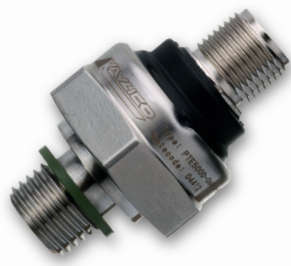


# Pressure Sensors, Transducers and Transmitters

---



- 
- Standard Products and Custom Solutions
  - Robust Designs for Demanding Applications
  - Quality Products, Quality Service
  - Multiple Sensing Technologies

## Kavlico Pressure Sensors

State-of-the-art pressure sensing and signal treatment technologies innovatively packaged to fit the highest quality requirements in the harshest environments.

For more than 50 years Kavlico Pressure Sensors has been a leading expert in designing, developing, and manufacturing a broad range of precision, pressure, pressure and temperature, fluid level, and specialty sensors.

Focused on premium products, and adapting innovative technologies to meet customer needs, Kavlico Pressure Sensors is the reliable solutions provider for the harshest and most demanding applications across the globe.

Kavlico Pressure Sensors is a brand of CST.

## Custom Sensors and Technologies

Custom Sensors & Technologies (CST) is a specialist in designing and manufacturing sensing, control and motion products.

Through its brands, BEI Kimco, BEI Sensors, BEI PSSC, Crouzet, Crydom, Kavlico, Newall and Systron Donner Inertial, CST offers customizable, reliable and efficient components for mission-critical systems in Aerospace & Defense, Transportation, Energy & Infrastructure, Medical, Food and Beverage and Building Equipment markets.

Focused on premium value offers and committed to excellence, CST, with 4,500 employees worldwide and sales of \$600M US in 2013, is the dependable and adaptable partner for the most demanding customers.

## Custom Design Solutions

Your Options, Your Choice. At Kavlico Pressure Sensors, we put the custom in customer. By matching our sensor technology to your application-specific design criteria, your performance is maximized. This essential element of our approach supports your program development and creates a long-term strategic partnership.

## Outstanding Sensor Features

All Kavlico Pressure sensors are rugged by design, allowing for installation in hostile measurement environments.

Our sensors feature:

- Repeatable, accurate measurements over the lifetime of your equipment
- High shock and vibration tolerance on heavy machinery
- EMI/RFI and ESD protection, high overpressure protection, and high humidity tolerance
- Compensation over a wide temperature range

With a 10-year minimum shelf life and a lifetime in millions of cycles, Kavlico Pressure sensors are built to last. And with so many OEM and custom options, choosing Kavlico for your measurement requirements just makes sense.

