

# CS54 Non-Incendive Differential Pressure Transducer



## FEATURES

- Differential pressures up to 50 PSI
- Line pressures up to 500 PSI
- Bi-directional pressure ranges available
- Wet/Wet

## APPROVALS / CERTIFICATIONS

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

## COMMON APPLICATIONS

- Filtration
- External tank level measurement
- Cryogenic bulk tank level measurement
- Compression systems



## SPECIFICATIONS

### Performance @ 25°C

|                                  |   |
|----------------------------------|---|
| <b>Accuracy*</b>                 | ≤ ±0.25% BFUL<br>≤ ±0.5% BFUL (2 PSI & below)                 |
| <b>Stability (1 Year)</b>        | ≤ ±0.25% of FS  |
| <b>Pressure Cycles</b>           | 4 million   |
| <b>Max Line Pressure**</b>       | 500 PSI   |
| <b>Max Differential Pressure</b> | 50 PSI  |
| <b>Overpressure***</b>           | 2X or 500 PSI, whichever is less, rated differential pressure |
| <b>Burst Pressure***</b>         | 3X rated differential pressure                                |

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

\*\* Max line pressure is the highest common mode pressure that can be applied to the sensor without damage.

\*\*\* Overpressure and burst pressure are the maximum differential pressure that can be applied to the high or low side before damage to the sensor will occur.

### Thermal

|   |  |
|---|--|
| <b>Operating Temperature</b>  | -40 to +80°C                               |
| <b>Operating Temperature (Electrical connection "F", DIN 43650-A)</b> | -20 to +80°C                               |
| <b>Media Temperature</b>  | -40 to +125°C                              |
| <b>Media Temperature (Electrical connection "F", DIN 43650-A)</b>     | -40 to +105°C                              |
| <b>Compensated Temperature</b>  | 0 to +55°C                                 |
| <b>Storage Temperature</b>  | -40 to +125°C                              |
| <b>TC Zero</b>  | ≤ ±1% of FS<br>≤ ±2% of FS (2 PSI & below) |
| <b>TC Span</b>  | ≤ ±1% of FS<br>≤ ±2% of FS (2 PSI & below) |

### Environmental

|                           |                        |
|---------------------------|------------------------|
| <b>EMI/RFI Protection</b> | Yes                    |
| <b>IP Rating*</b>         | IP65 minimum           |
| <b>Vibration</b>          | 20g, 20 to 5000Hz      |
| <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.

