

# CS51

## Non-Incendive Low Pressure Transducer

### FEATURES

- Pressures from 1 PSI up to 49 PSI
- Media isolated
- Bi-directional pressure ranges available
- IP65 minimum rated

### APPROVALS/CERTIFICATIONS

- CSA Class I, Division 2 Groups A,BC,D T4
- ABS (American Bureau of Shipping)
- CE

### GREAT FOR....

- Natural gas compression
- Vapor recovery
- Oil exploration
- Process controls



## About the CS51

The **CS51 Non-Incendive Low Pressure Transducer** is a high strength sensor designed for low pressure measurements in Class 1, Division 2 hazardous locations. The CS51 features an all welded stainless steel construction, offering a minimum IP65 rating. A wide range of configurable options make the CS51 a versatile pressure transducer designed to operate in some of the harshest conditions. The CS51 is an excellent solution for applications such as natural gas compression, vapor recovery and process control instrumentation.



## Available With A Turck Minifast Connection

In an effort to simplify installation in Class I, Division 2 hazardous locations, the **CS51 Non-Incendive Low Pressure Transducer** is offered with an integral Turck Minifast electrical connection.

When combined with a CSA Division 2 approved Turck cordset and a Turck Lokfast Guard, **there is no requirement for conduit to be installed over the cable\***. This not only makes installation easy but also makes switching out sensors less cumbersome. Core Sensors can supply all components as a complete package.

\*Core Sensors recommends confirming hazardous location installation requirements with your local inspector as each installation is unique.

# SPECIFICATIONS

## Performance

<b>Accuracy @ 25°C:*</b>	$\leq \pm 0.25\%$ BFSL $\leq \pm 0.5\%$ BFSL (2 PSI & below)
<b>Stability (1 Year):</b>	$\leq \pm 0.25\%$ of FS
<b>Pressure Cycles:</b>	100 million
<b>Overpressure:</b>	2X minimum
<b>Burst Pressure:</b>	5X or 245 PSI, whichever is less

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

## Thermal

<b>Operating Temperature:</b>	-40 to +80°C
<b>Operating Temperature:</b> (Electrical Connection "F", DIN 43650-A)	-20 to +80°C
<b>Media Temperature:</b>	-40 to +125°C
<b>Media Temperature:</b> (Electrical Connection "F", DIN 43650-A)	-40 to +105°C
<b>Compensated Temperature:</b>	0 to +55°C
<b>Storage Temperature:</b>	-40 to +125°C
<b>TC Zero:</b>	$\leq \pm 1\%$ of FS $\leq \pm 2\%$ of FS (2 PSI & below)
<b>TC Span:</b>	$\leq \pm 1\%$ of FS $\leq \pm 2\%$ of FS (2 PSI & below)

## Environmental

<b>EMI/RFI Protection:</b>	Yes
<b>IP Rating:*</b>	IP65 minimum
<b>Vibration:</b>	10g, 20 to 2000Hz
<b>Shock:</b>	100g, 11msec, 1/2 sine

\* IP Rating is dependent on electrical termination selected. Contact factory for more information.

\* IP Rating applies when electrical connector is attached with the appropriate ingress protection.

## Electrical (Current)

<b>Outputs:</b>	4-20mA
<b>Excitation:</b>	10-28VDC
<b>Current Consumption:</b>	20mA, typical
<b>Output Load:</b>	0-800 Ohms @ 10-28VDC
<b>Frequency Response (min):</b>	~250Hz
<b>Zero Offset (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max
<b>Span Tolerance (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max

## Electrical (Voltage)

<b>Outputs:</b>	1-5V 1-6V
<b>Excitation:</b>	10-28VDC
<b>Current Consumption:</b>	<10mA
<b>Output Load:</b>	5K Ohms, min
<b>Frequency Response (min):</b>	~1kHz
<b>Zero Offset (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max
<b>Span Tolerance (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max