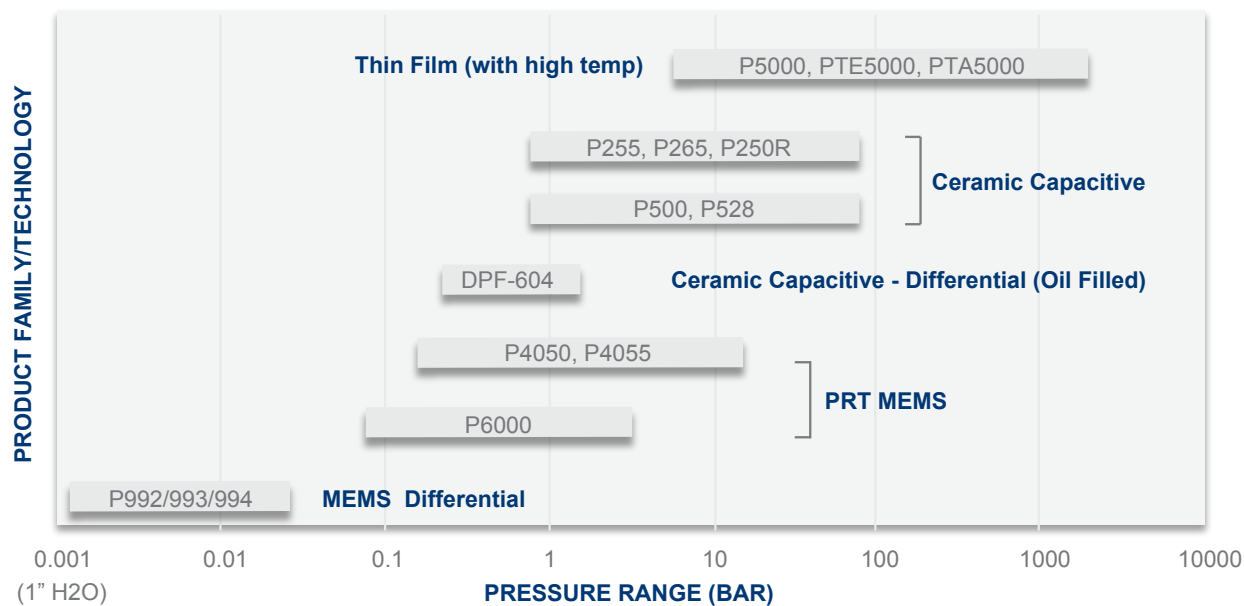
## Types of Pressure References

**Absolute Pressure** - Absolute Pressure sensors measure pressure compared with a vacuum.

**Gage Pressure** - Gage Pressure sensors measure pressure using the ambient outside pressure as the reference rather than a vacuum. This outside pressure varies with altitude so sensor output will adjust to altitude.

**Sealed Gage** - Sealed Gage Pressure sensors are Absolute Pressure sensors with the reference shifted from a vacuum to atmospheric pressure at sea level (14.7 PSI). The output of these sensors will not vary with altitude.

# Pressure Sensor Application Matrix



## Sensor Selection Guide

TYPICAL APPLICATIONS	COMMON PRESSURE RANGE	RECOMMENDED PRODUCT FAMILY
HVAC - Refrigeration and Chillers	0-7 Bar to 0-42 Bar	P528, P250, P5000, PTE5000, PTA5000
HVAC - Duct Air Flow	0-2.5 mBar to 0-25 mBar	P992, P993
Compressors	0-7 Bar to 0-35 Bar	P255, P265, P4055, PTE5000, PTA5000
Standby Power Generation	0-7 Bar to 0-20 Bar	P500, P4055, P255, P265, P2000
Filter Restriction	0-35 mBar to 0-350 mBar	P4055, P6000
Vacuum Sensors	-1-0 Bar to 0-7 Bar	P4055, P6000
Engine Oil, Coolant, Fuel Pressure	0-1 to 0-20 Bar	P500, P4055, P255, P265, P2000
Urea Dosing	0.2 to 25 Bar	PE2000
EGR Sensors	0-350 mBar to 0-3.5 Bar	P321
DPF Sensors	0-350 mBar to 0-3.5 Bar	DPF-P604, P321
Aerospace Cabin Pressure	0-2.5 mBar to 0-25 mBar	P992, P993
Anesthesia/Oxygen Control	0-2.5 mBar to 0-25 mBar	P992, P993
Crankcase Ventilation	-200 to +200 mBar	P4055, PE2000
Test Instrumentation	0-6 Bar to 0-400 Bar	P265, P500, P5000, PTE5000, PTA5000
Leak Detection	0-35 to 0-350 mBar	P356, P6000, P992, P993
Sterilizers	0-7 Bar	P500, P255, P265
CNG & LPG	0 to 200 Bar	PTE5000, PTA5000
Industrial Transmitters	0-10 Bar to 0-600 Bar	PTE5000, PTA5000
Hydraulics	0-100 Bar to 0-600 Bar	P5000, PTE5000, PTA5000

Application Considerations for Product Selection include: Media Compatibility, Physical Requirements (Vibration, Thermal, EMC), Accuracy, and Production Volume.

