

# CS-HTR

## High Temperature Ratiometric Pressure Sensor

The HTR series miniature pressure sensor uses a fully active four arm Wheatstone bridge, dielectrically isolated Silicon on Sapphire sensing element based on proprietary technology. Designed with an amplified 0.5-4.5V ratiometric output signal capable of handling 140°C ambient and 170°C media temperatures, the CS-HTR is an excellent choice for high temperature applications without the need for external amplification. A standard housing diameter of 12.5mm allows for installation in confined spaces and for applications where overall weight is important. An optional PT1000 temperature output is available for additional measurement capabilities in a single device.



### Features

- $\leq \pm 0.15\%$  BFSL accuracy
- Pressures up to 20,000 PSI
- High strength titanium-alloy 6-4 sensing element
- Amplified 0.5-4.5V ratiometric output signal

### Applications

- Test Stands
- Autosports
- Aerospace Controls

## SPECIFICATIONS

### Performance

Accuracy*	$\leq \pm 0.15\%$ BFSL
Stability (1 Year)	$\leq \pm 0.2\%$ of FS
Overpressure	2X Rated Pressure
Burst Pressure	3X Rated Pressure

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

### Environmental

EMI/RFI Protection	Yes
Linear Vibration	100g, 10 to 1000Hz
Shock	100g, 11msec, 1/2 sine

### Thermal

Ambient Temperature	-50 to +140°C
Media Temperature	-50 to +170°C
Compensated Temperature	-40 to +105°C
TC Over Compensated Temp	2% of FS, max

### Electrical

<b>Output</b>	<b>0.5-4.5V Ratiometric</b>
Excitation	5VDC, +/- 0.5V
Supply Current	<10mA
Full Scale Output	4.5V
Isolation Resistance	100M $\Omega$ (pin to case @ 500VDC)
Output Resistor	>4.7 K $\Omega$
Response Time (10-90% FS)	1ms, typical 2ms, max

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

# MODEL NUMBER CONFIGURATION

**CSHTR- X E XXXXX X X X X 000**

## Model Family

CSHTR = Ratiometric 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 20,000 PSI  
(i.e. 20000 = 20,000 PSI)

## Pressure Unit

- P = PSI
- B = Bar

## Options

000 = No Special Options

## Electrical

- A = Solder hooks
- C = 1 meter high temp cable

## Output

- C = 0.5-4.5V Ratiometric
- F = 0.5-4.5V Ratiometric (pressure) w/ PT1000 (temp)
- G = Dual 0.5-4.5V Ratiometric press/ temp (-50 to +150, PT1000)

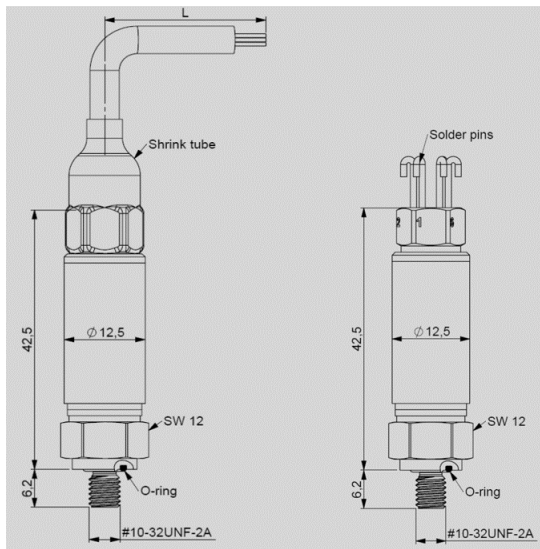
## Pressure Reference

- G = Gauge
- S = Sealed Gauge

\* Ordering Example: CSHTR-CE00500PSCC000 (0-500 PSI, 10-32 UNF-2A Male w/ O-Ring Groove, 0.5-4.5V Ratiometric, Cable, 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](http://www.core-sensors.com)