

CS-HTP

Miniature High Temperature Pressure Sensor

The HTP series miniature 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°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 125mV at 10VDC excitation provides a large amount of usable output for simplifying signal conditioning. An optional independent PT1000 temperature output offers additional measurement capabilities in a single compact sensor.



Features

- $\leq \pm 0.15\%$ BFSL accuracy
- Pressures up to 30,000 PSI
- High strength titanium-alloy 6-4 sensing element
- Operating temperature from -195 to +204°C

Applications

- Test Stands
- Autosports
- Aerospace Controls
- Cryogenics

SPECIFICATIONS

Performance

Accuracy*	$\leq \pm 0.15\%$ 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

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

Environmental

EMI/RFI Protection	N/A
Linear Vibration	100g, 10 to 1000Hz
Shock	100g, 11msec, 1/2 sine
Weight (excluding cable)	35 grams, typical

Thermal

Operating Temperature	-195 to +204°C
Thermal Error, Zero	0.025% FS per °C, typical
Thermal Error, Span	0.05% FS per °C, typical

Electrical

Output	Millivolt
Excitation	10VDC, typical 12VDC, max
Full Scale Output @ 10VDC	100mV, min 125mV, typical 200mV, max
Isolation Voltage	500VDC
Input & Output Impedance	3.5K Ω , typical
Response Time	0.1ms, typical 0.2ms, max
Zero Offset (of FS)	$\leq \pm 5\%$ FSO

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" NPT Male	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

MODEL NUMBER CONFIGURATION

CSHTP- X E XXXXX X X X X 000

Model Family

CSHTP = High Temp Pressure Sensor

Process Connection

A = 3/8"-24 Male with 74° Cone
 B = M10x1 Male
 C = 10-32 UNF-2A Male w/ O-ring Groove
 D = 1/4" NPT Male
 F = 7/16-20 UNF Male with 74° Cone
 G = M5x0.8 Male

Wetted Material

E = Titanium 6-4

Pressure Range

Insert 5-digit pressure code, max 30,000 PSI
 (i.e. 30000 = 30,000 PSI)

Pressure Unit

P = PSI
 B = Bar

Options

000 = No Special Options

Electrical

A = Solder hooks
 B = 1 meter high temp cable, short housing (no PT1000 option)
 C = 1 meter high temp cable, long housing

Output

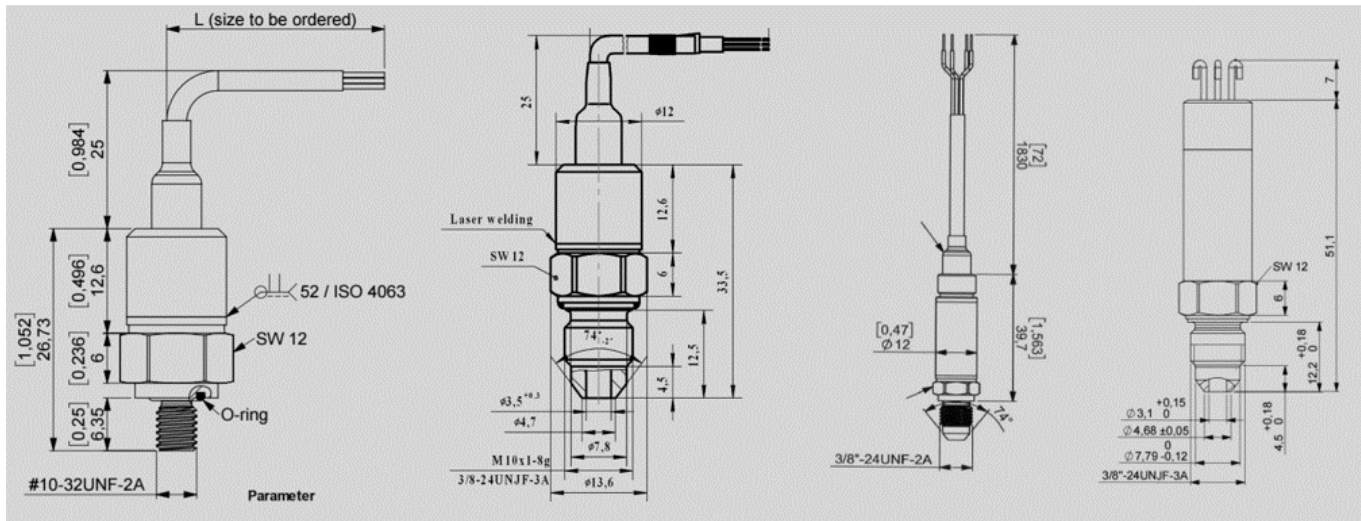
A = mV
 D = mV with PT1000

Pressure Reference

A = Absolute
 G = Gauge
 S = Sealed Gauge

* Ordering Example: CSHTP-CE00500PSAA000 (0-500 PSI, 10-32 UNF-2A Male w/ O-Ring Groove, mV, Solder Hooks, Titanium 6-4, Sealed gauge)
 * Contact factory for custom configurations not shown

DIMENSIONS



*Dimensions are for reference only



We are committed to delivering the highest quality instrumentation on every order.

Core Sensors warrants that all items shipped will be free of defects in material and workmanship for a period of one (1) year from the date of shipment.

View complete warranty information online at www.core-sensors.com.