## Electrical (Ratiometric Voltage)

<b>Outputs:</b>	0.5-4.5V ratiometric
<b>Excitation:</b>	5VDC +/- 0.5V
<b>Current Consumption:</b>	<10mA
<b>Output Load:</b>	5K Ohms, min
<b>Frequency Response (min):</b>	~1kHz
<b>Zero Offset (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max
<b>Span Tolerance (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max

## Electrical (Low Power Voltage)

<b>Outputs:</b>	0.5-2.5V non-ratiometric
<b>Excitation:</b>	3-5VDC unregulated
<b>Current Consumption:</b>	$\leq 3$ mA
<b>Output Load:</b>	5K Ohms, min
<b>Frequency Response (min):</b>	~1kHz
<b>Zero Offset (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max
<b>Span Tolerance (of FS):</b>	$\leq \pm 0.5\%$ typical $\pm 1\%$ max

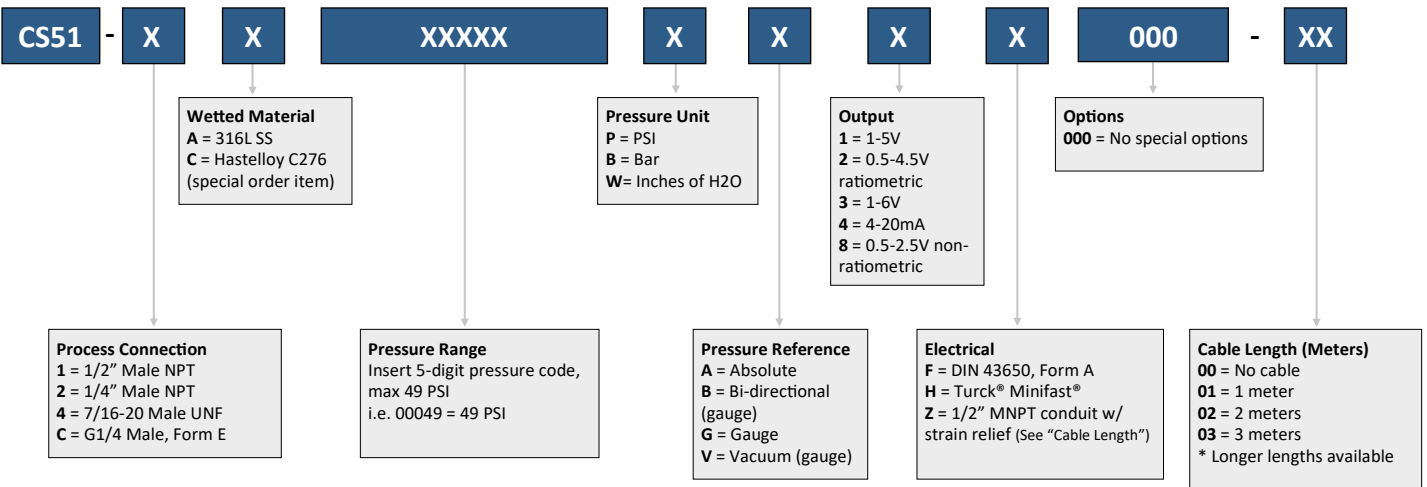
For wiring information, visit [core-sensors.com/wiring](http://core-sensors.com/wiring)

# DIMENSIONS

\*Dimensions are for reference only



# MODEL NUMBER CONFIGURATION



**Ordering Example:** CS51-2A00010PG4H000-00 (1/4" Male NPT, 316L SS, 0-10 PSI gauge, 4-20mA, Turck® Minifast® )  
 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.



Caution must be taken when installing and operating the CS51 in known Class I, Division 2 hazardous locations. **Please review the Non-Incendive Operating Instructions prior to installation. Call Core Sensors at (862) 245-2673** if you are unsure about any of the instructions or to request a copy. Operating Instructions and Certificates of Compliance can be downloaded from the CS51 product web page at [core-sensors.com](#).

Warranty information can be found online at [core-sensors.com](#).

**\*\*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.