

AutoPSI-S2000™

Dynamic Pressure Sensor for High Pressure Applications



The AutoPSI-S2000 has been designed for high pressure (**2,000 bar** or **30,000 psi**) dynamic pressure measurement in harsh environments characterized by temperatures up to 300°C, high levels of Electromagnetic and Radio Frequency Interference fields (EMI/RFI), and chemically volatile media.

The AutoPSI-S2000 comes with the service lifetime up to **500 million** cycles or 3 years (based on a fatigue-free fiber optic/metal diaphragm design). The unprecedented sensor lifetime enables continuous monitoring and control of **high pressure hydraulic systems**.

A robust sensor head design with a 1/2-20 thread and tapered sealing surface provides convenient mounting and torquing. The optical fiber is housed in standard 200°C-rated silicone cable or optional flexible metal hose for industrial applications. Permanently attached to this cable is a signal conditioner housing the optics and electronics.

The sensor has an accuracy of $\pm 1\%$ of Full Scale Output over a frequency range of 0.1Hz to 15kHz. A standard output voltage of 0.5V to 5V is provided, with different output values available. The sensor requires a 9V to 18V DC power supply.

Specifications

Pressure Range	0-2000 bar (~30,000 PSI)
Over Pressure	1.5x Pressure Range
Natural Frequency	>150 kHz
Frequency Range	0.1 Hz to 15 kHz (standard)
Operating Temperature	
Sensor Housing	-40 to 300°C (572°F)
Cable	-40 to 200°C (390°F)
Signal Conditioner	-20 to 65°C (150°F)
HT Version	-20 to 125°C (257°F)
Temperature Coefficient of Sensitivity	
AutoPSI-S2000	$\pm 0.03\%$ /°C (standard)
Non-Linearity and Hysteresis	$\pm 1.0\%$ FSO
Output Signal	0.5-5 V Analog (white wire)
Diagnostic Output Signal	0-3.6 V Analog (blue wire)
Output Impedance	250 Ohm
Interface Power Supply	9-18 V DC, 85 mA (red wire)
Sensor Operational Mode	Sealed Gauge
Pressure Media	Gaseous or Liquid
Fiber Optic Cable Length	2m (6.5 ft.) Standard
Interface Unit/Amplifier	Integrated with Sensor
Signal Conditioner	Diam 1.125" x 3.25"
Guaranteed Lifetime	500 Million Pressure Cycles or 3 years