P528
Pressure Sensor

Description

The P528 incorporates Kavlico's 4th generation ceramic capacitive sense element with the latest state of the art proprietary ASIC. Available in brass or stainless steel housings, this multi-purpose sensor is rugged by design. Highly reliable, the P528 is ideal for measuring a broad range of process media including hydrocarbon based fluids, air, and gases. The P528 package has a built-in Metri-Pack 150 series sealed electrical connector and is available with popular pressure connection thread options. The sensor is offered with seal materials suitable for diverse applications. Standard pressure ranges are available in PSI or Bar.



Features

- Small Size (3/4" Hex)
- External Hex for Easy Installation
- Linear Amplified Output
- Temperature Compensated
- Superior Long-Term Stability
- Low Power Consumption
- Minimum Life Expectancy: Ten Million Cycles

Applications

- Compressors
- Process Controls
- Instruments & Test Equipment
- Sterilizers
- Air Pressure
- Oil & Fuel Pressure
- Coolant Pressure
- Agricultural Equipment
- CNG & Natural Gas Engines

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MAIN FEATURES

Pressure Ranges	0 - 6 up to 0 - 70 Bar and 0 - 100 up to 0 - 1000 PSI
Electrical Connection	Packard Electric Metri-Pack 150 Series
Pressure Connection	1/4"SAE Female Flare w/ Schrader Deflator 7/16"-20 UNF-2A external threads 1/4"-18 NPT 1/8"-27 NPT (external threads)
Housing Material	Brass (up to 300 psi) and stainless steel (above 300 psi)
Output Voltage	0.5 to 4.5 Vdc

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TECHNICAL SPECIFICATIONS

Pressure Ranges

Bar A, S or G	0 - 1	0 - 1.6	0 - 2.5	0 - 4	0 - 6	0 - 10	0 - 16	0 - 25	0 - 40	0 - 50	0 - 70	
PSI A, S or G	0 - 15	0 - 20	0 - 30	0 - 50	0 - 75	0 - 100	0 - 150	0 - 200	0 - 300	0 - 500	0 - 750	0 - 1000

For custom pressure ranges consult Kavlico Pressure Sensors.

Physical

Durability/Service Life	10 million full pressure cycles (minimum)
Proof Pressure	3X FS Pressure (upto 14 Bar / 200 PSI) 2X FS Pressure (above 14 Bar / 200 PSI)
Burst Pressure	1500 PSI (upto 24 Bar / 300 PSI) 2500 PSI (above 24 Bar / 300 PSI)
Humidity	93 +/- 3% RH
Vibration	10 g's peak to peak sine (10 - 2000 Hz)
Shock	75 g's, 1/2 Sine Wave
Drop Test	1 meter drop on concrete as per SAE J1455
Weight	< 50 gm
Ingress Protection	IP67

Performance

Linearity Error	≤ +/- 0.5% of span
Total Error Band	+/-1.5% of span (0 ≤ T ≤ 85 C°) +/-2.0% of span (T < 0 C°,T < 85 C°)
Stability Coefficient	+/-0.3 % of Full span over 1 year
Operating Temperature	-40 C° to 125 C° (Seal material dependent. See Ordering Options)
Storage Temperature	-40 C° to 125 C° (Seal material dependent. See Ordering Options)

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Electrical

Supply Voltage	5.0 Vdc +/- 0.5
Output Voltage	0.5 to 4.5 Vdc
Supply Current	≤ 5 mA
Output Impedance	≤ 100 Ω
Output load	≥ 10 KΩ
Output response time	≤ 2 ms to 63 % of final output voltage with step change in input pressure
Overvoltage protection	36 Vdc
Reverse Voltage	-36 Vdc
Short Circuit protected	Output to supply, Output to Ground: Indefinite
Isolation Voltage	R ≥ 100 MΩ, 500 Vdc / 1 min
Warmup time	3 mSec Max.
EMC	Meets ISO 7637-3, ISO 11452-4, ISO 11452-2, CISPR 25, MIL-STD 461 E
ESD	IEC 1000-4.2 (8kV contact, 15kV air), ISO 10605 (8kV contact, 25kV air)

