



Series RSP0160

Precision Pressure Transducers

RSP0160



Description

The Series RSP0160 pressure transducers are high accuracy millivolt /volt output sensors designed specifically for applications in very demanding test and measurement environments. The Series RSP0160 pressure transducers offer a unique combination of small size, 0.1% static accuracy, enhanced thermal accuracy, and extended operating temperature range to achieve the results expected in these rigorous conditions. All RSP0160 units are constructed of welded stainless steel. Standard pressure ranges are 15 psi to 40,000 psi in both gage and absolute references. All RSP0160 pressure transducers are shock and vibration resistant. A comprehensive selection of pressure ports, electrical terminations, and temperature compensation ranges are available. Each unit is shipped with a standard 19 point calibration record traceable to NIST.

Standard Features

- $\pm 0.1\%$ FSO Accuracy
- 25.4 mm O.D.
- Stainless Steel Construction
- Ranges to 40K
- Improved Temperature Performance
- 19 Point Calibration Record
- Extended Operating Temperature Range

Optional Features

- Alternate Materials of Construction
- Customer Specified Pressure Ports
- Customer Specified Electrical Connectors
- Temperature Compensation Available Between -195°C to $+204^{\circ}\text{C}$
- Shunt Calibration

Series RSP0160 Specifications

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

Performance

Static Accuracy

± 0.10% FSO.

Resolution

Infinite.

Thermal Zero Shift

< ± 0.009% FSO/°C (typical).

Thermal Sensor Shift

< ± 0.009% FSO/°C (typical).

Zero Balance

±1% FSO at 20°C.

Full Scale Output

2.0 ± 0.010 mV/V at 20°C.

Mechanical Characteristics

Standard Ranges

0 - 15, 30, 50, 75, 100, 200, 500, 750,
1000, 5000, 7500, 10000, 15000, 20000,
25000, 30000, 40000 PSIA / PSIS.

Proof Pressure

15-200 PSI ranges: 500 PSI.
500 PSI range and up: 1.5 X range

Burst Pressure

3 X range or 1500 PSI, whichever
is greater.

Operating Media

Liquids and gases compatible with
316 or 17-4PH stainless steel.

Enclosure

Body and pressure cavity of stainless
steel, hermetically sealed.

Pressure Fitting

(For ranges 15 psi thru 10,000 psi).

BSP G ¼ B Female (Standard)
BSP G ¼ B Male, G ¼ B Female, G ¼ B Male,
¼" NPT Male, ¼" NPT Female (No charge options)
Metric threads available

(For ranges 15,000 psi thru 40,000 psi)

AE F250-C, or HIP HF4, or equivalent (Standard)
Metric equivalent of AE F250-C (No charge option)

For additional pressure fittings
please consult factory

Weight

130 g maximum.

Electrical Characteristics

Excitation

10 Vdc recommended, 15 Vdc maximum.

Input/Output Resistance

350 ± 3.5 ohms at 20°C.

Insulation Resistance

> 10K megaohms at 50 Vdc at 20°C.

Electrical Termination

PTIH-10-6P stainless steel connector
or equivalent.
Optional electrical terminations available.

Environmental Characteristics

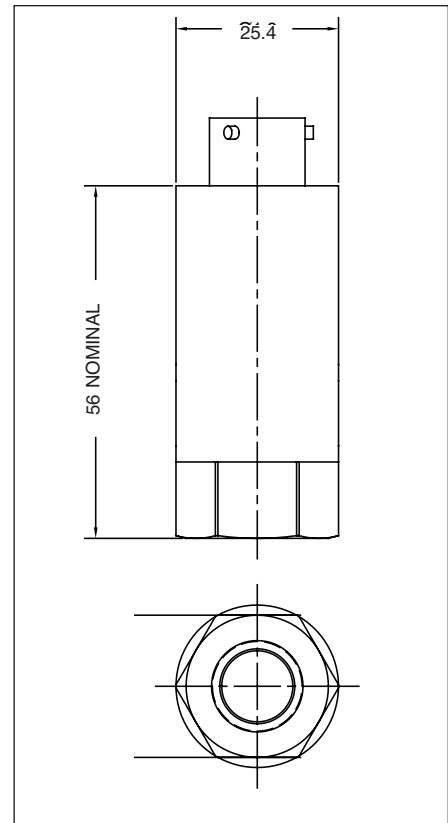
Compensated Temperature Range

-34°C to +76°C.
(options available).

Operating Temperature Range

-50°C to +120°C.

Dimensions (mm)



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: RDP 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 RDP'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 RDP. This warranty is in lieu of all other warranties expressed or implied.

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

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