

Description

The P4056 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 P4056 pressure ranges are measured in Bar.



Features

- Small Size
- Absolute, Gage or Sealed Gage Pressure References

Sensata

Technologies

- 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



Pressure Ranges	0 to 200 mBar up to 0 to 20 bar					
Electrical Connection	Packard Electric Metri-Pack 150 Series					
Pressure Connection	1/4-18 NPT (external), 1/8-27 NPT (external) - for more options see how to order					
Housing Material	Brass					
Output Signal	0.5 - 4.5 VDC					





Pressure Ranges

From 0 to *1	bar	200 mBar	300 mBar	1	2	4	5	7	10	15	20
Proof Pressure	bar	400 mBar	600 mBar	2	4	8	10	14	20	22.5	30
Burst Pressure	bar	600 mBar	900 mBar	3	6	12	15	21	30	30	40

1. for more options see Ordering Options

Physical

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

Performance

Copyright © 2022 Sensata Technologies, Inc.

Total Error Band ² +/-2% of span (-20 \le T \le 100° C) +/-3% of span (T < -20° C,T < 100° C)

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

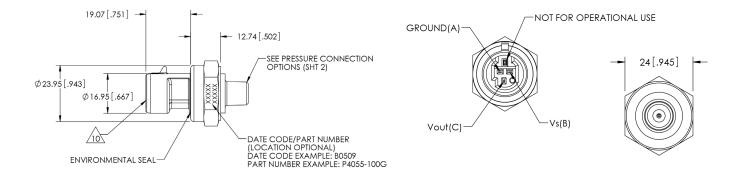
Electrical

Output Signal	0.54.5 VDC ratiometric
Operating Supply Signal	5 VDC ± 5%
Power Consumption	\leq 25 mW
Overvoltage Protection	16 VDC
Short-circuit Proofness	Yes ³
Insulation Voltage	500 VDC
Reverse Polarity Protection	Yes ⁴
Impedance	Min load 25 k Ω
Response Time	\leq 10 ms max. to 63% of full scale pressure with step change on input

3. for min. 3 intervals at 5 minutes each 4. for min. 10 seconds on assigned pins



Packard (metri-pack 150) Pin Call Outs							
Output	Pin C						
0.5-4.5 VDC ratiometric	GND	Vsup	Vout				



Copyright © 2022 Sensata Technologies, Inc.





Example: P4056-15A-E1A

P4056 Pressure Sensor, 0 – 1 Bar Absolute, Fluorosolicone Internal Sealrmaterial , 1/4-18 NPT- Pressure Connection, with Packard Metri-Pack 150 Built-in Connector

Family Prossure Ranges Processure Ranges P2: 0.200 mBar 0.200 mBar P3: 0.200 mBar 0.200 mBar P4: 0.4 Bar 0.4 Bar 10: 0.10 Bar 0.200 mBar 11: 0.10 Bar 0.200 mBar 12: 0.10 Bar 0.200 mBar 13: 0.10 Bar 0.200 Bar Reference 0.200 Bar 0.200 Bar Reference 0.200 Bar 0.200 Bar Reference 0.200 Bar 0.200 Bar Internal Seal Material 0.200 Bar 0.200 Bar Feisure Connection (Port) 0.200 Bar 0.200 Bar 1: 1/4-18 NPT 2.200 Bar 0.200 Bar 1: 1/2-18 NPT 2.200 Bar 0.200 Bar 1: 1/2-18 NPT 2.200 Bar 0.200 Bar 1: 1/2-18 NPT 2.200 Bar <t< th=""><th></th><th>P4056 - 15</th><th>Α -</th><th>E 1</th><th>Α</th><th></th></t<>		P4056 - 15	Α -	E 1	Α	
Pressure Ranges Image: Constraint of the second	Family			\top \top	T	
P2: 0 - 200 mBar P3: 0 - 300 mBar 1: 0 - 1 Bar 2: 0 - 2 Bar 4: 0 - 4 Bar 5: 0 - 5 Bar 7: 0 - 7 Bar 10: 0 - 10 Bar 14: 0 - 14 Bar 15: 0 - 5 Bar 16: 0 - 16 Bar 16: 0 - 16 Bar 16: 0 - 20 Bar Reference Image: Comparison of the state	P4056					
P3: 0.300 mBar 1: 0.1 Bar 2: 0.2 Bar 4: 0.4 Bar 5: 0.5 Bar 7: 0.7 Bar 10: 0.1 0 Bar 14: 0.1 4 Bar 15: 0.1 5 Bar 16: 0.1 6 Bar 20: 0.2 0 Bar Reference 6: Gauge 5: Sealed Gauge Internal Seal Material Fesure Connection (Port) 1: 1/-18 NPT 2: M12 N 15: 50 6149 3: M10 X 1-50 pER INS 06149 3: M14 X 1.560 pER INS 06149 3: M16 X 1-56 pER INS 06149 3: M10 END VPE RDIN 3852-C-R1/8 (1/8-28 BSPT)	Pressure Ranges					
20: 0 - 20 Bar ■ <	P3: 0 - 300 mBar 1: 0 - 1 Bar 2: 0 - 2 Bar 4: 0 - 4 Bar 5: 0 - 5 Bar 7: 0 - 7 Bar 10: 0 - 10 Bar 14: 0 - 14 Bar 15: 0 - 15 Bar					
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 1.5-6g 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-A-G1/4 (sealing by washer, not supplied) 6: M14 X 1.5-6g PER ISO 6149 7: STUD END PER DIN 3852-A-G1/4 (sealing by washer, not supplied) 6: M14 X 1.5-6g PER ISO 8149 9: M16 X 1.5-6g 9: M16 X 1.5-6g 9: M16 X 1.5-6g 9: M16 X 1.5-6g 10: STUD END PER DIN 3852-C-R1/8 (1/8-28 BSPT)						
G: Gauge S: Sealed Gauge Internal Seal Material Internation Internation Internation Internation Internation I	Reference					
E: Fluorosilicone I: 1/4-18 NPT 2: M12 X 1.5-6g PER ISO 6149 I: 1/4-18 NPT 3: M10 X 1-6g PER ISO 6149 I: 1/4-18 NPT 4: 1/8-27 NPTF I: STUD END PER DIN 3852-A-G1/4 (sealing by washer, not supplied) 6: M14 X 1.5-6g PER ISO 6149 I: 7/16-20UNF-2A 9: M16 X 1.5-6g IIIN 3852-C-R1/8 (1/8-28 BSPT)	G: Gauge					
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)	Internal Seal Material					
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)	E: Fluorosilicone					
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)	Pressure Connection (Port)					
	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, no 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	t supplied)				
Built-in Connector	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

Page 5

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, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DATA SHEETS 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 THEROF.

All products are sold subject to Sensata's terms and conditions of sale supplied at 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 switches@sensata.com Europe, Middle East & Africa

+359 (2) 809 1826 pressure-info.eu@sensata.com

Asia Pacific

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