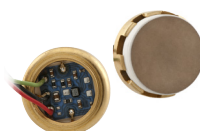


	P500	P528	P2000	PE2000	P265
	Next Generation Ceramic Pressure Sensor	Refrigeration Ceramic Pressure Sensor	Ceramic Capacitive OEM Pressure Sensor	Ceramic Capacitive OEM Pressure Sensor	General Purpose Ceramic Pressure Sensor - Outside Hex
<b>TECHNICAL SPECS:</b>					
<b>Sensor Technology</b>	Ceramic Capacitive	Ceramic Capacitive	Ceramic Capacitive	Ceramic Capacitive	Ceramic Capacitive
<b>Pressure Range</b>	0-15 to 0-1,000 PSI 0-1 to 0-70 Bar Absolute or Sealed Gage	0-100 to 0-1000 PSI 0-6 to 0-70 Bar Absolute or Sealed Gage	0-15 to 0-300 PSI Absolute or Gage	0-0.2 to 0-25 Bar Absolute or Gage	0-15 to 0-1,000 PSI Absolute, Gage, or Sealed Gage
<b>Nominal Output Signal</b>	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc
<b>Total Error Band (TEB)<sup>1</sup></b>	±1.5% of Span (0°C ≤ T ≤ 85°C) ±2.0% of Span (T < 0°C, T > 85°C)	±1.5% of Span (0°C ≤ T ≤ 85°C) ±2.0% of Span (T < 0°C, T > 85°C)	±1.5% of Span (10°C ≤ T ≤ 85°C) ±3.0% of Span (T < 10°C, T > 85°C)	±1.0% of Span (20°C ≤ T ≤ 80°C) ±2.0% of Span (T < 20°C, T > 80°C)	±2.0% of Span (-20°C ≤ T ≤ +100°C) ±3.0% of Span (T < -20°C, T > +100°C)
<b>Accuracy<sup>2</sup></b>	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span
<b>Supply Current</b>	< 5mA	< 5mA	< 5mA	< 5mA	< 5mA
<b>Supply Voltage</b>	5Vdc ± 0.5Vdc	5Vdc ± 0.5Vdc	5Vdc ± 0.5Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.5Vdc
<b>Over Voltage Protection</b>	36Vdc	36Vdc	16Vdc	16Vdc	16Vdc
<b>Reverse Polarity Protection</b>	-36Vdc	-36Vdc	-5Vdc	+/- 16Vdc Vsupply -0.5 / +16Vdc Vout	-5Vdc
<b>Output Impedance</b>	<100Ω	<100Ω	<100Ω	<100Ω	<100Ω
<b>Response Time</b>	< 2ms to 63% of Final Output Voltage with step change in Input Pressure	< 2ms to 63% of Final Output Voltage with step change in Input Pressure	< 15ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 15ms to 63% of Final Output Voltage with step change in Input Pressure
<b>Housing Material Options</b>	Brass (P ≤ 350 PSIA [24 BarA]) 304 Stainless Steel (P > 350 PSIA [24 BarA])	Brass (P ≤ 350 PSIA [24 BarA]) 304 Stainless Steel (P > 350 PSIA [24 BarA])	304 Stainless Steel	303 Stainless Steel	303 Stainless Steel
<b>Standard Seal Material Options</b> (Contact Factory for Additional/Custom Options)	Fluorocarbon; Fluorosilicone; Ethylene Propylene	Neoprene; Ethylene Propylene; HNBR	Fluorocarbon; Fluorosilicone	Silicone; Nitrile; Neoprene; Fluorocarbon; Fluorosilicone; Ethylene Propylene	Nitrile; Neoprene; Fluorocarbon; Fluorosilicone; Ethylene Propylene
<b>Seal Type</b>	O-Ring	O-Ring	O-Ring	O-Ring	O-Ring
<b>Wetted Surface</b>	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
<b>Media Compatibility</b>	Seal Dependent	Seal Dependent	Seal Dependent	Seal Dependent	Seal Dependent
<b>Operating Temperature</b>	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)
<b>Storage Temperature</b>	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)
<b>Vibration</b>	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)
<b>Mechanical Shock</b>	75g's, 1/2 Sine Wave	75g's, 1/2 Sine Wave	75g's, 1/2 Sine Wave	75g's, 1/2 Sine Wave	75g's, 1/2 Sine Wave
<b>Weight</b>	< 50 grams	< 50 grams	< 85 grams	< 60 grams	< 128 grams
<b>Standard Pressure Connection Port Options</b> (Contact Factory for Additional/Custom Options)	1/4-18 NPT; 1/8-27 NPT; G 1/4; G 1/4 (Internal); 3/8-24 UNF-2A; 3/8-24 UNF-2B	1/4-18 NPT; 1/4 SAE Female Schraeder Deflator; 7/16-20 UNF-2A; 1/8-27 NPT	1/8-27 NPT; 1/4-18 NPT	1/4-18 NPT	1/4-18 NPT; 3/8-24 UNF-2A; 1/8-27 NPT
<b>Standard Electrical Connector Options</b> (Contact Factory for Additional/Custom Options)	Packard Metripack 150 with mating connector with 12" Leads; Packard Metripack 150	Packard Metripack 150 with mating connector with 12" Leads; Packard Metripack 150	Packard Metripack 150 with mating connector with 12" leads; Packard Metripack 150; DIN 72585; DIN 72585 with mating connector with 12" leads	Packard Metripack 150; DIN 72585	Packard Metripack 150 with mating connector with 12" leads; 3-Lead Wires, 20 AWG, Insulated; Packard Metripack 150
<b>QUALITY CERTIFICATIONS:</b>					
<b>RoHS Compliant</b>	Yes	Yes	No	Yes	No
<b>CE Mark</b>	Yes	Yes	No	**	**
<b>UL Certification</b>	Yes	Yes	No	**	**

