

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°C to +125°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

Pressure ranges	Customizable, beginning at 0...0.2 bar up to 0...25 bar (gage or absolute) Vacuum calibrations also available		
Proof pressure	3x full scale (up to 10bar), 2x full scale pressure (above 10bar)		
Burst pressure	4x full scale (up to 10bar), 3x full scale pressure (above 10bar)		
Electrical			
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 *1)		
*1) ± 16 VDC at Vsup; -0,5 ... +16 VDC at Vout			
Pin assignment			
	Pin A	Pin B	Pin C
Packard Metri-Pack 150	GND	Vsup	Vout
Response time	≤ 10 ms max. to 63 % of full scale pressure with step change on input		
Accuracy			
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			
Temperatures			
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)		
Total Error Band			
20 °C ≤ T ≤ 80 °C	1.0 % of span		
T < 20 °C, T > 80 °C	2.0 % of span		
Conformity			
RoHS	According to 2002/95/EC RoHS Directive		
Vibration resistance	IEC 60068-2-64 (RANDOM) 10 PSD		
Shock resistance	75 g minimum according to EN 60068-2-27		
Electrical connector	Packard Metri-Pack 150 - 3 pole	Others on request	
Ingress protection per IEC 60 529	IP65		
Materials			
Housing	Stainless steel 303 (1.4305)		
Wetted surface	Ceramic		
Seal material options	Silicone, Nitrile, Neoprene, Fluorocarbon, Fluorosilicone, Ethylene Propylene		
Weight	appr. 60 gram		
Media			
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.			



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.

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