

# Series RSP0180

Standard Accuracy Pressure Transducers

RSP0180



## Description

The Series RSP0180 pressure transducers are millivolt/volt output units designed to provide reliable and economical pressure sensor solutions for test and measurement applications. The RSP0180 pressure transducers are 0.25% accuracy units with standard pressure ranges from 15 psi to 40,000 psi in gage, absolute, and vacuum references. All RSP0180 pressure transducers are shock and vibration resistant. A comprehensive selection of pressure ports and electrical terminations are available. Each unit is shipped with a standard 15 point calibration record traceable to NIST.

## Standard Features

- $\pm 0.25\%$  Accuracy
- 3 mV/V Output
- Stainless Steel Construction
- Ranges to 40K psi
- Gage, Absolute, Vacuum Ranges
- 15 Point Calibration Record

## Optional Features

- Alternate Materials of Construction
- Customer Specified Pressure Ports
- Customer Specified Electrical Connectors
- Expanded Temperature Compensation
- Shunt Calibration

# Series RSP0180 Specifications

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

## Performance

### Static Accuracy

± 0.25% FSO by BFSL.

### Resolution

Infinite.

### Thermal Error

< ± 0.036% FSO/°C (typical).

### Zero Balance

± 2% FSO at 20°C.

### Full Scale Output

3.0 ± 0.015 mV/V at 20°C.

### Frequency Response

Consult Factory.

## Mechanical Characteristics

### Standard Ranges

0-50, 100, 200, 500, 750, 1000, 3000,  
5000, 7500, 10000, 15000, 20000,  
25000, 30000, 40000 PSIA / PSIG.

### Proof Pressure

1.5 X range.

### Burst Pressure

2.0 X range.

### Operating Media

Fluids and gases compatible with  
316 or 17-4 stainless steel.  
Inconel and other materials optional.

### Enclosure

Body of stainless steel.

### Pressure Fitting

(For ranges 50 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, 9/16-18 UNF (Standard)

Metric equivalent of AE F250-C (No charge option)

For additional pressure fittings  
please consult factory

### Weight

Approximately 140 g.

## Electrical Characteristics

### Excitation

10 Vdc recommended, 15 Vdc maximum.

### Input/Output Resistance

350 ± 20 ohms at 20°C.

### Insulation Resistance

Greater than 10K megaohms at 50 Vdc  
at 20°C.

### Electrical Connection

3 ft. of PVC cable with shield and drain wire.  
Optional electrical terminations available.

## Environmental Characteristics

### Compensated Temperature Range

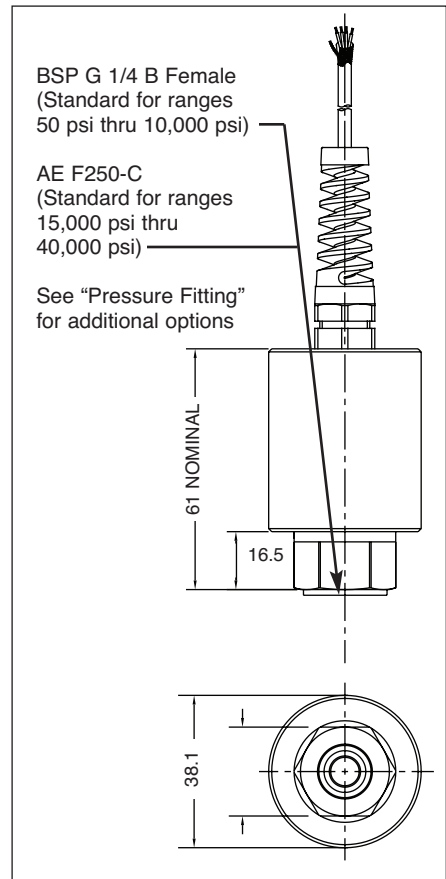
-1°C to +54°C.

Options available.

### Operating Temperature Range

-50°C to +120°C.

## Dimensions (mm)



CE  
0539

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.

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Datasheet P/N: 236788C

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