1) TEB = Linearity + Hysteresis + Repeatability + Temp. Coeff. + Zero + Span Tolerance

2) Accuracy = Linearity (best fitted straight line) including Hysteresis + Repeatability

\*\*Contact Factory



	P255	P356	PS162	PS312	P6000
	General Purpose Ceramic Pressure Sensor - Inside Hex	Low Pressure Differential/Gage Pressure Sensor	OEM High Pressure Sensing Module	OEM Low Pressure Sensing Module	Remote Mount Miniature Pressure Sensor
<b>TECHNICAL SPECS:</b>					
<b>Sensor Technology</b>	Ceramic Capacitive	Ceramic Capacitive	Ceramic Capacitive	Ceramic Capacitive	Piezo Resistive
<b>Pressure Range</b>	0-15 to 0-1,000 PSI Absolute, Gage, or Sealed Gage	0-0.5 to 0-5.0 PSI Gage or Differential	0-200 mBar to 0-60 Bar	50 mBar to 20 Bar	0-2.5 to 0-5 PSI (Gage) 0-15 to 0-100 PSI (Absolute or Gage) 0-200 to 0-500 mBar (Gage) 0-1 to 0-7 Bar (Absolute or Gage)
<b>Nominal Output Signal</b>	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc or 1Vdc to 4Vdc	0.5Vdc to 4.5Vdc or 1Vdc to 4Vdc	0.5Vdc to 4.5Vdc
<b>Total Error Band (TEB)<sup>1</sup></b>	±2.0% of Span (-20°C ≤ T ≤ +100°C) ±3.0% of Span (T < -20°C, T > +100°C)	±3% of Span (-30°C to +100°C)	±1% of Span (typical) (20°C to 85°C)	±1% of Span (typical) (20°C to 85°C)	±2% of Span above 2.5 PSI and 200 mBar and ±3% of Span for 2.5 PSI and 200 mBar (0°C to 85°C)
<b>Accuracy<sup>2</sup></b>	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span
<b>Supply Current</b>	< 5mA	< 3mA	< 3mA	< 3mA	< 5mA
<b>Supply Voltage</b>	5Vdc ± 0.5Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.25Vdc
<b>Over Voltage Protection</b>	16Vdc	16Vdc	16Vdc	16Vdc	16Vdc
<b>Reverse Polarity Protection</b>	-5Vdc	-5Vdc	+/- 16Vdc Vsupply -0.5 / +16Vdc Vout	+/- 16Vdc Vsupply -0.5 / +16Vdc Vout	-6Vdc
<b>Output Impedance</b>	< 100Ω	< 100Ω	< 100Ω	< 100Ω	< 100Ω
<b>Response Time</b>	< 15ms to 63% of Final Output Voltage with step change in Input Pressure	< 15ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure
<b>Housing Material Options</b>	316 Stainless Steel	CA360 Brass	Brass spacer	Brass spacer	PA 66, 30% Glass
<b>Standard Seal Material Options</b> (Contact Factory for Additional/Custom Options)	Nitrile; Neoprene; Fluorocarbon; Fluorosilicone; Ethylene Propylene	Fluorocarbon; Fluorosilicone	**	**	Fluorosilicone
<b>Seal Type</b>	O-Ring	O-Ring	N/A	N/A	Adhesive
<b>Wetted Surface</b>	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic, Silicon, PA66 (30% GF)
<b>Media Compatibility</b>	Seal Dependent	Seal Dependent	Broad Compatibility	Broad Compatibility	Air and Compatible Fluids
<b>Operating Temperature</b>	-40°C to +125°C (Seal Material Dependent)	-30°C to +100°C (Seal Material Dependent)	-40°C to +125°C	-40°C to +125°C	0°C to +85°C
<b>Storage Temperature</b>	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C (Seal Material Dependent)	-40°C to +125°C	-40°C to +125°C	-30°C to +100°C
<b>Vibration</b>	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (5 to 2,000 Hz)
<b>Mechanical Shock</b>	75g's, 1/2 Sine Wave	75g's, 1/2 Sine Wave	50g's, 1/2 Sine Wave	50g's, 1/2 Sine Wave	50g's, 1/2 Sine Wave
<b>Weight</b>	< 100 grams	< 128 grams	< 20 grams	< 40 grams	< 1.3 grams
<b>Standard Pressure Connection Port Options</b> (Contact Factory for Additional/Custom Options)	1/4-18 NPT; 3/8-24 UNF-2A; 3/8-24 UNF-2B; 1/8-27 NPT	1/4-18 NPT; 9/16-18 UNRF-2vA; M16x1.5	Custom Connection (contact factory)	Custom Connection (contact factory)	Barb for 3/16 ID tubing
<b>Standard Electrical Connector Options</b> (Contact Factory for Additional/Custom Options)	Packard Metripack 150 with mating connector with 12", 16 AWG Leads; Packard Metripack 150	Packard Metripack 150 with mating connector with 12", 16 AWG Leads; Packard Metripack 150	3 Isolated Wires 0.15mm, 2-75mm Long (Red: +Vcc, Green: +Out, Black: GND)	3 Isolated Wires 0.15mm, 2-75mm Long (Red: +Vcc, Green: +Out, Black: GND)	Pin Header; Pin Header with Mating Con- nector with Lead wires 12" long
<b>QUALITY CERTIFICATIONS:</b>					
<b>RoHS Compliant</b>	Yes	No	Yes	Yes	Yes
<b>CE Mark</b>	**	**	**	**	Yes
<b>UL Certification</b>	**	**	**	**	**

