

AutoPSI-TC™

Temperature-Compensated Dynamic Pressure Sensor



The AutoPSI-TC - **temperature compensated dynamic pressure sensor** is uniquely capable of long term operation in high temperature up to 360°C, at high levels of Electromagnetic and Radio Frequency (EMI/RFI) fields, and in chemically volatile media.

The temperature coefficient of sensitivity of the AutoPSI-TC sensor is reduced to $\pm 0.003\%/^{\circ}\text{C}$ - matching the performance of much more expensive water-cooled sensors.

The sensor is suitable for a wide range of applications such as:

- **Engine Balancing, Condition-Based Maintenance, Diagnostics and Prognostics in Natural Gas and Diesel Engines**, where long life, excellent pressure-response linearity and calibrated performance are required.
- **In-Vehicle Engine Calibration and Mapping** - when integrated with Optrand's pressure indicating spark plug, CALplug.
- **Extrusion, Injection and Compression Molding** in the plastics industry.
- **Metal Die Casting**

Specifications

<i>Pressure Range</i>	0-14 bar (~1,000 psi) through 2,000 bar (~30,000 psi)
<i>Over Pressure</i>	2 x Pressure Range or 35,000 psi, whichever is less
<i>Non-Linearity & Hysteresis</i>	±0.5% FS under non-combustion conditions
	±1% FS under combustion conditions
<i>Sensor Output Signal</i>	Analog, 0.5V to 5V
<i>Diagnostic Output Signal</i>	Analog, 0V to 3.6V
<i>Diaphragm Resonant Frequency</i>	≥120kHz
<i>Frequency Range</i>	0 Hz to 15 kHz
<i>Sensor Housing Temperature Range</i>	-40° to 360°C
<i>Fibe-Optic Cable Operating Temperature</i>	-40° to 200°C
<i>Fiber-Optic Cable Length</i>	2m (6.5') Standard; Custom Length Optional
<i>Fiber-Optic Cable Minimum Bending Radius</i>	5mm (5/16")
<i>Sensor Operational Mode</i>	Sealed Gauge
<i>Signal Conditioner Operating Temperature Range</i>	-20°C to 65°C (~150°F)
<i>Temperature Coefficient of Sensitivity</i>	±0.003%/°C
<i>Pressure Media</i>	Gaseous or Liquid
<i>Output Impedance</i>	250 ohm