**SPECIFICATIONS** continued...

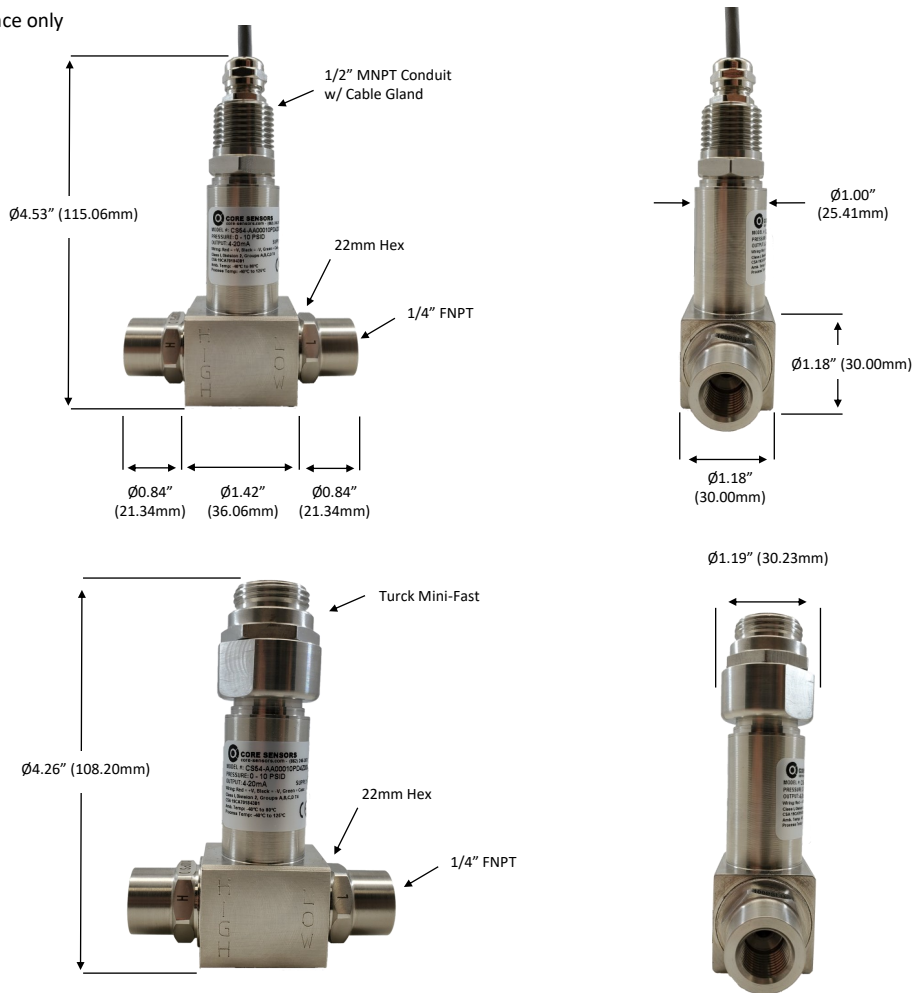
**Electrical**

|                                 | 4-20mA                       | 1-5V                         | 0.5-4.5V ratiometric         | 0.5-2.5V non-ratiometric     |
|---------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| <b>Excitation</b>               | 10-28VDC                     | 10-28VDC                     | 5VDC +/- 0.5V, regulated     | 3-5VDC unregulated           |
| <b>Current Consumption</b>      | 20mA, typical                | <10mA                        | <10mA                        | ≤3mA                         |
| <b>Output Load</b>              | 0-800 Ohms @ 10-28VDC        | 5K Ohms, min                 | 5K Ohms, min                 | 5K Ohms, min                 |
| <b>Frequency Response (min)</b> | ~250Hz                       | ~1kHz                        | ~1kHz                        | ~1kHz                        |
| <b>Zero Offset (of FS)</b>      | ≤ ± 0.5% typical<br>± 1% max | ≤ ± 0.5% typical<br>± 1% max | ≤ ± 0.5% typical<br>± 1% max | ≤ ± 0.5% typical<br>± 1% max |
| <b>Span Tolerance (of FS)</b>   | ≤ ± 0.5% typical<br>± 1% max | ≤ ± 0.5% typical<br>± 1% max | ≤ ± 0.5% typical<br>± 1% max | ≤ ± 0.5% typical<br>± 1% max |

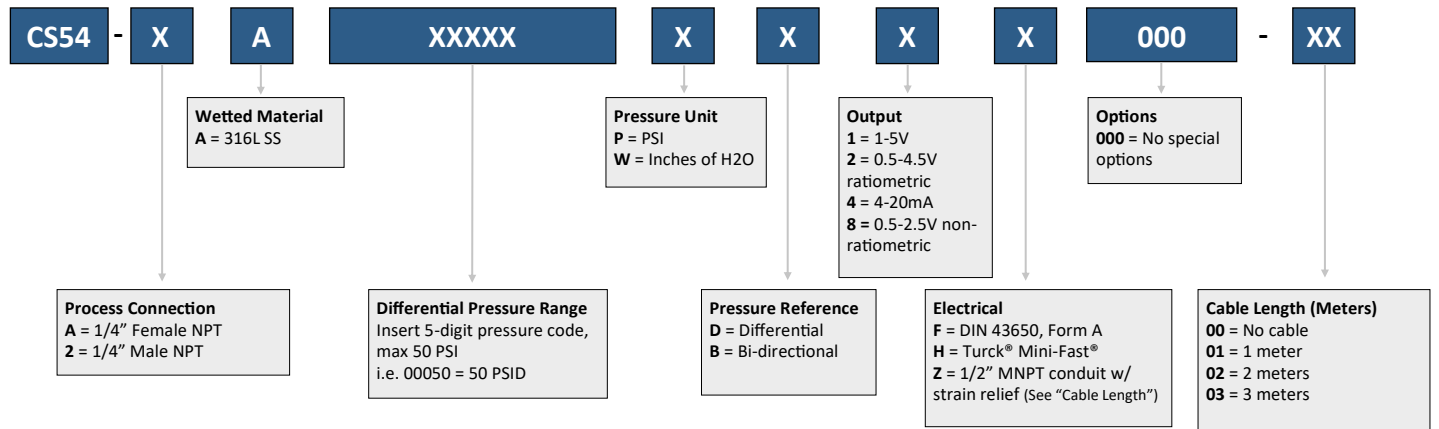
For wiring information, visit [core-sensors.com/wiring](http://core-sensors.com/wiring)

**DIMENSIONS**

\*Dimensions are for reference only



**MODEL NUMBER CONFIGURATION**



Ordering Example: CS54-AA00010PD4H000-00 (1/4" Female NPT, 316L SS, 0-10 PSI differential, 4-20mA, Turck® Mini-Fast® )  
 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 CS54 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 CS54 product web page at [core-sensors.com](http://core-sensors.com).

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