1) TEB = Linearity + Hysteresis + Repeatability + Temp. Coeff. + Zero + Span Tolerance

2) Accuracy = Linearity (best fitted straight line) including Hysteresis + Repeatability

\*\*Contact Factory



	<b>P312</b>	<b>DPF-P604 Ceramic</b>	<b>P5000</b>	<b>P4055/P4056</b>	<b>DPF-P4050 PRT</b>
	<b>Pressure Sensing Module</b>	<b>Diesel Particulate Filter (DPF) Pressure Sensor</b>	<b>Hermetically Sealed High Pressure Sensor</b>	<b>Piezo Resistive OEM Pressure Sensor</b>	<b>Low Profile Diesel Particulate Filter (DPF) Pressure Sensor</b>
<b>TECHNICAL SPECS:</b>					
<b>Sensor Technology</b>	Ceramic Capacitive	Oil-Filled Ceramic Capacitive	Thin Film	Piezo Resistive	Piezo Resistive
<b>Pressure Range</b>	0-5 to 0-100 PSI Absolute or Gage	0-5 to 0-50 PSI Differential	0-1,000 to 0-8,000 PSI 0-65 to 0-600 Bar Gage	0-3 to 0-300 PSI 0-200 mBar to 0-20 Bar Absolute, Gage, or Sealed Gage	0 to 90 kPa Differential
<b>Nominal Output Signal</b>	0.5Vdc to 4.5Vdc (Ratiometric to Supply Voltage)	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc	0.5Vdc to 4.5Vdc
<b>Total Error Band (TEB)<sup>1</sup></b>	±3.0% of Span (-30°C to +100°C)	±3.0% of Span (25°C ≤ T ≤ 125°C) ±5.0% of Span (-40°C ≤ T ≤ +25°C)	±1.5% of Span (0°C ≤ T ≤ 100°C) ±3.0% of Span (T < 0°C, T > 100°C)	±2.0% of Span (-20°C ≤ T ≤ +100°C) ±3.0% of Span (T < -20°C, T > +100°C)	±1.5% of Span (0°C to 100°C)
<b>Accuracy<sup>2</sup></b>	< 0.5% of Span	< 2% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span
<b>Supply Current</b>	< 7mA	< 5mA	< 5mA	< 5mA	< 5mA
<b>Supply Voltage</b>	4.75Vdc to 7Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.25Vdc	5Vdc ± 0.5Vdc
<b>Over Voltage Protection</b>	7Vdc	16Vdc	16Vdc	16Vdc	16Vdc
<b>Reverse Polarity Protection</b>	**	-5Vdc	-5Vdc	-5Vdc	-5Vdc
<b>Output Impedance</b>	< 100Ω	<100Ω	<100Ω	< 100Ω	< 100Ω
<b>Response Time</b>	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 140ms to 63% of Final Output Voltage with step change in Input Pressure	< 5ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 5ms to 63% of Final Output Voltage with step change in Input Pressure
<b>Housing Material Options</b>	304 Stainless Steel	Valox 420	304L Stainless Steel	Brass	PPS (40% glass)
<b>Standard Seal Material Options</b> (Contact Factory for Additional/Custom Options)	Silicone; Nitrile; Neoprene; Fluorocarbon; Fluorosilicone	Silicone	External seal options: Nitrile; Fluorosilicone; Aluminum Washer; Copper Washer	Fluorosilicone	Fluorosilicone
<b>Seal Type</b>	O-Ring	O-Ring	Weld	O-Ring	Adhesive
<b>Wetted Surface</b>	Ceramic	Ceramic	Stainless Steel	Ceramic	Ceramic, Silicon, PPS (40% GF)
<b>Media Compatibility</b>	Seal Material Dependent	Diesel Exhaust	Broad Compatibility	Broad compatability	Broad compatability (including diesel exhaust)
<b>Operating Temperature</b>	-30°C to +100°C (Seal Material Dependent)	-40°C to +125°C	-40°C to +140°C	-40°C to +125°C	-40°C to +140°C
<b>Storage Temperature</b>	-40°C to +125°C (Seal Material Dependent)	-40°C to +130°C	-55°C to +150°C	-40°C to +125°C	-40°C to +155°C
<b>Vibration</b>	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	25g's Peak-to-Peak Random (10 to 2,000 Hz)	10g's Peak-to-Peak Sine (10 to 2,000 Hz)	20g's Peak-to-Peak Random (10 to 2,000 Hz)
<b>Mechanical Shock</b>	50g's, 1/2 Sine Wave	100gs, 1/2 Sine Wave	50g's, 1/2 Sine Wave	75g's, 1/2 Sine Wave	50g's, 1/2 Sine Wave
<b>Weight</b>	< 100 grams	<90 grams	< 60 grams	< 50 grams	< 30 grams
<b>Standard Pressure Connection Port Options</b> (Contact Factory for Additional/Custom Options)	Custom Connection (contact factory)	Pressure Hose Fitting Connection	1/4-18 NPTF; 7/16-20 UNF-2A; 1/8-27 NPTF; G1/4; M10x1; M12x1.5; M14x1.5; 1/4-19 BSPT (R1/4); 3/8-24 UNF-2A; 9/16-18 UNF-2A	1/4-18 NPT; 1/8-27 NPT; M10x1; M12x1.5; M14x1.5; M16x1.5; G1/4; 1/4-19 BSPT; 7/16-20 UNF-2A; 1/8-28 BSPT	Dependent on Requested Design; Custom Connection (contact factory)
<b>Standard Electrical Connection Options</b> (Contact Factory for Additional/Custom Options)	3 Isolated Wires 0.15mm, 2-75mm Long (Red: +Vcc, Green: +Out, Black: GND)	Framatome FCI Connector	Packard Metripack 150; M12; 9.4mm; 18mm; Quad-Lok; Quad-Lok with mating connector with 12" leads	Packard Metripack 150 with mating connector with 12" leads; Packard Metripack 150	**
<b>QUALITY CERTIFICATIONS:</b>					
<b>RoHS Compliant</b>	No	No	Yes	Yes	Yes
<b>CE Mark</b>	**	No	**	Yes	No
<b>UL Certification</b>	**	No	**	**	No

