

| 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

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



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)

Electrical

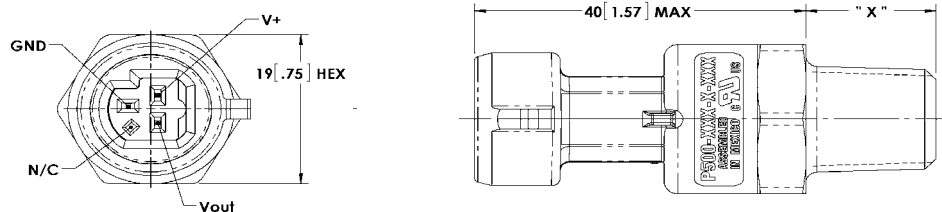
Supply Voltage	5.0 Vdc +/- 0.5
Output Voltage	0.5 to 4.5 Vdc
Supply Current	≤ 5 mA
Output Impedance	≤ 100 Ω
Output load	≥ 10 KΩ
Output response time	≤ 2 ms to 63 % of final output voltage with step change in input pressure
Overvoltage protection	36 Vdc
Reverse Voltage	-36 Vdc
Short Circuit protected	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)



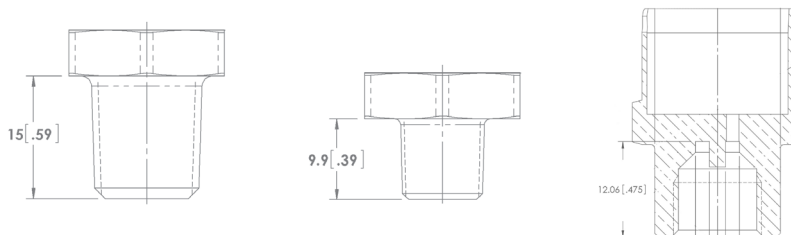
DIMENSIONS

Dimensions in mm [Inch]

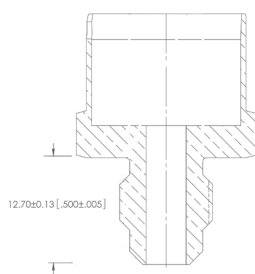
Pressure Sensor with Electrical Connection



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 vary according to material and specific application.



ORDERING OPTIONS

Example: P528-16B-A-C1-A

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

Family	P528	-	16B	-	A	-	C	-	1	-	A
Pressure Ranges											
6B: 0 – 6 Bar	100: 0 – 100 PSI	1000: 0 – 1000 PSI									
10B: 0 – 10 Bar	150: 0 – 150 PSI										
16B: 0 – 16 Bar	300: 0 – 300 PSI										
25B: 0 – 25 Bar	400: 0 – 400 PSI										
40B: 0 – 40 Bar	500: 0 – 500 PSI										
50B: 0 – 50 Bar	600: 0 – 600 PSI										
70B: 0 – 70 Bar	750: 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											



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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