

# CS70 Intrinsically Safe Pressure Transducer

- CSA Class 1, Division 1, Groups A, B, C, D, T4
- Class 1, Zone 1 AEx ia IIC T4 Gb
- Pressures up to 29,000 PSI (2,000 Bar)
- $\leq \pm 0.25\%$  BFSL accuracy



## OVERVIEW

Core Sensors offers the CS70 Intrinsically Safe pressure transducer, designed for use in hazardous locations with an approved barrier (see entity parameters on page 3). The CS70 is approved to CSA Class 1, Division 1 Intrinsically Safe, Groups A, B, C, D, T4. Available with 4-20mA current and various voltage output signals and a variety of electrical and process connections, the CS70 is a great choice for applications requiring intrinsic safety such as vapor recovery, natural gas compression, and external fuel tank monitoring.

## SPECIFICATIONS

Pressure Range	0 to 29,000 PSI	Accuracy (includes non-linearity, hysteresis, non-repeatability)	$\leq \pm 0.25\%$ FSO BFSL
Pressure Type	Absolute, Gauge, Sealed, Compound	Stability (1 year)	$\leq \pm 0.2\%$ of FS
Overpressure	2x, min	Zero Offset	$\pm 0.5\%$ typical, $\pm 1\%$ max
Burst Pressure	5x or 58,000 PSI, whichever is less	Span Tolerance	$\pm 0.5\%$ typical, $\pm 1\%$ max
Pressure Cycles	100 million	TC Zero	$\leq \pm 1\%$ of FS
Storage Temperature	-40 to +125°C	TC Span	$\leq \pm 1\%$ of FS
Operating Temperature	-40 to +85°C	Vibration	10g, 20 to 2000Hz
Media Temperature	-40 to +100°C	Shock	100g, 11msec, 1/2 sine
Compensated Temperature	-20 to +85°C	Response Time (10-90%)	$\sim 2$ milliseconds
EMI/RFI Protection	Yes, EN61326 (Class B)	Isolation Voltage	500VAC
IP Rating	IP65 minimum		

# ELECTRICAL INFORMATION

Output	4-20mA, 1-5V	0.5-4.5V ratiometric	0.5-2.5V non-ratiometric
Power Supply Requirements	10-27 VDC, unregulated	5VDC +/- 0.5V, regulated	3-5VDC, unregulated

\*For wiring information, visit: <https://www.core-sensors.com/wiring/>

# ORDERING INFORMATION

**CS70 - X - X - XXXXX - X - X - 4 - X - 000 - XX**

## Process Connection

- 1 = 1/2" NPT Male
- 2 = 1/4" NPT Male
- 4 = 7/16-20 UNF Male
- 8 = F250C Female Autoclave (over 10,000 PSI)
- C = G1/4 Male, Form E

## Wetted Material

- A = 316L SS
- B = 17-4 PH
- C = Hastelloy C276 (Special order item)
- D = Inconel 718 (Special order item)

## Pressure Range

Insert 5-digit pressure code, max 29,000 PSI  
(i.e. 29000 = 29,000 PSI)  
Consult factory for pressures above 10,000 PSI

## Pressure Unit

- P = PSI
- B = Bar

## Pressure Reference

- A = Absolute
- V = Vacuum (Gauge)
- C = Vacuum (Sealed Gauge)
- G = Gauge
- S = Sealed Gauge

