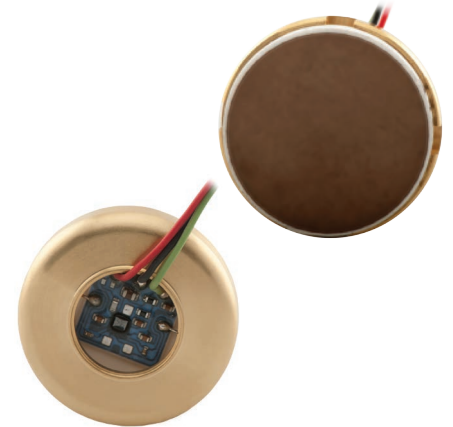


# Data Sheet

## PS312

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



#### 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 <sup>2</sup> , 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)

#### Attributes

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

#### Typical 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

#### 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 mm<sup>2</sup>, 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.

# Technical Specifications

## 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

\* Data is being calibrated in the Kavlico test fixtures

\*1 with Kavlico test fixture, is due to change depending on 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 <sub>2</sub> O <sub>3</sub>

## 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 Impedence	100 kΩ	
Load	50 kΩ	
Response Time	≤ 5 ms max. to 63% of full scale pressure with step change on input	
Overtoltage 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	

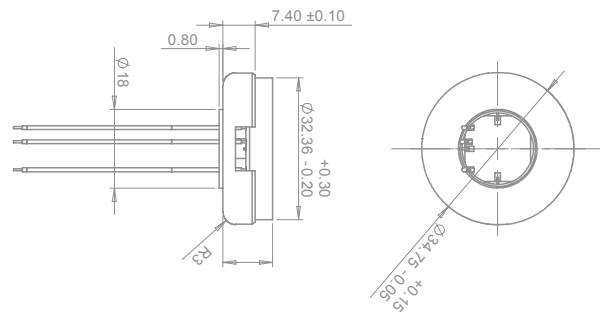
## Approvals & Certificates

ROHS	2011/65/EU ROHS Directive
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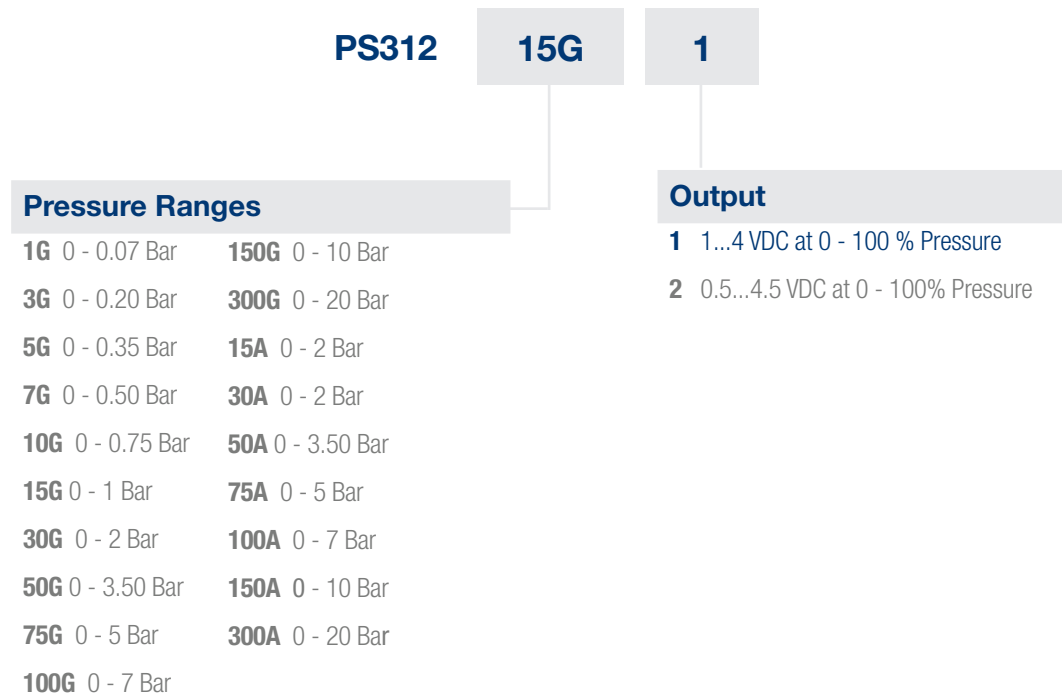
## Dimensions

### Pressure Sensor with Electrical Connection

Dimensions in mm [Inch]



## How to Order



### Example:

PS312-15G-1

### Description:

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



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

**Warning:** The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Kavlico reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

- Manufacturing Facility
- Commercial Office



## Contact Information

### North America

Custom Sensors & Technologies (CST)  
235 E. Main St., Suite 102A  
Northville, MI 48167, USA  
Phone: +1 (248) 465-0815  
Fax: +1 (248) 465-0810  
E-mail: [pressure.sensors@kavlico.com](mailto:pressure.sensors@kavlico.com)

### Europe

Custom Sensors & Technologies (CST)  
Potsdamer Strasse 14  
32423 Minden, Germany  
Phone: +49 571 3859-0  
Fax: +49 571 3859-119  
E-mail: [info@kavlico.de](mailto:info@kavlico.de)

### China

Custom Sensors & Technologies (CST)  
11th Floor, Chang Feng  
International Tower, 89  
Yunling Road (east), Putuo District  
Shanghai - 200062, China  
Phone: +86 (21) 8025 7166  
Fax: +86 (21) 6107 1771  
E-mail: [china@cstsensors.com](mailto:china@cstsensors.com)

### India

Custom Sensors & Technologies (CST)  
Trident Tower, No. 23, 4th Floor, 100 Feet Road  
Ashoka Pillar Road, 2nd Block, Jaydnagar  
Bangalore - 560011, India  
Phone: +91 80 4113-2204/05  
Fax: +91 80 4113-2206  
E-mail: [india@cstsensors.com](mailto:india@cstsensors.com)

### South Korea

Custom Sensors & Technologies (CST)  
14F, Kbiz DMC Tower, 189,  
Seongam-ro, Mapo-gu,  
Seoul, Korea 121-904  
Phone: +82 2 2629-8312  
Fax: +82 2 2629-8310  
E-mail: [korea@cstsensors.com](mailto:korea@cstsensors.com)

### East Asia & Pacific Countries

Custom Sensors & Technologies (CST)  
10/F, Wharf T&T Centre, Harbour City,  
7 Canton Road, Tsim Sha Tsui,  
Kowloon, HONG KONG  
Phone: +852 3960 6473  
Fax: +852 3669 7111  
E-mail: [eap@cstsensors.com](mailto:eap@cstsensors.com)

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