

CS91

High Temperature (+200°C) Pressure Sensor

FEATURES

- $\leq \pm 0.25\%$ BFSL accuracy
- -40°C to +200°C operating temperature range
- Configurable pressure ranges from 500 to 30,000 PSI sealed gauge
- PT1000 RTD temperature output
- High strength Hastelloy C276 or Inconel 718 sensing element
- Compensated over pressure and temperature

GREAT FOR....

- Engine test stands
- Environmental chambers
- Semiconductor manufacturing
- Sterilization equipment (Autoclave)



About the CS91

The **CS91 High Temperature Pressure Sensor** uses a fully active four arm Wheatstone bridge, dielectrically isolated bulk silicon sensing element based on proprietary technology. This sensor has been designed for continuous operation in high temperature applications (up to 200°C) such as engine test stands, environmental chambers and semiconductor manufacturing. Standard offering includes a metal-to-metal flare process connection, 10mV/V compensated output signal, 22mm diameter housing, and a high strength glass-to-metal seal electrical connection. An additional PT1000 RTD temperature output is standard for further measurement capabilities. The CS91 has been independently tested to meet IEC 60068-2-27 shock and IEC 60068-2-6 vibration standards. A replaceable Inconel 600 metal seal is included to ease installation.



High Millivolt Output - High Temperature Ready

The CS91 High Temperature Pressure Sensor offers a **compensated output of 10mV/V with a maximum excitation of 10VDC**. This provides a large amount of usable output, simplifying signal conditioning.

The CS91 is not only ideal for high temperature applications but it will also **perform excellent in corrosive environments**. For pressure ranges up to 10,000 PSI, Hastelloy C276 (UNS N10276) is the standard wetted material. For pressure ranges greater than 10,000 PSI, Inconel 718 (UNS N07718) is the standard wetted material.

All of these features come packaged in a ready to use pressure sensor that can be installed directly in the high temperature environment without the need for cooling adapters or other cooling accessories.

SPECIFICATIONS

Performance

Accuracy @ 25°C*	≤ ± 0.25% BFSL
Stability (1 Year)	≤ ±0.25% of FS
Overpressure	1.5X rated pressure
Burst Pressure	3X rated pressure
Platinum Resistance Temperature Detector (RTD)	Class A, PT1000

* Accuracy includes non-linearity, hysteresis and non-repeatability

Environmental

Vibration	IEC 60068-2-6
Shock	IEC 60068-2-27

Mechanical

Wetted Material	Pressures ≤10,000 PSI = Hastelloy C276 Pressures >10,000 PSI = Inconel 718
Installation Torque	14-17 Nm (3/8-24 UNF)
Installation Information	Mount using supplied Inconel 600 replaceable metal seal

Thermal

Operating Temperature	-40°C to +200°C
Compensated Temperature	+25°C to +150°C
TC Zero	±0.025% FS per °C, typical
TC Span	±0.025% FS per °C, typical

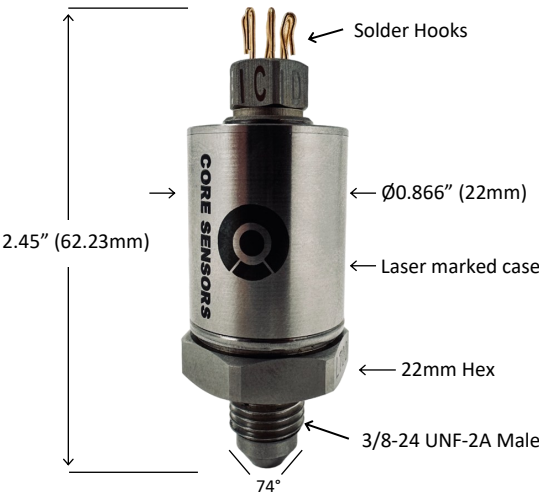
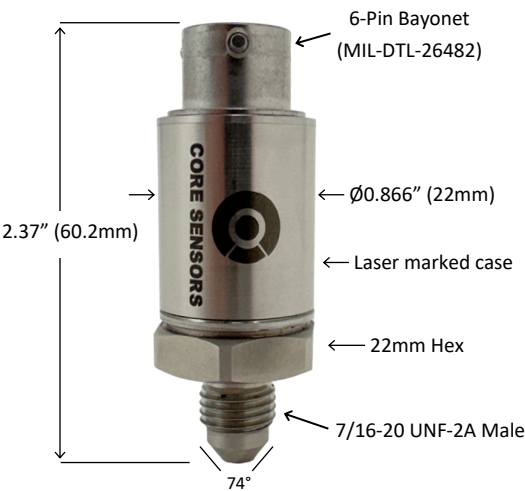
Electrical