## Cable Length (Meters)

Electrical option "L" & "P" only

- 00 = No cable
- 01 = 1 meter
- 02 = 2 meter
- 03 = 3 meter

## Options

000 = No Special Options

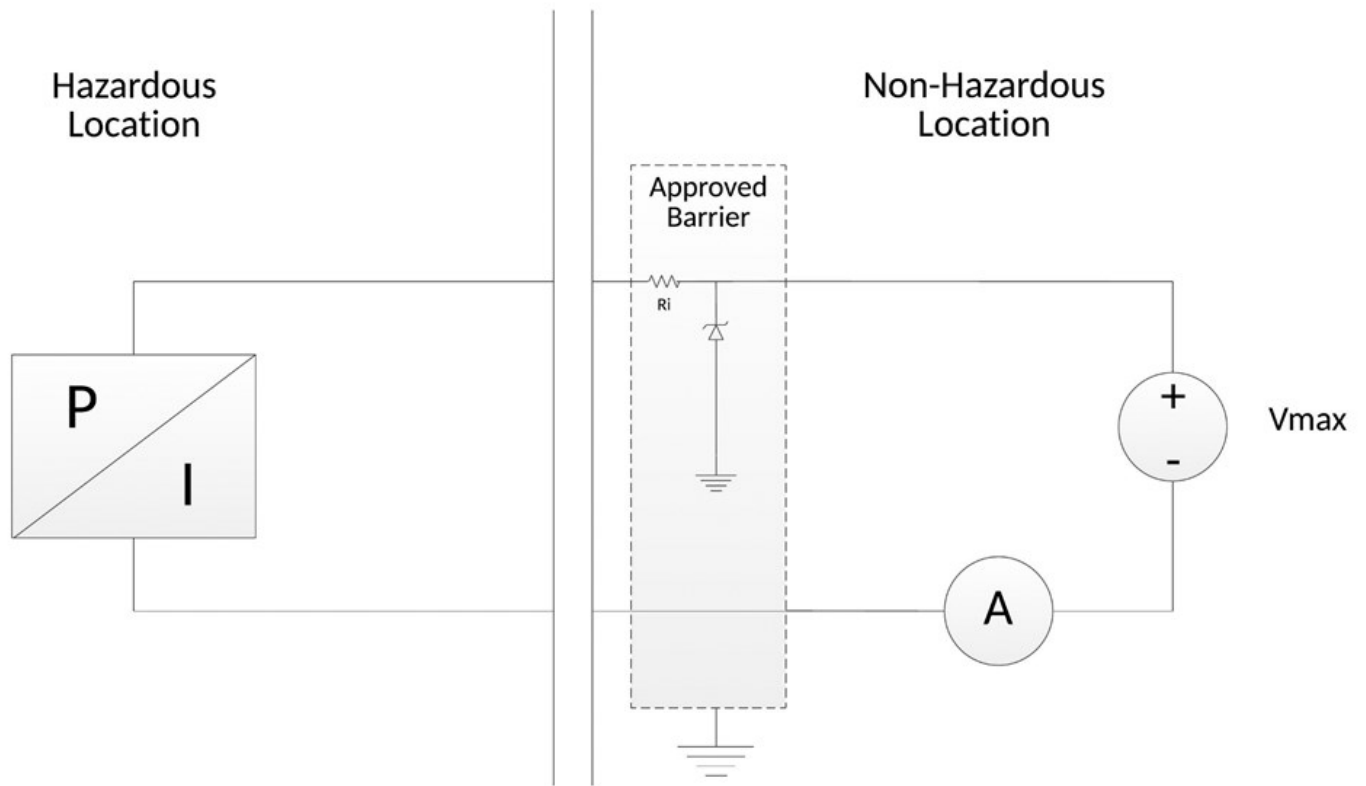
## Electrical

- A = M12x1
- B = Deutsch DT04-4P
- C = Packard 3-Pin
- D = Mini-DIN, Form C
- E = Deutsch DT04-3P
- F = DIN 43650, Form A
- L = Cable (See "Cable Length")
- P = Conduit w/ cable (See "Cable Length")

## Output

- 1 = 1-5V
- 2 = 0.5-4.5V Ratiometric
- 4 = 4-20mA
- 8 = 0.5-2.5V Non-Ratiometric

# Entity Parameters



## Entity Parameters for CS70

<b>U<sub>i</sub></b>	27 VDC
<b>P<sub>i</sub></b>	0.85 W
<b>L<sub>i</sub></b>	Negligible
<b>I<sub>i</sub></b>	125 mA
<b>C<sub>i</sub></b>	5 nF

# DIMENSIONAL DATA (For reference only)

