

## | P4055

### Pressure Transducer

### Description

The P4055 Pressure Transducer incorporate a back-side PRT configuration that is compatible with many types of liquid and gaseous media. This flexible product family can be supplied with a built in Metri-Pack 150 electrical connector. The small sensor size is ideal for high volume applications. Pressure ranges may be customized for OEM applications. The P4055 is specified with pressure ranges measured in PSI.



### Features

- Small Size
- Absolute, Gage or Sealed Gage Pressure References
- Packard Metri-Pack 150 Electrical Connector Standard
- 0.5 to 4.5 Vdc Output
- High Vibration Tolerance
- Superior EMI/RFI Performance
- Available with NPT, G1/4, M10, & M12 Pressure Ports
- Temperature Compensated
- RoHS Compliant

### Applications

- Pumps & Compressors
- Process Controls
- Filter Restriction
- Oil and Fuel Pressures
- Water Management
- Level Measurement
- Test & Monitoring Equipment



### MAIN FEATURES

|                              |                                                                                  |
|------------------------------|----------------------------------------------------------------------------------|
| <b>Pressure Ranges</b>       | 0 to 3 up to 0 to 300 PSI                                                        |
| <b>Electrical Connection</b> | Packard Electric Metri-Pack 150 Series                                           |
| <b>Pressure Connection</b>   | 1/4-18 NPT (external), 1/8-27 NPT (external) - for more options see how to order |
| <b>Housing Material</b>      | Brass                                                                            |
| <b>Output Signal</b>         | 0.5 - 4.5 VDC                                                                    |

## Pressure Ranges

| From 0 to ...  | PSI | 3 | 5  | 15 | 30 | 50  | 75  | 100 | 150 | 200 | 300 |
|----------------|-----|---|----|----|----|-----|-----|-----|-----|-----|-----|
| Proof Pressure | PSI | 6 | 10 | 30 | 60 | 10  | 150 | 200 | 300 | 300 | 450 |
| Burst Pressure | PSI | 9 | 15 | 45 | 90 | 150 | 225 | 300 | 450 | 400 | 600 |

## Physical

|                                  |                                                                        |
|----------------------------------|------------------------------------------------------------------------|
| <b>Operating Life Cycle</b>      | min. 1 million full pressure cycles over the full range                |
| <b>Vibration Resistance</b>      | 10 G's peak to peak sinusoidal, from 20 to 2000 Hz                     |
| <b>Shock Resistance</b>          | 75 G's ½ sine wave                                                     |
| <b>Drop Test</b>                 | 1m onto concrete surface                                               |
| <b>Weight</b>                    | ≤ 50 grams                                                             |
| <b>Ingress Protection</b>        | IP67                                                                   |
| <b>Media Temperature</b>         | -40°C to + 125°C                                                       |
| <b>Environmental Temperature</b> | -40°C to + 125°C                                                       |
| <b>Storage Temperature</b>       | -40°C to + 125°C                                                       |
| <b>Media</b>                     | All class II fluids and gases compatible with brass and fluorosilicone |

## Performance

|                                     |                                                                         |
|-------------------------------------|-------------------------------------------------------------------------|
| <b>Total Error Band<sup>1</sup></b> | +/-2% of span (-20 ≤ T ≤ 100° C) +/-3% of span (T < -20° C, T < 100° C) |
|-------------------------------------|-------------------------------------------------------------------------|

1. Including accuracy, calibration, temperature, non-linearity, hysteresis, non-repeatability, error

## Electrical

|                                    |                                                                      |
|------------------------------------|----------------------------------------------------------------------|
| <b>Output Signal</b>               | 0.5...4.5 VDC ratiometric                                            |
| <b>Operating Supply Signal</b>     | 5 VDC ± 5%                                                           |
| <b>Power Consumption</b>           | ≤ 25 mW                                                              |
| <b>Overvoltage Protection</b>      | 16 VDC                                                               |
| <b>Short-circuit Proofness</b>     | Yes <sup>2</sup>                                                     |
| <b>Insulation Voltage</b>          | 500 VDC                                                              |
| <b>Reverse Polarity Protection</b> | Yes <sup>3</sup>                                                     |
| <b>Impedance</b>                   | Min load 25 kΩ                                                       |
| <b>Response Time</b>               | ≤ 10 ms max. to 63% of full scale pressure with step change on input |

