

## Miniature High Temperature Pressure Sensor

### FEATURES

- $\leq \pm 0.15\%$  BFSL accuracy
- Pressures up to 30,000 PSI
- High strength titanium BT9 sensing element
- Operating temperature from  $-195$  to  $+204^{\circ}\text{C}$
- Optional PT1000 temperature output

### GREAT FOR....

- Test stands
- Autosports
- Aerospace controls
- Cryogenics



## About the CS-HTP

The **HTP Miniature High Temperature Pressure Sensor** uses a fully active four arm Wheatstone bridge, dielectrically isolated Silicon on Sapphire sensing element based on proprietary technology. An operating temperature range of  $-195$  to  $+204^{\circ}\text{C}$  makes this sensor ideal for extreme temperature applications from cryogenics to engine compartments. The miniature design allows for installation in confined spaces. A typical full scale output of  $125\text{mV}$  at  $10\text{VDC}$  excitation provides a large amount of usable output, simplifying signal conditioning. An optional PT1000 temperature output offers additional measurement capabilities in a single compact sensor.

### Miniature Package - High Millivolt Output

The CS-HTP Miniature High Temperature Pressure Sensor offers a **typical full scale output of  $125\text{mV}$  when using a  $10\text{VDC}$  excitation**. This provides a large amount of usable output, simplifying signal conditioning.

An optional **PT1000 temperature output is available** for applications where a reference temperature measurement is beneficial.

The CS-HTP features a Titanium BT9 (Grade 12) metallic construction offering high strength in high temperature applications.

All of these features come in a **small, compact package with a typical diameter of  $\sim 12\text{mm}$** .



### Performance

Accuracy @ 25°C:\*  $\leq \pm 0.15\%$  BFSL

Stability (1 Year):  $\leq \pm 0.25\%$  of FS

Overpressure ( $\leq 10,000$  PSI): 2X rated pressure

Burst Pressure ( $\leq 10,000$  PSI): 5X rated pressure

Overpressure ( $> 10,000$  PSI): 1.3X rated pressure

Burst Pressure ( $> 10,000$  PSI): 2X rated pressure

### Thermal

Operating Temperature: -195 to +204°C

TC Zero: 0.025% FS per °C, typical

TC Span: 0.05% FS per °C, typical

### Environmental

EMI/RFI Protection: No

Vibration: 10g, 10 to 1000Hz

Shock: 100g, 11msec, 1/2 sine

For wiring information, visit [core-sensors.com/wiring](http://core-sensors.com/wiring)

### Electrical (Millivolt)

Outputs: Millivolt uncompensated

Excitation:\* 10VDC, typical  
12VDC, max

Full Scale Output @ 10VDC 100mV, minimum  
125mV, typical  
200mV, max

Isolation Voltage 500VDC

Input & Output Impedance 3.5K $\Omega$ , typical

Response Time: 0.1ms, typical  
0.2ms, max

Zero Offset (of FS):  $\leq \pm 5\%$  FSO

\* Sensor will operate off of any voltage up to 12VDC. Output is ratiometric to supply voltage used.

### Process Connection Max Pressure Guide

10-32 UNF-2A Male w/ O-ring groove 3,000 PSI

M5x0.8 Male 3,000 PSI

M10x1 Male 10,000 PSI

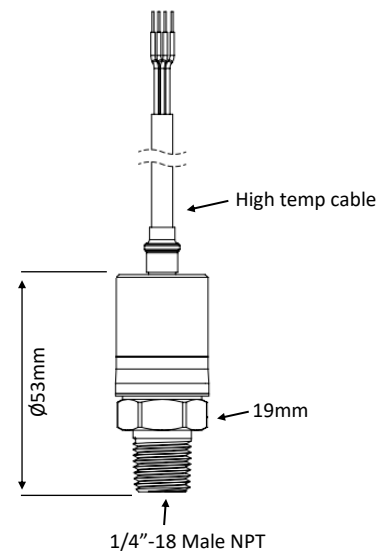
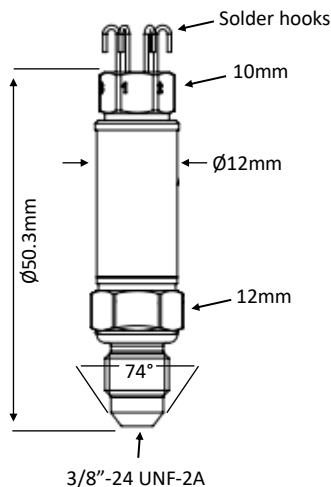
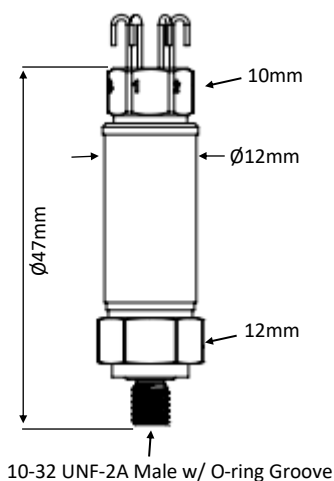
1/4" Male NPT 10,000 PSI

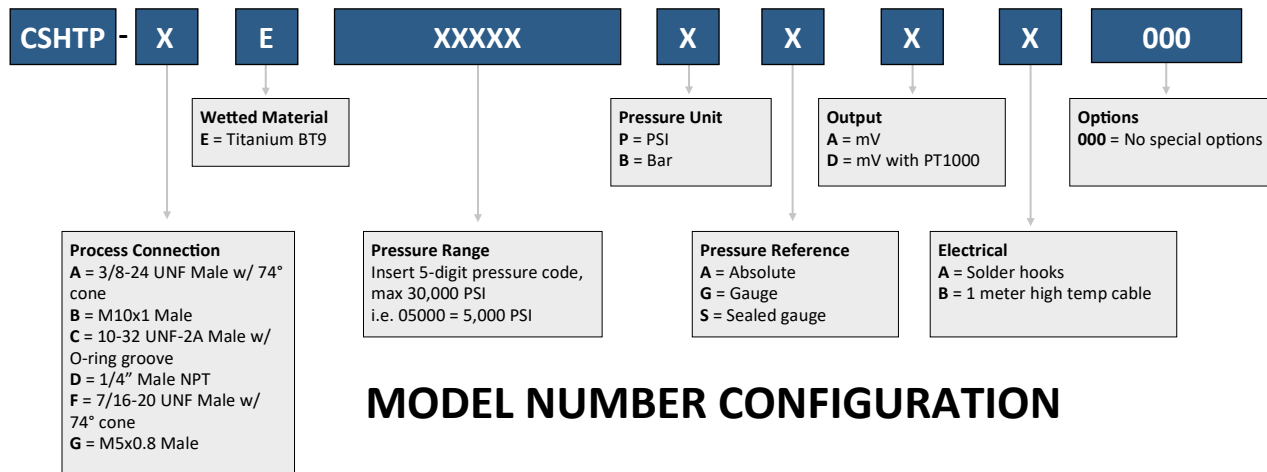
3/8-24 UNF Male w/ 74° Cone 30,000 PSI

7/16-20 UNF Male w/ 74° Cone 30,000 PSI

## DIMENSIONS

\*Dimensions are for reference only





**Ordering Example:** CSHTP-AE01000BSAA000 (3/8-24 UNF Male w/ 74° cone, Titanium BT9, 0-1000 Bar sealed gauge, mV, Solder hooks)  
 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.