

PS312

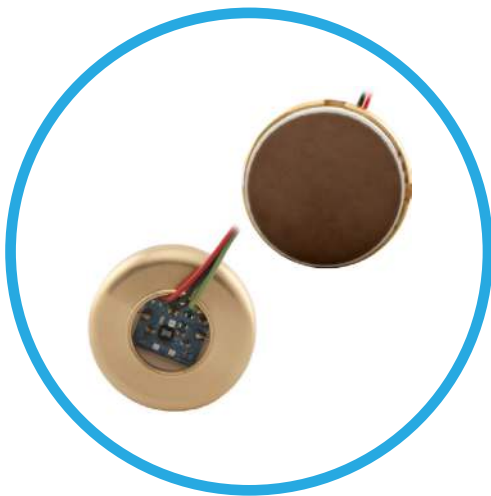
Ceramic Capacitive OEM High and Low Pressure Sensing Modules

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 mm ² , 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)



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 ₂ O 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

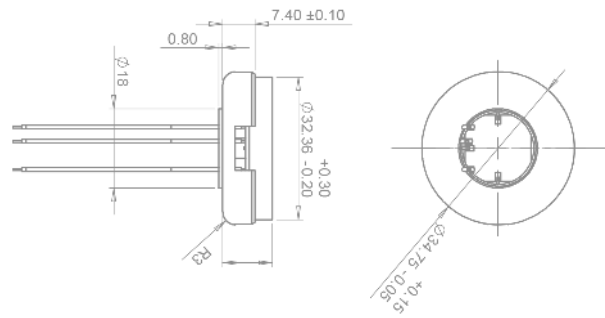
Output Signal	1...4 VDC	0.5...4.5 VDC
Supply Voltage	5.00 ±0.25 VDC	
Supply Current	MAX. 2.2 mA at 5 VDC	
Output Impedance	100 kΩ	
Load	50 kΩ	
Response Time	≤ 5 ms max. to 63% of full scale pressure with step change on input	
Oversoltage Protection	up to ± 16 V	
Reserve Voltage	up to ± 16 V	
Short-Circuit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



DIMENSIONS

Dimensions in mm [Inch]

Pressure Sensor with Electrical Connection





ORDERING OPTIONS

Example: PS312-15G-1

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

Revised 3/8/18

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