2. for min. 3 intervals at 5 minutes each

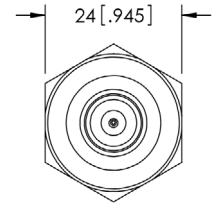
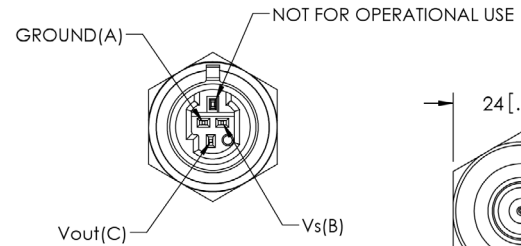
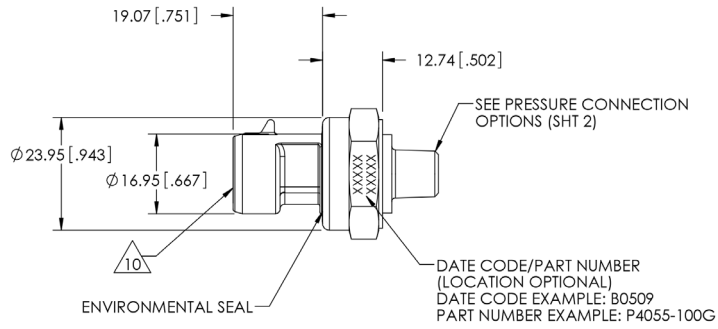
3. for min. 10 seconds on assigned pins



## DIMENSIONS

Dimensions in mm [Inch]

| Packard (metri-pack 150) Pin Call Outs |       |       |       |
|----------------------------------------|-------|-------|-------|
| Output                                 | Pin 1 | Pin 2 | Pin 3 |
| 0.5-4.5 VDC ratiometric                | GND   | Vsup  | Vout  |





P4055 Pressure Sensor, 0 – 15 PSI Absolute, Fluorosilicone, Internal Seal, 1/4 18 NPT, Pressure Connection with Packard, Metri-Pack 150 Built-in Connector

## Family

P4055

### Pressure Ranges (PSI)

|             |             |
|-------------|-------------|
| <b>3:</b>   | 0 - 3 PSI   |
| <b>5:</b>   | 0 - 5 PSI   |
| <b>10:</b>  | 0 - 10 PSI  |
| <b>15:</b>  | 0 - 15 PSI  |
| <b>30:</b>  | 0 - 30 PSI  |
| <b>50:</b>  | 0 - 50 PSI  |
| <b>75:</b>  | 0 - 75 PSI  |
| <b>100:</b> | 0 - 100 PSI |
| <b>150:</b> | 0 - 150 PSI |
| <b>200:</b> | 0 - 200 PSI |
| <b>300:</b> | 0 - 300 PSI |

## Reference

**A:** Absolute  
**G:** Gauge  
**S:** Sealed Gauge

### Internal Seal Material

**E:** Fluorosilicone

### Pressure Connection (Port)

- 1:** 1/4-18 NPT
- 2:** M12 X 1.5-6g PER ISO 6149
- 3:** M10 X 1-6g PER ISO 6149
- 4:** 1/8-27 NPTF
- 5:** STUD END PER DIN 3852-A-G1/4 (sealing by washer, not supplied)
- 6:** M14 X 1.5-6g PER ISO 6149
- 7:** STUD END PER DIN 3852-C-R1/4 (1/4-19 BSPT)
- 8:** 7/16-20UNF-2A
- 9:** M16 X 1.5-6g
- 10:** STUD END PER DIN 3852-C-R1/8 (1/8-28 BSPT)

## Built-in Connector

**A:** Metripack 150 with mating connector 12" leads  
**C:** Metripack 150 without mating connector



## AGENCY APPROVALS & CERTIFICATIONS



2002/95/EC RoHS Directive



Pressure equipment directive 97/23/EC

EMC directive 2004/108/EEC, EN 61 326 Emission (Group 1, Class B) and Immunity (industrial locations), EMI, ESD protected



Revised 2/7/18

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com) SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

## CONTACT US

### Americas

+1 (800) 350 2727  
[sensors@sensata.com](mailto:sensors@sensata.com)  
[switches@sensata.com](mailto:switches@sensata.com)

### Europe, Middle East & Africa

+359 (2) 809 1826  
[pressure-info.eu@sensata.com](mailto:pressure-info.eu@sensata.com)

### Asia Pacific

[sales.isasia@list.sensata.com](mailto:sales.isasia@list.sensata.com)  
China +86 (21) 2306 1500  
Japan +81 (45) 277 7117  
Korea +82 (31) 601 2004  
India +91 (80) 67920890  
Rest of Asia +886 (2) 27602006  
ext 2808