



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 1, Groups C, D T4
- ✓ Class I, Zone 0, AEx ia IIB T4 Ga (Ex ia IIB T4 Ga)
- ✓ ABS (American Bureau of Shipping)
- ✓ CE

NOTE: Must use an approved barrier to maintain listed certifications. See [page 4](#) for entity parameters.

COMMON APPLICATIONS

- Filtration
- External fuel tank level measurement
- Compression systems

SPECIFICATIONS

Performance @ 25°C

Accuracy*	≤ ±0.25% BFSL ≤ ±0.5% BFSL (2 PSI & below)
Stability (1 Year)	≤ ±0.25% of FS
Pressure Cycles	4 million
Max Line Pressure**	500 PSI
Max Differential Pressure	50 PSI
Overpressure***	2X or 500 PSI, whichever is less, rated differential pressure
Burst Pressure***	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.

Environmental

EMI/RFI Protection	Yes
IP Rating*	IP65 minimum
Vibration	20g, 20 to 5000Hz
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 +80°C
Operating Temperature (Electrical connection "F", DIN 43650-A)	-20 to +80°C
Media Temperature	-40 to +125°C
Media Temperature (Electrical connection "F", DIN 43650-A)	-40 to +105°C
Compensated Temperature	0 to +55°C
Storage Temperature	-40 to +125°C
TC Zero	≤ ±1% of FS ≤ ±2% of FS (2 PSI & below)
TC Span	≤ ±1% of FS ≤ ±2% of FS (2 PSI & below)

SPECIFICATIONS continued...