1) TEB = Linearity + Hysteresis + Repeatability + Temp. Coeff. + Zero + Span Tolerance

2) Accuracy = Linearity (best fitted straight line) including Hysteresis + Repeatability

\*\*Contact Factory



	<b>P992</b>	<b>P993</b>	<b>P994</b>	<b>PTA5000</b>	<b>PTE5000</b>
	Low Range Differential Pressure Sensor	Low Range Differential Pressure PCB Sensor	Low Range Differential Pressure PCB Mount Sensor	Hermetically Sealed Modular Pressure Sensor	Hermetically Sealed Modular Pressure Sensor
<b>TECHNICAL SPECS:</b>					
<b>Sensor Technology</b>	Capacitive MEMS	Capacitive MEMS	Capacitive MEMS	Thin Film	Thin Film
<b>Pressure Range</b>	2, 5, 10, $\pm 1$ , $\pm 2$ , and $\pm 5$ inches of H <sub>2</sub> O Differential 0-5 mBar to 0-25 mBar Differential	2, 5, 10, $\pm 1$ , $\pm 2$ , and $\pm 5$ inches of H <sub>2</sub> O Differential 0-5 mBar to 0-25 mBar Differential	1, 2, 5, 10, $\pm 1$ , $\pm 2$ , and $\pm 5$ inches of H <sub>2</sub> O Differential 0-5 mBar to 0-25 mBar Differential	0-100 to 0-10,000 PSI Gage	0-6 to 0-600 Bar Gage
<b>Nominal Output Signal</b>	0.25Vdc to 4Vdc	0.25Vdc to 4Vdc	0.25Vdc to 3.75Vdc	4mA to 20mA; 0Vdc to 10Vdc; 0.5Vdc to 4.5Vdc ratiometric	4mA to 20mA; 0.5Vdc to 4.5Vdc ratiometric; 0Vdc to 5Vdc; 0Vdc to 10Vdc
<b>Total Error Band (TEB)<sup>1</sup></b>	$\pm 2.0\%$ of Span (10°C to 40°C)	$\pm 2.0\%$ of Span (10°C to 40°C)	$\pm 2.0\%$ of Span (10°C to 40°C)	TC zero 0.2% / 10 K + TC span 0.2% / 10 K + Accuracy	TC zero 0.2% / 10 K + TC span 0.2% / 10 K + Accuracy
<b>Accuracy<sup>2</sup></b>	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span	< 0.5% of Span
<b>Supply Current</b>	< 4mA	< 4mA	< 4mA	< 5mA	< 5mA
<b>Supply Voltage</b>	5Vdc $\pm$ 0.25Vdc	5Vdc $\pm$ 0.25Vdc	5Vdc $\pm$ 0.25Vdc	8-30Vdc for output 4 to 20 mA; 5Vdc $\pm$ 5% for output 0.5 to 4.5Vdc; 14-30Vdc for output 0 to 10Vdc	8-30Vdc for output 4 to 20 mA (0 to 5Vdc); 5Vdc $\pm$ 5% for output 0.5 to 4.5Vdc; 14-30Vdc for output 0 to 10Vdc
<b>Over Voltage Protection</b>	16Vdc	16Vdc	16Vdc	33Vdc	33Vdc
<b>Reverse Polarity Protection</b>	-6Vdc	-6Vdc	-6Vdc	Yes	Yes
<b>Output Impedance</b>	< 100 $\Omega$	< 100 $\Omega$	< 100 $\Omega$	< 100 $\Omega$	< 100 $\Omega$
<b>Response Time</b>	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 10ms to 63% of Final Output Voltage with step change in Input Pressure	< 2ms to 63% of Final Output Voltage with step change in Input Pressure	< 2ms to 63% of Final Output Voltage with step change in Input Pressure
