Data Sheet
P255
Stainless Steel
Pressure Transducer

Main Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Ranges</td>
<td>0 to 15 up to 0 to 1000 PSI</td>
</tr>
<tr>
<td>Electrical Connection</td>
<td>Packard Electric Metri-Pack 150 Series</td>
</tr>
<tr>
<td>Pressure Connection</td>
<td>1/4-18 NPT (external), 3/8-24 UNF-2A (male)*1</td>
</tr>
<tr>
<td>Housing Material</td>
<td>316 Stainless Steel</td>
</tr>
<tr>
<td>Output Signal</td>
<td>0.5 - 4.5 VDC</td>
</tr>
</tbody>
</table>

1. For more options see how to order

Attributes

- Dry Media *1
- Superior Long Term Stability
- Excellent Repeatability/Hysteresis
- Superior EMI/RFI Rejection
- Low Power Consumption
- Linear Output
- Temperature Compensated
- Over-Voltage, Reverse Polarity & Short Circuit Protection
- Ten Million Cycle Life Expectancy
- Outstanding Shock & Vibration Performance

1. For wet conductive media please contact us

Typical Applications

- Steam Sterilizers
- Gasoline & Diesel Engines
- Natural Gas & CNG Engines
- Agricultural Chemical Equipment
- Level Measurement
- Test Equipment
- Injection Molding
- Coolant Pressure
- Industrial Compressors

Description

The model P255 is based on Kavlico’s fieldproven ceramic capacitive technology with the latest state-of-the-art ASIC. Featuring a 316SS housing, the P255 is designed for general use wherever a rugged and reliable pressure transducer is required. The P255 package has a built-in Metri-Pack 150, electrical connector and supports popular process connection threads. The P255 is offered with a variety of seal materials and is suitable for many diverse applications. Specifically intended for OEM applications, the P255 delivers a cost effective solution without compromising performance or reliability.
Technical Specifications

Pressure Ranges

<table>
<thead>
<tr>
<th>From 0 to …</th>
<th>PSIA, PSIG, PSIS (gage)</th>
<th>1 5 20 30 50 75 100 150 200 300 500 750 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proof pressure</td>
<td>PSI (gage)</td>
<td>75 100 150 250 375 300 450 600 900 1500 1500 2000</td>
</tr>
</tbody>
</table>

Physical

<table>
<thead>
<tr>
<th>Operating Life Cycle</th>
<th>min. 10 million full pressure cycles over the full range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration Resistance</td>
<td>10 G’s peak to peak sinusoidal (10 to 2000 Hz)</td>
</tr>
<tr>
<td>Shock Resistance</td>
<td>75 G’s ½ sinewave</td>
</tr>
<tr>
<td>Drop Test</td>
<td>1 meter drop on concrete as per SAE J1455 / DIN EN 60068-2-3-1</td>
</tr>
<tr>
<td>Weight</td>
<td>≤ 100 grams (without mating connector)</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>IP67 - depending on electrical connector</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to 125°C (depending on seal material) *2</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +125°C (depending on seal material) *2</td>
</tr>
<tr>
<td>Media</td>
<td>All class II fluids and gases compatible with stainless steel 3/6 and the internal seal ring material</td>
</tr>
</tbody>
</table>

Performance

<table>
<thead>
<tr>
<th>Total error band *3</th>
<th>+/-2% of span (-20 ≤ T ≤ 100° C)  +/-3% of span (T &lt; -20° C, T &lt; 100° C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability coefficient</td>
<td>+/-0.5 % of full span over 1 year</td>
</tr>
<tr>
<td>Temp. Coefficients - Zero</td>
<td>0.2 % of span / 10 K within temperature range 0°C to + 80°C.2 %</td>
</tr>
<tr>
<td>Temp. Coefficients - Span</td>
<td>0.2 % of span / 10 K within temperature range 0°C to + 80°C.2 %</td>
</tr>
</tbody>
</table>

2. for more details see How to Order

3. Including non-linearity, hysteresis, non-repeatability, zero point and full scale error (corresponds to error of measurement per IEC 61298-2). Adjusted in vertical mounting position with pressure port down
## Electrical

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Signal</td>
<td>0.5…4.5 VDC Ratiometric</td>
</tr>
<tr>
<td>Operating Supply Signal</td>
<td>5 VDC ± 10%</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>≤ 25 mW</td>
</tr>
<tr>
<td>Overvoltage Protection</td>
<td>16 VDC</td>
</tr>
<tr>
<td>Short-circuit Proofness</td>
<td>Yes *4</td>
</tr>
<tr>
<td>Insulation Voltage</td>
<td>500 VDC</td>
</tr>
<tr>
<td>Reverse Polarity Protection</td>
<td>Yes *5</td>
</tr>
<tr>
<td>Load</td>
<td>≥ 25 kΩ</td>
</tr>
<tr>
<td>Response Time</td>
<td>15 ms max. to 63% of full scale pressure with step change on input</td>
</tr>
</tbody>
</table>

*4. for min. 3 intervals at 5 minutes each

*5. for min. 10 seconds on assigned pins

## Approvals & Certificates

<table>
<thead>
<tr>
<th>Approval</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROHS</td>
<td>2011/65/EU ROHS Directive</td>
</tr>
</tbody>
</table>
**Dimensions**

![Diagram showing dimensions](image)

- **1.04 [26.4]**
- **.67 [17.02]**
- **.80 [20.3]**
- **1.02 [25.9]**

**1/4-18 NPT**

**.88 [22.4]**

**.59 [15.0]**

**.37**

**5/8-24 UNF-2A SUPPLIED WITH O-RING**

**.67**

**.39**

**5/8-24 UNF-2B INTERNAL THREAD O-RING BOSS PER SAE J514**

**.68 [17.3]**

**.39 [9.9]**

**1/8-27 NPT**

**.562 [14.27] HEX**
How to Order

**Seal Material**
- B  Nitrile
- C  Neoprene
- D  Fluorocarbon
- E  Fluorosilicone
- F  Ethylene Propylene

**Pressure Ranges**
- 0 - 15
- 0 - 20
- 0 - 30
- 0 - 50
- 0 - 75
- 0 - 100
- 0 - 150
- 0 - 200
- 0 - 300
- 0 - 500
- 0 - 750
- 0 - 1000

**Reference**
- A  Absolute
- G  Gage
- S  Sealed Gauge (0 PSIS = 14.7 PSIA)

**Pressure Connection (port)**
- 1  1/4 - 18 NPT (Male)
- 2  3/8 - 24 UNF-2A (Male)
- 3  3/8 - 24 UNF-2B (Female)
- 4  1/8 - 27 NPT (Male)

**Built-in Electrical Connection**
- A  Packard with Mating Connector
- C  Packard without Mating Connector

**Example:**
P255-15A-B1A

**Description:**
P255Sensor, 0 - 15 PSI, Nitrile Seal Material, 1/4 - 18 NPT Pressure Connection with Mating Connector

Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

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