

Series DT140

Differential Pressure Transducers



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

DT140

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 ± 3.5 ohms at 70° F.

Insulation Resistance

> 10 K megohms at 50 Vdc at 70° F.

Zero Balance

$\pm 1\%$ FSO at 70° F.

Full Scale Output

3.0 ± 0.015 mV/V FSO at 70° 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

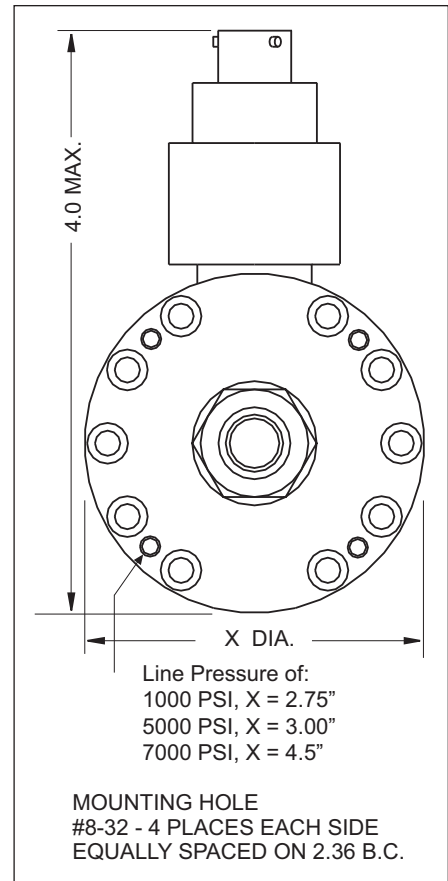
Compensated Temperature Range

-10° F to $+160^{\circ}$ F.

Operating Temperature Range

-40° 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 ISO 9001/AS9100
SENSING

Stellar Technology

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

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