Ports
- Unidirectional and Bidirectional Operation
- 3 mV/V Output
- 0.25% Accuracy
- All Stainless Steel Construction
- 19 Point Calibration Record Traceable to NIST

## Optional Features

- Higher Base Line Pressures To 5,000 psi (Some ranges to 8,500 psi)
- Submersible Versions
- Customer Specified Electrical Termination
- Customer Specified Pressure Ports
- Alternative Materials
- Special Calibrations

# Series DT140

## Specifications

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

### Performance

#### Static Accuracy

Linearity:  $\pm 0.25\%$  FSO.  
Hysteresis:  $\pm 0.25\%$  FSO.  
Repeatability:  $\pm 0.20\%$  FSO.

#### Resolution

Infinite

#### Thermal Zero Shift

$< \pm 0.010\%$  FSO/ $^{\circ}$ F.

#### Thermal Span Shift

$< \pm 0.020\%$  FSO/ $^{\circ}$ F.

#### Input / Output Resistance

$350 \pm 3.5$  ohms at  $70^{\circ}$ F.

#### Insulation Resistance

$> 10K$  megohms at  $50$  Vdc at  $70^{\circ}$ F.

#### Zero Balance

$\pm 1\%$  FSO at  $70^{\circ}$ F.

#### Full Scale Output

$3.0 \pm 0.015$  mV/V FSO at  $70^{\circ}$ F.

### Mechanical Characteristics

#### Standard Ranges

5, 10, 15, 20, 25, 30, 50, 75, 100, 150,  
200, 250, 300, 400, 500 PSID  
Bidirectional or Unidirectional.

#### Differential Overload Pressure

1000 PSI may be applied to either port  
without causing a zero shift greater than  
1% FSO.

#### Line Pressure

1000 PSI (5000 PSI optional). Zero shift  
with line pressure is less than 1% FS per  
1000 PSI of line pressure.

#### Operating Media

Fluids and gases compatible with  
316 stainless steel, and BUNA-N (std.).  
Fill fluid is Krytox oil.

Optional Hastelloy wetted parts and  
optional O-ring material available.

#### Pressure Fitting

7/16"-20 per AS5202E4 / MS33649-4  
(Female) - (Standard).

1/4" NPT Female (No charge option).

7/16"-20 per AS4395E4 / MS33656-4  
(Male) - (Optional).

1/4" NPT Male (Optional).

For additional pressure fittings please  
consult factory.

#### Enclosure

Body and pressure cavity of  
stainless steel, environmentally sealed.

#### Weight

Approximately 4 lbs.

### Electrical Characteristics

#### Excitation

10 Vdc recommended, 15 Vdc max.

#### 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.

### Environmental Characteristics

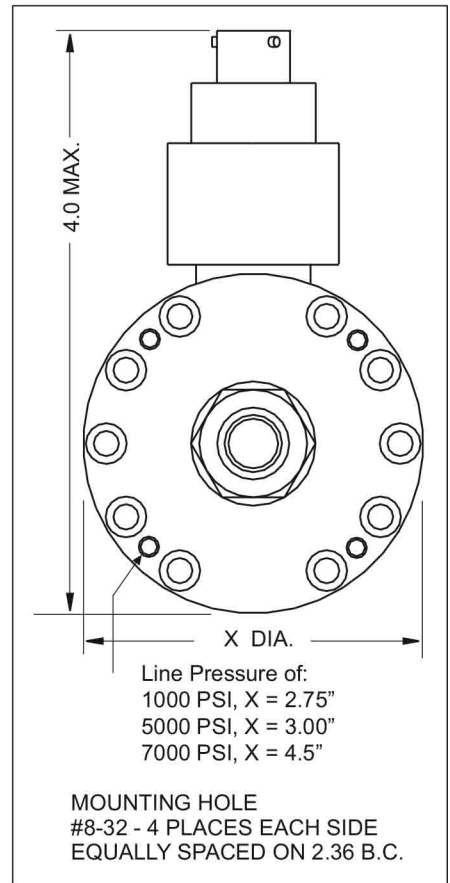
#### Compensated Temperature Range

$-10^{\circ}$ F to  $+160^{\circ}$ F.

#### Operating Temperature Range

$-40^{\circ}$ F to  $+185^{\circ}$ F.

### Dimensions (inches)



### 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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