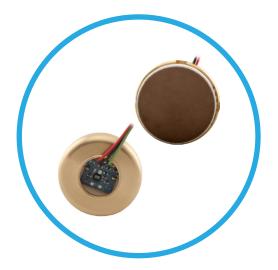
# **PS312** Ceramic Capacitive OEM High and Low Pressure Sensing Modules

### Description

The ceramic capacitive sensing technology in Kavlico<sup>®</sup>'s OEM Pressure sensing modules has been field proven for more than 30 years and has been designed for high volume applications. Kavlico<sup>®</sup> 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



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)			



Sensata

**Technologies** 



# 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	$\leq$ 50 grams (without mating connector)			
Operating Temperature	-40°C to + 125°C			
Media	All fluids and gases compatible with $AU/AI_2O_3$			

## Performance

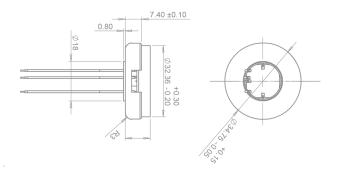
Linearity *1	± 0.1 % TYP. / ± 0.2 % MAX				
Total Error Band *1	± 1.0 % TYP. for temperature range +20°+85°C ± 2.0 % MAX. for temperature range -40°+125°C				
Stability *1	± 0.1 % TYP. * / ± 0.25 % MAX. (1 YEAR)				
Temp. Coefficients - Zero	$\pm$ 0.05 % TYP. * / $\pm$ 0.1% MAX. / 10 K within temperature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

## Electrical

Output Signal	14 VDC	0.54.5 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	$\leq$ 5 ms max. to 63% of full scale pressure with step change on input				
<b>Overvoltage Protection</b>	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				



# Pressure Sensor with Electrical Connection





Example: PS312-15G-1

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

	S312 – 15G	1	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   100G: 0 - 7 BarG   100G: 0 - 7 BarG   100G: 0 - 7 BarG   150G: 0 - 10 BarG   300G: 0 - 20 BarG   150G: 0 - 10 BarG   300G: 0 - 20 BarG   150A: 0 - 1 BarA   30A: 0 - 2 BarA   50A: 0 - 3.50 BarA   75A: 0 - 5 BarA   100A: 0 - 7 BarA   300A: 0 - 20 BarA   75A: 0 - 5 BarA   100A: 0 - 7 BarA   300A: 0 - 20 BarA   75A: 0 - 5 BarA   100A: 0 - 7 BarA   300A: 0 - 20 BarA   75A: 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





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#### Revised 3/8/18

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