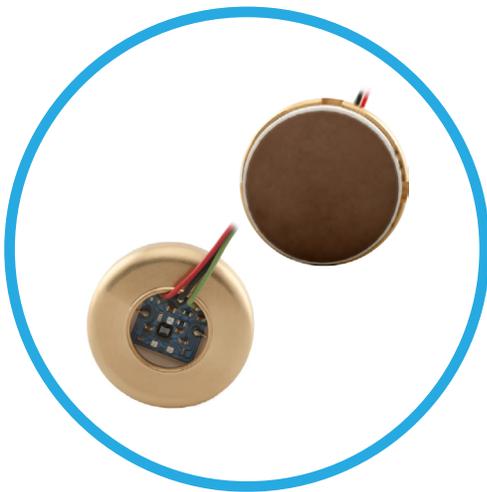# | PS312
Ceramic Capacitive OEM High and Low Pressure Sensing Modules

Description

The ceramic capacitive sensing technology in Kavlico®'s OEM Pressure sensing modules has been field proven for more than 30 years and has been designed for high volume applications. Kavlico® sensors are installed worldwide in a variety of industrial and transportation applications.

These RoHS compliant modules are equipped with a robust flush mounted ceramic sensing diaphragm compatible with most industrial fluids and gaseous media. The standard module is provided with a brass spacer as housing material and an electric connection of 3 isolated wires 0.15 mm2, 75mm long. The module facilitates easy integration and installation into final assemblies for a wide variety of applications.

With a 10-year minimum shelf life and a lifetime of millions of cycles, Kavlico®'s ruggedly designed modules are made to last.

Features

- Media Resistant
- Superior Long-Term Stability & Repeatability
- High Overpressure Capability
- Shock & Vibration Resistant

Applications

- Industrial Pumps & Compressors
- Refrigeration
- Heating, Ventilation and Air-conditioning (HVAC)
- Steam Sterilizers, Boilers & Dryers
- Test & Monitoring Equipment
- Process Controls
- Facility Management
- Mechanical Engineering
- Filter Restriction
- Fuel Cells
- Hydraulics Systems
- Process Controls
- Level Measurement
- Water Management
- Power Generators

MAIN FEATURES

Pressure Ranges	0 to 0.07 bar up to 0 to 20 bar (gage) 0 to 1 up to 0 to 20 bar (absolute)
Electrical Connection	3 isolated color coded wires; 0.15 mm², appr. 75 mm long Silicon coat: RED – VSUPPLY; GREEN – OUTPUT; BLACK – GROUND
Housing Material	Brass spacer
Output Signal	1 - 4 VDC, 0.5 - 4.5 VDC (at 0 - 100% pressure)

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KAVLICO Pressure Sensors

Pressure Ranges

From 0 to ...	bar (gage)	0.07	0.20	0.35	0.50	0.75	1	2	3.50	5	7	10	20
From 0 to ...	bar (absolute)						1*	2*	3.50	5	7	10	20
Proof Pressure *1	bar	1.2	1.4	1.5	2.25	2.25	3	6	10.5	15	21	30	60
Burst Pressure *1	bar	2.4	2.7	3	4.1	4.1	5	10	17	25	35	50	100

*1. Data is calibrated in Sensata test fixtures, specifications may change depending on the customer housing.

Physical

Operating Life Cycle	min. 10 million full pressure cycles over the full range
Weight	≤ 50 grams (without mating connector)
Operating Temperature	-40°C to + 125°C
Media	All fluids and gases compatible with AU/Al_2O_3

Performance

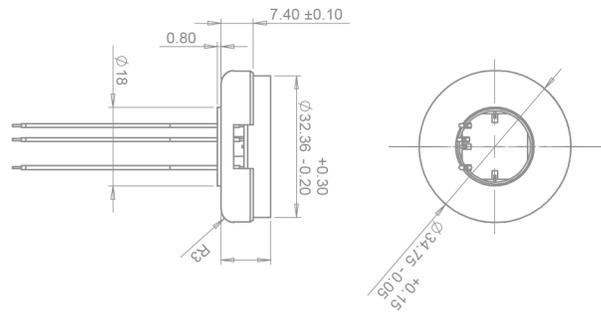|	
Linearity *1	± 0.1 % TYP. / ± 0.2 % MAX
Total Error Band *1	± 1.0 % TYP. for temperature range +20°…+85°C ± 2.0 % MAX. for temperature range -40°…+125°C
Stability *1	± 0.1 % TYP. * / ± 0.25 % MAX. (1 YEAR)
Temp. Coefficients - Zero	± 0.05 % TYP. * / ± 0.1% MAX. / 10 K within temperature range 0° to + 85°C
Temp. Coefficients - Span	± 0.05 % TYP. * / ± 0.1% MAX. / 10 K within temperature range 0° to + 85°C

Electrical

Output Signal	1...4 VDC	0.5…4.5 VDC
Supply Voltage	5.00 ±0.25 VDC	
Supply Current	MAX. 2.2 mA at 5 VDC	
Output Impedance	100 kΩ	
Load	50 kΩ	
Response Time	≤ 5 ms max. to 63% of full scale pressure with step change on input	
Overvoltage Protection	up to ± 16 V	
Reserve Voltage	up to ± 16 V	
Short-Circuit Proofness	yes (for min. 3 intervals at 5 min. each)	
Insulation Voltage	500 VDC	> 1 MΩ
EMI Protection	Depending on customer package	

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Pressure Sensor with Electrical Connection

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ORDERING OPTIONS

PS312 Pressure Sensing Module, 0 - 1 bar gage, 1...4 VDC at 0 - 100% pressure.

PS312 — **15G** — **1**

Family

PS312

Pressure Ranges

1G: 0 - 0.07 BarG
3G: 0 - 0.20 BarG
5G: 0 - 0.35 BarG
7G: 0 - 0.50 BarG
10G: 0 - 0.75 BarG
15G: 0 - 1 BarG
30G: 0 - 2 BarG
50G: 0 - 3.50 BarG
75G: 0 - 5 BarG
100G: 0 - 7 BarG
150G: 0 - 10 BarG
300G: 0 - 20 BarG
15A: 0 - 1 BarA
30A: 0 - 2 BarA
50A: 0 - 3.50 BarA
75A: 0 - 5 BarA
100A: 0 - 7 BarA
150A: 0 - 10 BarA
300A: 0 - 20 BarA

Output

1: 1...4 VDC at 0 - 100 % Pressure
2: 0.5...4.5 VDC at 0 - 100% Pressure

AGENCY APPROVALS & CERTIFICATIONS

2011/65/EU ROHS Directive

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