<b>Housing Material Options</b>	PET, 30% Glass	PET, 30% Glass	PET, 30% Glass	304 Stainless Steel	304 Stainless Steel
<b>Standard Seal Material Options</b> (Contact Factory for Additional/Custom Options)	Fluorosilicone	Fluorosilicone	Silicone	Fluorocarbon; Aluminium Washer; Copper Washer	Fluorocarbon; Aluminium Washer; Copper Washer
<b>Seal Type</b>	Adhesive	Adhesive	Adhesive	Weld	Weld
<b>Wetted Surface</b>	Ceramic, Fluorosilicon, PET (30% GF)	Ceramic, Fluorosilicon, PET (30% GF)	Ceramic, Silicone, PET (30% GF)	Stainless Steel	Stainless Steel
<b>Media Compatibility</b>	Dry Air	Dry Air	Dry Air	Broad Compatibility	Broad Compatibility
<b>Operating Temperature</b>	-10°C to +60°C	-10°C to +60°C	-0°C to +60°C	-30°C to +100°C (limitations according to exact sensor configuration; broader temperature range for other connectors)	-30°C to +100°C (limitations according to exact sensor configuration; broader temperature range for other connectors)
<b>Storage Temperature</b>	-40°C to +95°C	-40°C to +95°C	-40°C to +95°C	-30°C to +100°C	-30°C to +100°C
<b>Vibration</b>	1g Peak-to-Peak Sine (20 to 1,200 Hz)	1g Peak-to-Peak Sine (20 to 1,200 Hz)	1g Peak-to-Peak Sine (20 to 1,200 Hz)	According to EN 600 68-2-27	According to EN 600 68-2-27
<b>Mechanical Shock</b>	10g's, 1/2 Sine Wave	10g's, 1/2 Sine Wave	10g's, 1/2 Sine Wave	1/2 Sine Wave	1/2 Sine Wave
<b>Weight</b>	< 20 grams	< 20 grams	< 3.5 grams	< 60 grams	< 60 grams
<b>Standard Pressure Connection Port Options</b> (Contact Factory for Additional/Custom Options)	1/8" diameter tube fitting with barb for 3/16 ID tubing	1/8" diameter tube fitting with barb for 3/16 ID tubing	Barb for 5/32 ID soft tubing	1/4-18 NPT	G1/4; 7/16-20 UNF-2A; 7/16-20 UNF-2B;
<b>Standard Electrical Connector Options</b> (Contact Factory for Additional/Custom Options)	PCB Mount; 3 Foot PCB (Compatible with Kavlico P892); 2 Foot PCB with lead wires (Compatible with Kavlico P592/ P593/P792)	3 solderable pins, tin plated	PCB Plug-in (Mates to PCB installed receptacle)	Packard Metripack 150; M12-4 pole	M12-4 pole; 18mm DIN; 9.4 mm GDS 307; Packard Metripack 150
<b>QUALITY CERTIFICATIONS:</b>					
<b>RoHS Compliant</b>	Yes	Yes	Yes	Yes	Yes
<b>CE Mark</b>	Yes	Yes	**	Yes	Yes
<b>UL Certification</b>	Yes	**	**	Yes	Yes