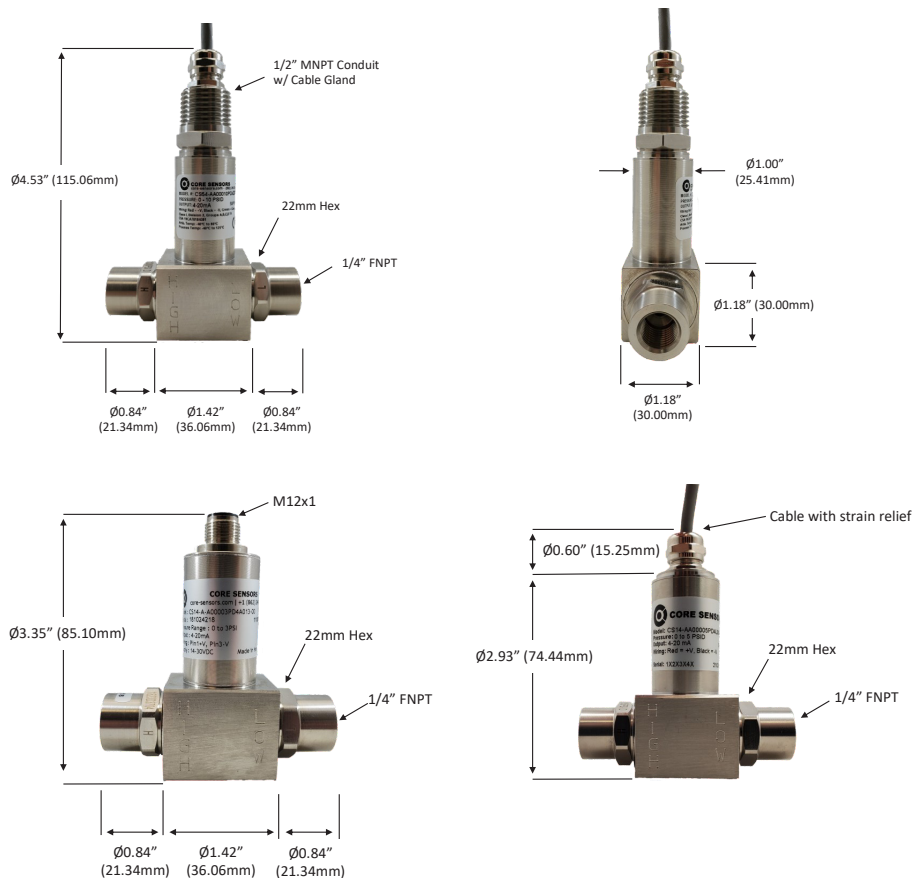
Electrical

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

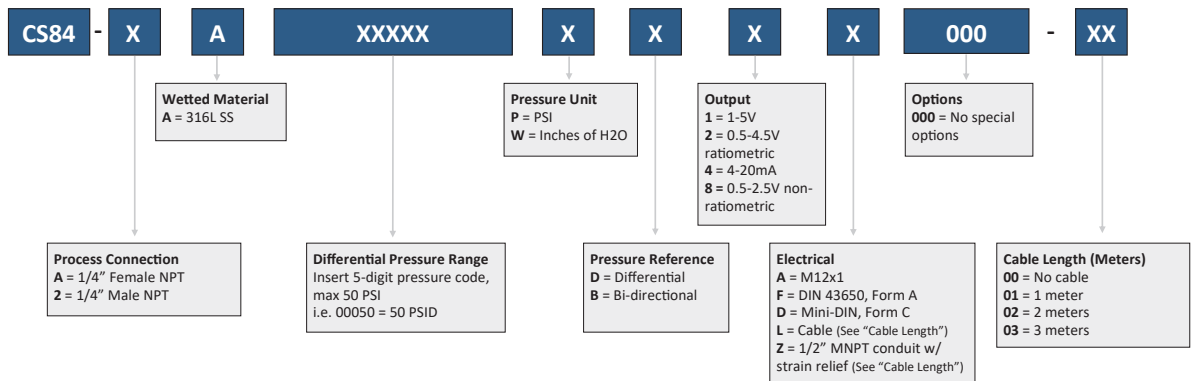
For wiring information, visit core-sensors.com/wiring

DIMENSIONS

*Dimensions are for reference only



MODEL NUMBER CONFIGURATION



Ordering Example: CS84-AA00010PD4A000-00 (1/4" Female NPT, 316L SS, 0-10 PSI differential, 4-20mA, M12x1)
 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.

ENTITY PARAMETERS

HAZARDOUS LOCATION	NON-HAZARDOUS LOCATION
<p>CS84 with 4-20mA output (excluding millivolt output)</p> <p>V- (U/Vmax)</p> <p>V+ (I/Imax)</p> <p>Associated Apparatus Safety Barrier</p> <p>Intrinsically Safe Ground</p> <p>CONTROL EQUIPMENT</p> <p>V+ V-</p> <p>VOUT</p>	<p>CS84 with 4-20mA output (excluding millivolt output)</p> <p>V- (U/Vmax)</p> <p>V+ (I/Imax)</p> <p>Associated Apparatus Safety Barrier</p> <p>Intrinsically Safe Ground</p> <p>CONTROL EQUIPMENT</p> <p>V+ V-</p> <p>VOUT</p>
<p>CS84 with millivolt output</p> <p>V- (U/Vmax)</p> <p>V+ (I/Imax)</p> <p>Associated Apparatus Safety Barrier</p> <p>Intrinsically Safe Ground</p> <p>CONTROL EQUIPMENT</p> <p>V+ V-</p> <p>VOUT</p>	<p>CS84 with millivolt output</p> <p>V- (U/Vmax)</p> <p>V+ (I/Imax)</p> <p>Associated Apparatus Safety Barrier</p> <p>Intrinsically Safe Ground</p> <p>CONTROL EQUIPMENT</p> <p>V+ V-</p> <p>VOUT</p>
<p>CS84 with millivolt output</p> <p>V- (U/Vmax)</p> <p>V+ (I/Imax)</p> <p>Associated Apparatus Safety Barrier</p> <p>Intrinsically Safe Ground</p> <p>CONTROL EQUIPMENT</p> <p>V+ V-</p> <p>VOUT</p>	<p>CS84 with millivolt output</p> <p>V- (U/Vmax)</p> <p>V+ (I/Imax)</p> <p>Associated Apparatus Safety Barrier</p> <p>Intrinsically Safe Ground</p> <p>CONTROL EQUIPMENT</p> <p>V+ V-</p> <p>VOUT</p>
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- NOTE:**
- US installations must be in accordance with National Electrical Code (ANSI/NFPA 70, Article 504 and 505) and ANSI/ISA RP126 Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations, Canadian Installations must be in accordance with Canadian Electrical Code Part I.
 - Maximum non-hazardous location voltage supplied to the Associated Apparatus must not be more than 250 Vac or 250 Vdc.
 - Revisions to this drawing must be approved by CSA prior to release.
 - The Associated Apparatus must be a CSA certified barrier and must be installed according to the barrier's installation instructions.
 - The Associated Apparatus must meet all the following requirements:
UL(Voc) < UL(Vmax) I(sc) < I(Imax) Po < Pi Cable(LxLo) ≥ LI + Lcable
 - Special Condition of Safe User Potential
 - Under certain extreme circumstances, exposed plastic and unthreaded metal parts of the enclosure of models CS8x may store an ignition capable of an electrostatic charge. Therefore, the user/installer shall implement provisions to prevent the buildup of electrostatic charge, i.e. locate the equipment where a charge-generating mechanism is unlikely to be present, and clean with a damp cloth.
 - Because the enclosure of CS8x is made from light metal, in rare cases, ignition sources due to impact and friction sparks could occur. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation and operation. Use care not to cause impacts or scrapes with other metal objects during installation.
 - The final user shall ensure appropriate earthing of the metallic accessories upon installation.
 - The final installation of the device in Hazardous area shall meet the requirements of CEC (for Canada) and NEC (for USA) for wiring method that is subject to acceptance of local authority having jurisdiction.
 - The equipment is for use under atmospheric conditions only, the permissible pressure range is 0.8 to 1.1 bar (80 to 110 Kpa) and the permissible normal oxygen content is typically 21 ½ v/v.