

CS10

Industrial Pressure Transducer

Core Sensors offers the CS10 industrial pressure transducer designed for demanding industrial applications. The CS10 utilizes MEMS silicon strain gages mounted to a stainless steel or nickel alloy sensing element. The ASIC electronics offer analog voltage or 4-20mA loop powered output signals. Various process connections are available in 17-4PH, 316L or nickel alloy including Hastelloy C276 and Inconel 718.

Electrical connections include cable or various integral connectors. Semi-custom and custom designs are available.



Features

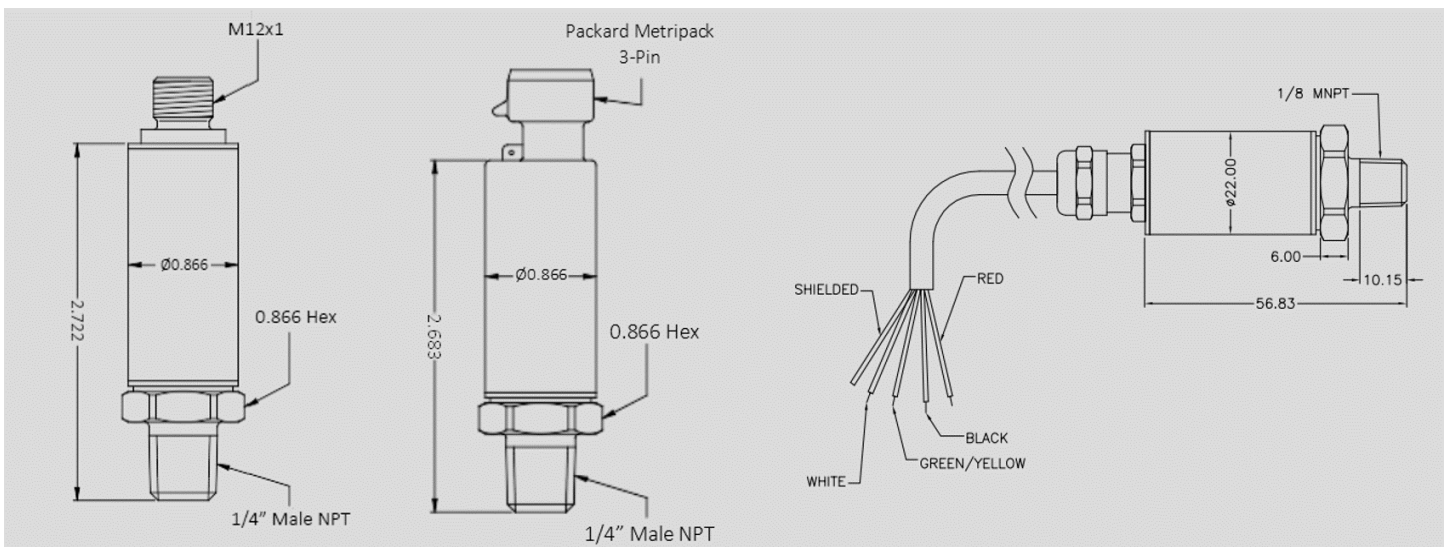
- $\leq \pm 0.25\%$ BFSL accuracy
- Pressure from vacuum to 40,000 PSI
- One piece design for pressures over 30 PSI
- Media isolated for pressures 30 PSI and below
- Reverse polarity protection
- Oxygen cleaning available
- Optional integral snubber



Applications

- Hydraulic / pneumatic equipment
- Water pressure monitoring
- HVAC/R controls
- Building Controls
- Hydrogen (316L SS only)
- Low pressure external tank level monitoring

DIMENSIONS



*Dimensions are for reference only

SPECIFICATIONS

Performance

Accuracy*	$\leq \pm 0.25\%$ BFSL
Stability (1 Year)	$\leq \pm 0.25\%$ of FS
Pressure Cycles	100 million
Overpressure	2x minimum
Burst Pressure	5X or 60,000 PSI, whichever is less

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

Environmental

EMI/RFI Protection	Yes
IP Rating*	IP65 minimum
Vibration	10g, 20 to 2000Hz
Shock	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