Output	10mV/V compensated
Excitation*	10VDC, max
Zero Offset	≤ ± 3% FSO
Span Tolerance	≤ ± 3% FSO
Isolation Voltage	250VDC
Input Impedance	2.5KΩ, typical
Response Time	0.1ms, typical 0.2ms, max

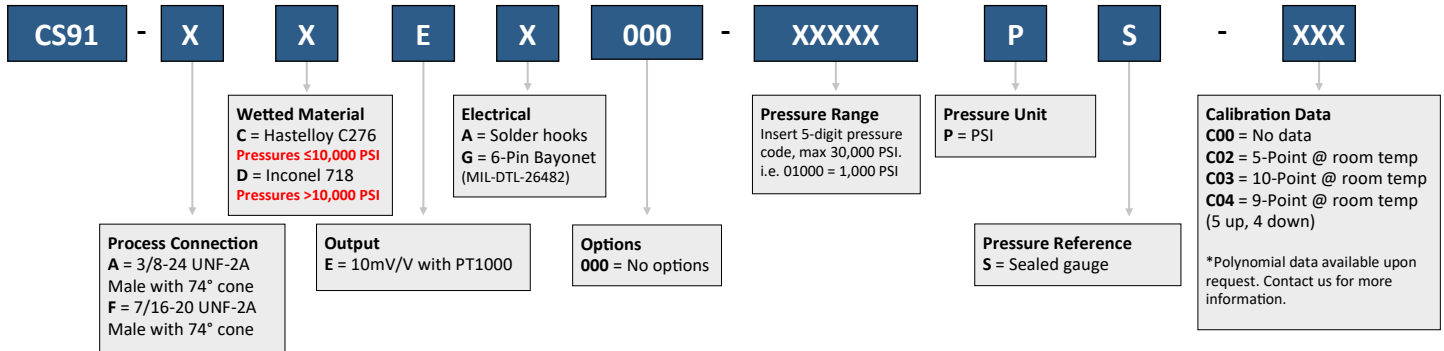
* Sensor will operate off of any voltage up to 10VDC. Output is ratiometric to supply voltage used.

DIMENSIONS

*Dimensions are for reference only



MODEL NUMBER CONFIGURATION



Ordering Example: CS91-ACEA000-05000PS-C00 (3/8"-24 UNF-2A Male w/ 74° cone, Hastelloy C276, 10mV/V with PT1000, Solder hooks, 0-5000 PSI sealed gauge, No data)
 Not all configurations are available. Our sales team can recommend the closest available configuration based on your requirements.
 Contact Core Sensors for configurations not shown.
 Visit our [How To Buy](#) page or [contact us](#) for a quote.

WIRING GUIDE

Wiring For both solder hooks and 6-Pin Bayonet	
PIN	Function
A	+Excitation
B	+Signal
C	-Signal
D	-Excitation
E	PT1000
F	PT1000

****Disclaimer:** Unless otherwise agreed in writing, Core Sensors products are not authorized for use in applications including medical devices, life support systems, in-flight aerospace, nuclear or any other application where the product failure could result in personal injury or death.

Warranty information can be found online at core-sensors.com.