

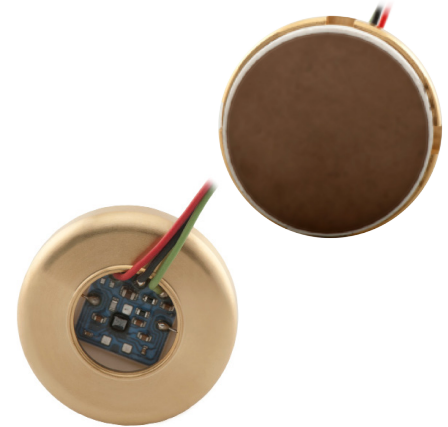
Data Sheet

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 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) |

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 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.

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 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 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 | |

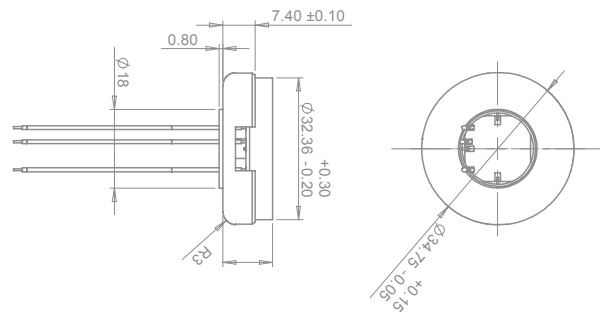
Approvals & Certificates

| | |
|------|---------------------------|
| ROHS | 2011/65/EU ROHS Directive |
|------|---------------------------|

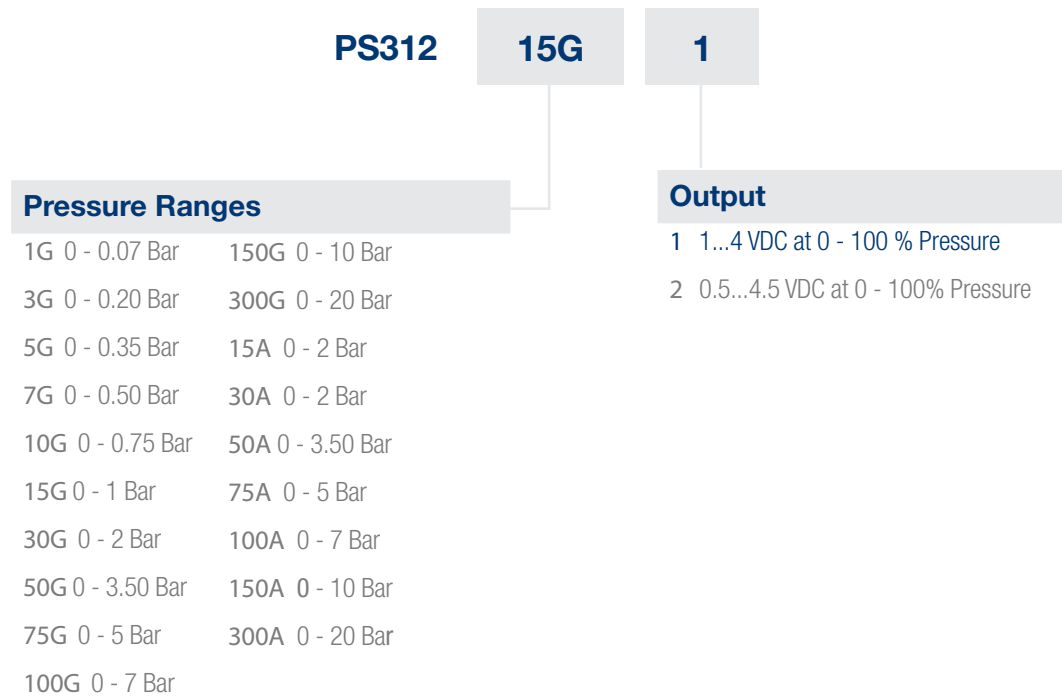
Dimensions

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.



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