

# CS-DHP

## Downhole Pressure Sensor

The DHP series miniature 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 on request. A PT1000 temperature output is available for further measurement capabilities.



### Features

- $\leq \pm 0.15\%$  BFSL accuracy
- Pressure from 5,000 to 30,000 PSI
- High strength titanium-alloy 6-4 sensing element
- Operating temperature from  $-195$  to  $+204^\circ\text{C}$

### Applications

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

## SPECIFICATIONS

### Performance

Accuracy*	$\leq \pm 0.15\%$ BFSL
Stability (1 Year)	$\leq \pm 0.25\%$ of FS
Overpressure	1.3x minimum
Burst Pressure	3X minimum

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

### Environmental

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

### Thermal

Operating Temperature	$-195$ to $+204^\circ\text{C}$
Thermal Error, Zero	0.025% FS per $^\circ\text{C}$ , typical
Thermal Error, Span	0.05% FS per $^\circ\text{C}$ , 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 $\Omega$ , typical
Response Time	0.1ms, typical 0.2ms, max
Zero Offset (of FS)	$\leq \pm 5\%$ FSO

# MODEL NUMBER CONFIGURATION

**CSDHP- X E XXXXX X S X X 000**

**Model Family**

CSDHP = Downhole Pressure Sensor

**Process Connection**

A = 3/8"-24 Male with 74° Cone

F = 7/16"-20 UNF Male with 74° Cone

**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

**Output**

A = mV

D = mV with PT1000

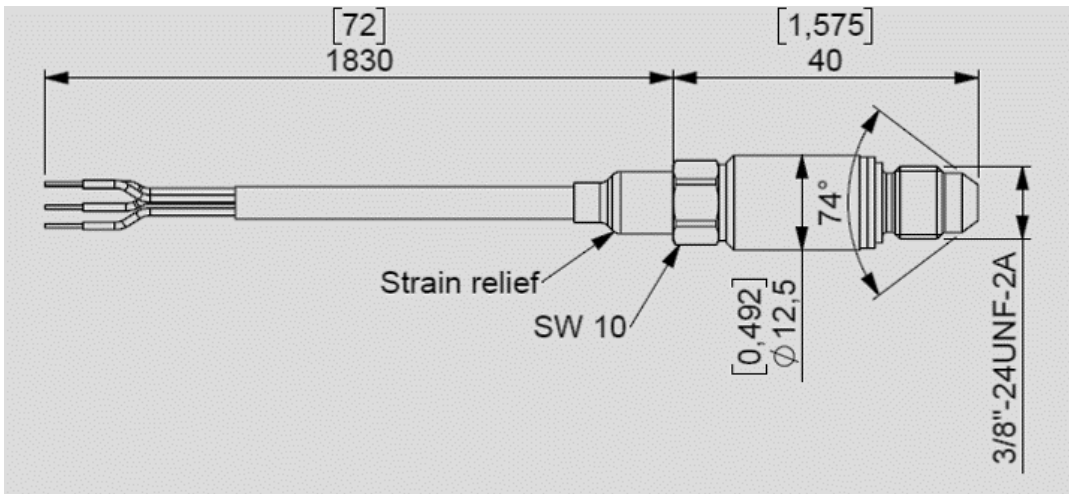
**Pressure Reference**

S = Sealed Gauge

\* Ordering Example: CSDHP-AE00040BSAA000 (0-40 Bar, 3/8"-24 Male w/ 74° Cone, 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](http://www.core-sensors.com).