Thermal

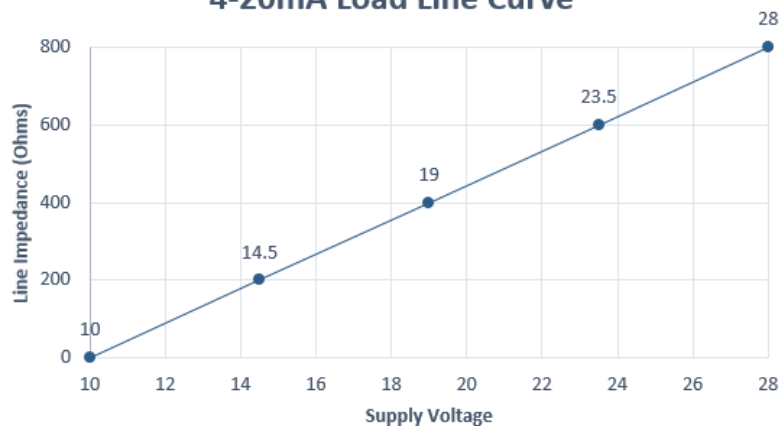
Operating Temperature	-40 to +85°C
Media Temperature	-40 to +120°C
Storage Temperature	-40 to +125°C
Compensated Temperature	0 to +60°C
TC Zero	$\leq \pm 1\%$ of FS
TC Span	$\leq \pm 1\%$ of FS

Electrical

Output	4-20mA	1-5V, 1-6V, 0-5V (3-wire)	0-10V (3-wire)	0.5-4.5V ratiometric	mV/V, millivolt
Excitation	10-28VDC	10-28VDC	15-28VDC	5VDC +/-0.5V	5VDC, typical
Current Consumption	20mA, typical	<10mA	<10mA	<10mA	<5mA
Output Load	See Load Line Curve Below	5K Ohms, min	5K Ohms, min	5K Ohms, min	>1M Ohms
Frequency Response (minimum)	~ 250Hz	~ 1kHz	~ 1kHz	~ 1kHz	~5kHz
Zero Offset (of FS)	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 2\%$ max
Span Tolerance (of FS)	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 0.5\%$ typical $\leq \pm 1\%$ max	$\leq \pm 2\%$ max

For wiring information, visit <http://www.core-sensors.com/wiring>

4-20mA Load Line Curve



MODEL NUMBER CONFIGURATION

CS10- X X XXXXX X X X X 000 - XX

Model Family

CS10 - Industrial Pressure Transducer

Process Connection

- 1 = 1/2" NPT Male
- 2 = 1/4" NPT Male
- 3 = 1/8" NPT Male
- 4 = 7/16-20 UNF Male
- 8 = F250C Female Autoclave (≥ 10,000 PSI)
- 9 = 1/2" NPT Male Flush (max 2,000 PSI)

Wetted Material

- A = 316L SS
- B = 17-4 PH
- C = Hastelloy C276
- D = Inconel 718

Pressure Range

Insert 5-digit pressure code, max 40,000 PSI
(i.e. 40000 = 40,000 PSI)
Consult factory for pressures above 10,000 PSI

Pressure Unit

- P = PSI
- B = Bar
- K = KG/CM2
- M = Millibar
- W = Inches of H2O

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
- * Longer lengths available

Options

- 000 = No Special Options
- 001 = Snubber
- 002 = 2x Header

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
- G = 6-Pin Bendix
- L = Cable (See "Cable Length")
- P = Conduit w/ cable (See "Cable Length")

Output

- 1 = 1-5V
- 2 = 0.5-4.5V Ratiometric
- 3 = 1-6V
- 4 = 4-20mA
- 5 = 0-5V (3-wire)
- 7 = 0-10V (3-wire)
- 9 = 10mV/V

* Ordering Example: CS10-2A01000PS4A000-00 (0-1,000 PSI, 1/4" MNPT, 4-20mA, M12x1, 316L SS, Sealed gauge)

* Contact factory for custom configurations not shown



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.