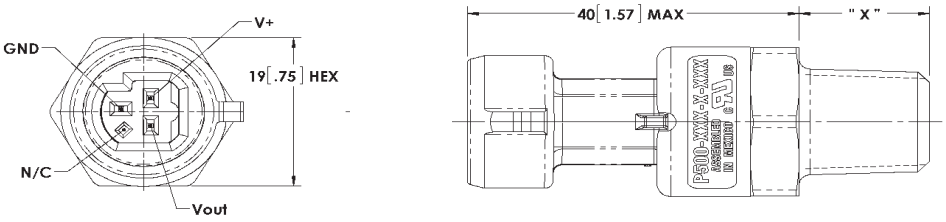
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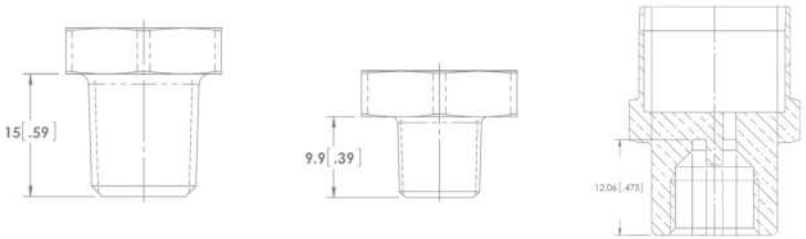
DIMENSIONS

Dimensions in mm [Inch]

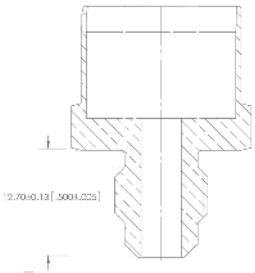
Pressure Sensor with Electrical Connection



Pressure Connections and Recommended Installation Torque



Name	1/4 - 18 NPT	1/8 - 27 NPT	Schrader deflator
Thread	External	External	Internal
Torque	25 Nm	14 Nm	15 Nm



Name	7/16 – 20 UNF 2A
Thread	External
Torque	16 Nm

Note: Recommended torque may varify according to material and specific application.

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ORDERING OPTIONS

Example: P528-16B-A-C1A

P528 Sensor, 0 - 16 Bar Absolute, Fluorosilicone Seal Material, 1/4 - 18 NPT Pressure Connection,

P528 – 16B – A – C 1 A

Family

P528

Pressure Ranges

0 – 6 Bar 0 – 10 Bar	0 – 100 PSI 0 – 150 PSI	0 – 1000 PSI
0 – 16 Bar	0 – 300 PSI	
0 – 25 Bar	0 – 400 PSI	
0 – 40 Bar	0 – 500 PSI	
0 – 50 Bar	0 – 600 PSI	
0 – 70 Bar	0 – 750 PSI	

Reference

A: Absolute
G: Gage
S: Sealed Gage (Referenced to 14.7 PSIA)

Seal Material

C: Neoprene (-30° to 120°C)
F: Ethylene Propylene (-40° to 120°C)
H: HNBR (-20° to 125°C)

Pressure Connection (Port)

1: 1/4 - 18 NPT (External Threads)
2: 1/4 SAE Female flare w/schrader deflator
3: 7/16 - 20 UNF 2A (External threads)
4: 1/8 - 27 NPT (External threads)

Built-in Electrical Connection

A: With Mating Connector, w/12", 18 AWG Leads
C: Without Mating Connector

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AGENCY APPROVALS & CERTIFICATIONS

EN 61326-1, 2006
IEC 61000-4-2, 2001
IEC 61000-4-3, 2006
IEC 61000-4-8, 2001

2002/95/EC RoHS Directive

File # SA10552

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

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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