1) TEB = Linearity + Hysteresis + Repeatability + Temp. Coeff. + Zero + Span Tolerance

2) Accuracy = Linearity (best fitted straight line) including Hysteresis + Repeatability

\*\*Contact Factory



## CST and Kavlico Pressure Sensors Worldwide



## Contact Information

### North America

Custom Sensors & Technologies (CST)  
235 E. Main St., Suite 102A  
Northville, MI 48167, USA  
Phone: +1 (619) 710 2068  
E-mail: [pressure.sensors@kavlico.com](mailto:pressure.sensors@kavlico.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)

### 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)

### 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)

### China

Custom Sensors & Technologies (CST)  
13th Floor, Chang Feng  
International Tower,  
89 Yunling Road (east), Putuo District  
Shanghai - 200062, China  
Phone: +86 (21) 6065-6888  
Fax: +86 (21) 6065-7749  
E-mail: [china@cstsensors.com](mailto:china@cstsensors.com)

### Taiwan and Other Asia & Pacific Countries

Custom Sensors & Technologies (CST)  
2F, No. 39, Ji-Hu Road Nei-Hu Dist.,  
Taipei 114, Taiwan, R.O.C.  
Phone: +886 2 8751 6388  
Fax: +886 2 2657 8725  
Taiwan E-mail: [taiwan@cstsensors.com](mailto:taiwan@cstsensors.com)  
EAP E-mail: [eap@cstsensors.com](mailto:eap@cstsensors.com)