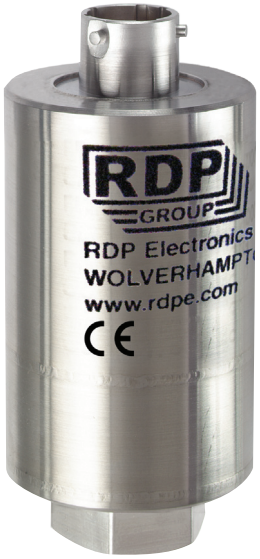
Series RSP0320

High Pressure, Fatigue Rated Pressure Transducers

RSP0320



Description

The Series RSP0320 pressure transducers are mV/V output units designed to address extremely high pressure applications to 100,000 psi. In addition, the special sensor design of the RSP0320 pressure transducer makes it ideal for fatigue rated applications for pressures ranging from 20,000 psi to 50,000 psi. These 0.25% accuracy pressure transducers provide excellent pressure sensor solutions for applications such as homogenizing, fuel injection testing, water jet cutting, and high pressure metal forming. All RSP0320 products are constructed of all-welded stainless steel and are manufactured to be shock and vibration resistant. A comprehensive selection of pressure ports and electrical terminations is available. Each unit is shipped with a 19 point calibration record traceable to NIST as standard.

Standard Features

- **Pressure Ranges To 100,000 psi**
- **Fatigue Rated**
- **mV/V Output**
- **± 0.25% FSO Accuracy**
- **Stainless Steel Construction**
- **Shock and Vibration Resistant**
- **19 Point Calibration Record Traceable to NIST**

Optional Features

- **Customer Specified Electrical Connections**
- **Extended Temperature Compensation Ranges**
- **Special Calibrations**

Series RSP0320
Specifications

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

Performance

Static Accuracy
± 0.25% nominal FSO by BFSL
(Ranges 20000 psi to 75000 psi)

± 0.35% FSO by BFSL
(Ranges >75000 psi to 100,000 psi)

Full Scale Output
2.0 ± 0.02 mV/V @ 20°C.
(Ranges 20000 psi to 75000 psi)

1.0 ± 0.01 mV/V @ 20°C.
(Ranges >75000 psi to 100,000 psi)

Resolution
Analog: Infinite.

Thermal Error
< ± 0.036% FSO/°C (typical).

Span
± 1% FSO at 20°C.

Zero Balance
±1% FSO at 20°C.

Mechanical Characteristics

Standard Ranges
20000, 30000, 40000, 50000
60000, 75000, 100000 PSIA / PSIG.

Proof Pressure
1.5 X range.

Burst Pressure
2.0 X range.

Operating Media
Fluids and gases compatible
stainless steel.

Enclosure
Body of stainless steel.

Pressure Fitting
(For ranges 20,000 psi thru 60,000 psi).
AE F250-C, 9/16”-18 UNF, or equivalent
Female (Standard).
(For ranges 75,000 psi thru 100,000 psi)
AE F312-C150, 5/8”-18 UNF, or equivalent
Female (Standard)
For additional pressure fittings please consult factory.

Weight
Approx. 280 g.

Electrical Characteristics

Excitation
10 Vdc recommended, 15 Vdc max.

Input / Output Resistance
350 ± 3.5 ohms at 20°C.

Insulation Resistance
> 10K megohms at 50 Vdc at 20°C.

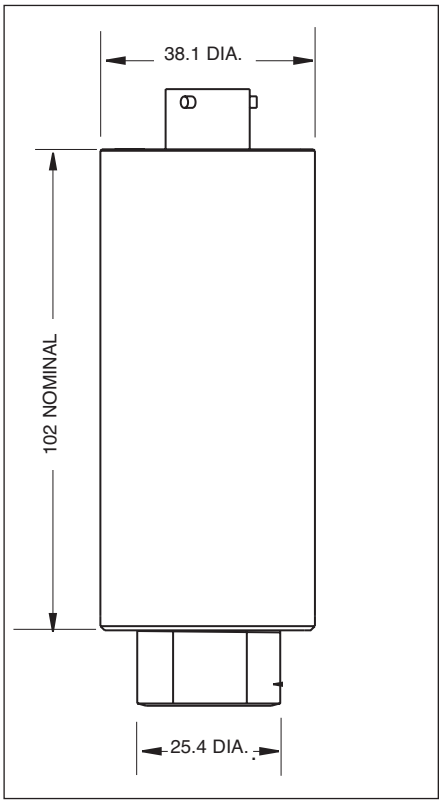
Electrical Termination
PTIH-10-6P stainless steel connector
or equivalent.
Optional electrical terminations available.

Environmental Characteristics

Compensated Temperature Range
-34°C to +76°C.
Options available.

Operating Temperature Range
-50°C to +120°C.

Dimensions (mm)



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.

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

RDP Electronics Ltd. • Grove Street, Heath Town • Wolverhampton WV10 0PY
Tel: 01902 457512 • **Fax:** 01902 452000
E-mail: sales@rdpe.com • **Website:** www.rdpe.com

Copyright © 2010 RDP Electronics Ltd. • All Rights Reserved
Datasheet P/N: 236798D