# CS-DHP

## Downhole Pressure Sensor

### FEATURES

- ≤ ± 0.15% BFSL accuracy
- Pressures from 5,000 to 30,000 PSI
- High strength titanium BT9 sensing element
- Operating temperature from –195 to +204°C

### GREAT FOR....

- Measurement While Drilling (MWD)
- Logging While Drilling (LWD)
- Oil & Gas Exploration
- Wellhead Measurements

## About the CS-DHP

The **DHP Downhole Pressure Sensor** uses a fully active four arm Wheatstone bridge, dielectrically isolated Silicon on Sapphire sensing element based on proprietary technology. This sensor was designed to withstand the high pressure, high temperature environments that are common in downhole oil & gas exploration. The compact design allows for installation in downhole tools without sacrificing space. Standard offering includes a 3/8”-24 UNF-2A process connection, uncompensated millivolt output signal, 12.5mm diameter housing and solder hooks. Integral high temperature cable can be added upon request. A PT1000 temperature output is available for further measurement capabilities.

## Miniature Package - High Millivolt Output

The CS-DHP Downhole Pressure Sensor offers a **typical full scale output of 125mV when using a 10VDC 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.

All of these features come in a **small, compact package with a typical diameter of 12.5mm**. The CS-DHP comes standard without a hex on the front end of the sensor (near the process connection threads) to ensure fitment in drilling tools with confined spaces. A hex comes standard on the back end of the sensor (near the electrical termination points) which can be used during installation.

# SPECIFICATIONS

## Performance

| | |
|---|---|
| **Accuracy @ 25°C:*** | ≤ ± 0.15% BFSL |
| **Stability (1 Year):** | ≤ ±0.25% of FS |
| **Overpressure:** | 1.5X rated pressure |
| **Burst Pressure:** | 2X rated pressure |

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

## Environmental

| | |
|---|---|
| **EMI/RFI Protection:** | No |
| **Vibration:** | 10g, 10 to 1000Hz |
| **Shock:** | 100g, 11msec, 1/2 sine |

## Thermal

| | |
|---|---|
| **Operating Temperature:** | -195 to +204°C |
| **TC Zero:** | 0.025% FS per °C, typical |
| **TC Span:** | 0.05% FS per °C, typical |

## Electrical (Millivolt)

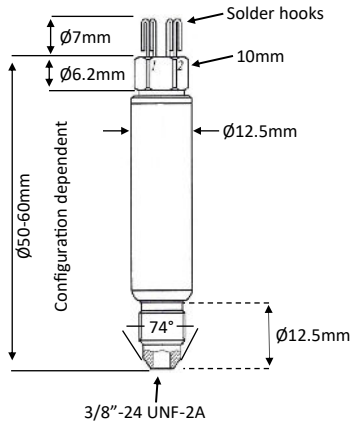
| | |
|---|---|
| **Outputs:** | Millivolt uncompensated |
| **Excitation:*** | 10VDC, typical<br>12VDC, max |
| **Full Scale Output @ 10VDC** | 100mV, minimum<br>125mV, typical<br>200mV, max |
| **Isolation Voltage** | 500VDC |
| **Input & Output Impedance** | 3.5KΩ, typical |
| **Response Time:** | 0.1ms, typical<br>0.2ms, max |
| **Zero Offset (of FS):** | ≤ ± 5% FSO |

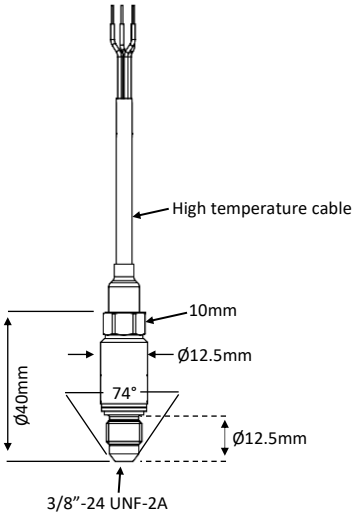
** Sensor will operate off of any voltage up to 12VDC. Output is ratiometric to supply voltage used.*

For wiring information, visit core-sensors.com/wiring

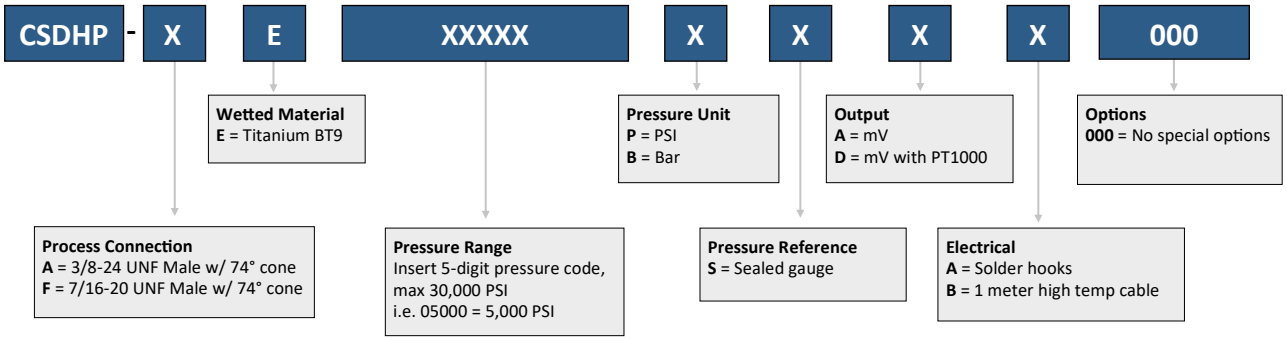
# DIMENSIONS

*Dimensions are for reference only



# MODEL NUMBER CONFIGURATION




Ordering Example: CSDHP-AE20000PSAA000 (3/8-24 UNF Male w/ 74° cone, Titanium BT9, 0-20000 PSI 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.

**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.