

# PE2000

## Ceramic Capacitive OEM Pressure Sensor

### Typical Applications

#### Industrial

- Compressors
- Instruments & Test Equipment
- Air Pressure
- Hydraulic Systems

#### Transportation

- Oil & Fuel Pressure
- Coolant Pressure
- Agricultural Equipment
- CNG & Natural Gas Engines
- Urea Dosing
- Exhaust Gas Back Pressure

### Standard Full Scale Pressure Ranges

0.2 up to 25 Bar (Absolute or Gage)

### Features

- Wet & Dry Media
- Superior Long Term Stability
- High Overpressure Capability
- Superior EMI protection
- Temperature Compensated
- Minimum Life Expectancy: 10 Million Cycles
- Outstanding Shock & Vibration Performance



### Description

The RoHS compliant PE2000 Ceramic Capacitive OEM Pressure Sensor incorporates Kavlico's 4th generation ceramic capacitive sense element with the latest state-of-the-art ASIC. Designed for harsh environments, this pressure sensor is offered in a rugged stainless steel housing, has superior EMI protection, high overpressure capability, outstanding shock and vibration performance, and exceptional long term stability.

The sensor is temperature compensated with an operating and storage temperature of  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  (dependent upon seal material selection), and it is offered with seal materials suitable for diverse applications. Standard pressure ranges are available in PSI or Bar. The standard electrical connection for this product would be the Packard Metri-pack 150 series, and it is available with various popular pressure connection thread options.

Specifically intended for both rugged industrial and transportation applications, the PE2000 delivers the optimal solution without compromising performance or reliability.

## Technical Specifications

<b>Pressure ranges</b>	Customizable, beginning at 0...0.2 bar up to 0...25 bar (gage or absolute) Vacuum calibrations also available		
<b>Proof pressure</b>	3x full scale (up to 10bar), 2x full scale pressure (above 10bar)		
<b>Burst pressure</b>	4x full scale (up to 10bar), 3x full scale pressure (above 10bar)		
<b>Electrical</b>			
Output Signal	0.5 - 4.5 VDC ratiometric		
Operating supply voltage	5 ± 0.25 VDC		
Supply current	≤ 5 mA		
Load	≥ 25 kΩ		
Output impedance	< 100 Ω		
Overvoltage protection	16 VDC		
Reverse polarity protection	Yes *)		
*) ± 16 VDC at Vsup; -0,5 ... +16 VDC at Vout			
<b>Pin assignment</b>			
	Pin A	Pin B	Pin C
Packard Metri-Pack 150	GND	Vsup	Vout
<b>Response time</b>	≤ 10 ms max. to 63 % of full scale pressure with step change on input		
<b>Accuracy</b>			
Reference conditions to EN 61298-1			
Accuracy *)	≤ 0.5 % of span		
Non-linearity **)	typ. 0.1 % of span, max. 0.2 % of span		
1-year stability	typ. 0.1 % of span, max. 0.25 % of span		
*) Including non-linearity, hysteresis, non-repeatability, zero point and full scale error (corresponds to error of measurement per IEC 61298-2). Adjusted in vertical mounting position with pressure port down			
**) BFSL according to IEC 61298-2			
<b>Temperatures</b>			
Medium	-40 °C to +125 °C (seal material dependent)		
Environmental	-40 °C to +125 °C (seal material dependent)		
Storage	-40 °C to +125 °C (seal material dependent)		
<b>Total Error Band</b>			
20 °C ≤ T ≤ 80 °C	1.0 % of span		
T < 20 °C, T > 80 °C	2.0 % of span		
<b>Conformity</b>			
RoHS	According to 2002/95/EC RoHS Directive		
<b>Vibration resistance</b>	IEC 60068-2-64 (RANDOM) 10 PSD		
<b>Shock resistance</b>	75 g minimum according to EN 60068-2-27		
<b>Electrical connector</b>	Packard Metri-Pack 150 - 3 pole	Others on request	
Ingress protection per IEC 60 529	IP65		
<b>Materials</b>			
Housing	Stainless steel 303 (1.4305)		
Wetted surface	Ceramic		
Seal material options	Silicone, Nitrile, Neoprene, Fluorocarbon, Fluorosilicone, Ethylene Propylene		
<b>Weight</b>	appr. 60 gram		
<b>Media</b>			
All class II fluids and gases compatible with stainless steel 303 (1.4305), ceramic and the used sealing material			
Customized versions on request - contact factory for details.			

Don't see what you want?  
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to customize this product to meet  
your application-specific needs!



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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## Main Contact

Sensata Germany GmbH  
Potsdamer Strasse 14,  
32423 Minden  
Tel: +49 571 3859-0  
Fax: +49 571 3859-119  
[www.kavlico.com](http://www.kavlico.com)  
[www.sensata.com](http://www.sensata.com)

## Your local sales contact:

### **JB Controls**

[industrie@jbcontrols.com](mailto:industrie@jbcontrols.com)  
+33(0)1 46 91 93 30  
<https://jbcontrols.com/>  
59 Rue Emile Deschanel  
92400 COURBEVOIE, France

