

CS10T

Dual Pressure and Temperature Transducer

FEATURES

- Multiple measurements from a single transducer
- Configurable pressure ranges from 50 PSI up to 10,000 PSI
- Multiple temperature ranges available
- Dual 4-20mA or voltage outputs
- IP65 minimum
- Compensated temperature range from -15 to +65°C
- Configurable design
- Assembled in USA

GREAT FOR....

- Gas measurement
- Irrigation systems
- Power generation
- Off-road vehicles



Deutsch DT04-4P

M12x1

About the CS10T

The **CS10T Dual Pressure and Temperature Transducer** is a high strength transducer offering dual pressure and temperature outputs from a single device. This transducer offers a $\pm 0.25\%$ BFSI pressure accuracy and $\pm 3\%$ of FS total error band temperature accuracy. The CS10T utilizes MEMs silicon strain gages mounted to a stainless steel or nickel alloy sensing element. The ASIC electronics offer dual analog voltage or 4-20mA loop powered output signals. Various process connections are available in 17-4PH, 316L SS or nickel alloy including Hastelloy C276 and Inconel 718. Configurable electrical connectors include M12x1, Deutsch DT04-4P, 6-Pin Bendix, and EN 175301-803 Forms A & C.



6-Pin Bayonet

Two Measurements, One Transducer

The CS10T offers dual output signals for both pressure and temperature, eliminating the need for multiple transducers and simplifying installation. The pressure and temperature outputs are independent of each other, **allowing users to measure only pressure, only temperature, or both as needed.** The temperature measurement is made via a platinum RTD sensor mounted near the diaphragm of the sensing element. The resistance is then amplified to the configured output signal. This results in a reliable reference temperature measurement, **helping users understand and control their process conditions in more detail.**

SPECIFICATIONS

Performance

Accuracy @ 25°C:* (Pressure)	$\leq \pm 0.25\%$ BFSL
Accuracy: (Temperature)	$\leq \pm 3\%$ of FS, TEB
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

Thermal

Operating Temperature:	-40 to +85°C
Media Temperature:	-40 to +125°C
Compensated Temperature:	-15 to +65°C
Storage Temperature:	-40 to +125°C
TC Zero:*	$\leq \pm 1\%$ of FS
TC Span:*	$\leq \pm 1\%$ of FS

* Pressure output only

Environmental

EMI/RFI Protection:	Yes
Vibration:	10g, 20 to 2000Hz
Shock:	100g, 11msec, 1/2 sine
IP Rating:*	IP65 minimum. See IP chart below for more information.

	IP65	IP66
M12x1 Gauge or Vacuum (gauge)	✓	
M12x1 Sealed Gauge**		✓
Deutsch DT04-4P Gauge or Vacuum (gauge)	✓	
Deutsch DT04-4P Sealed Gauge**		✓
EN 175301-803 Forms A & C All pressure references	✓	
6-Pin Bayonet Only available in sealed gauge		✓

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

** Sealed gauge not available on all pressure ranges. Contact factory for more information.

Physical

Wetted Material:	See model number configuration
Case Material:	304 SS
Weight (approx.):	4.0 oz.

Electrical (Current)

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

* Pressure output only

Electrical (Voltage)

Outputs:	1-5V 0.5-4.5V non-ratiometric
Excitation:	10-28VDC
Current Consumption:	<10mA
Output Load:	5K Ohms, min
Frequency Response (min):	~1kHz
Zero Offset (of FS):*	$\leq \pm 0.5\%$ typical $\pm 1\%$ max
Span Tolerance (of FS):*	$\leq \pm 0.5\%$ typical $\pm 1\%$ max

* Pressure output only

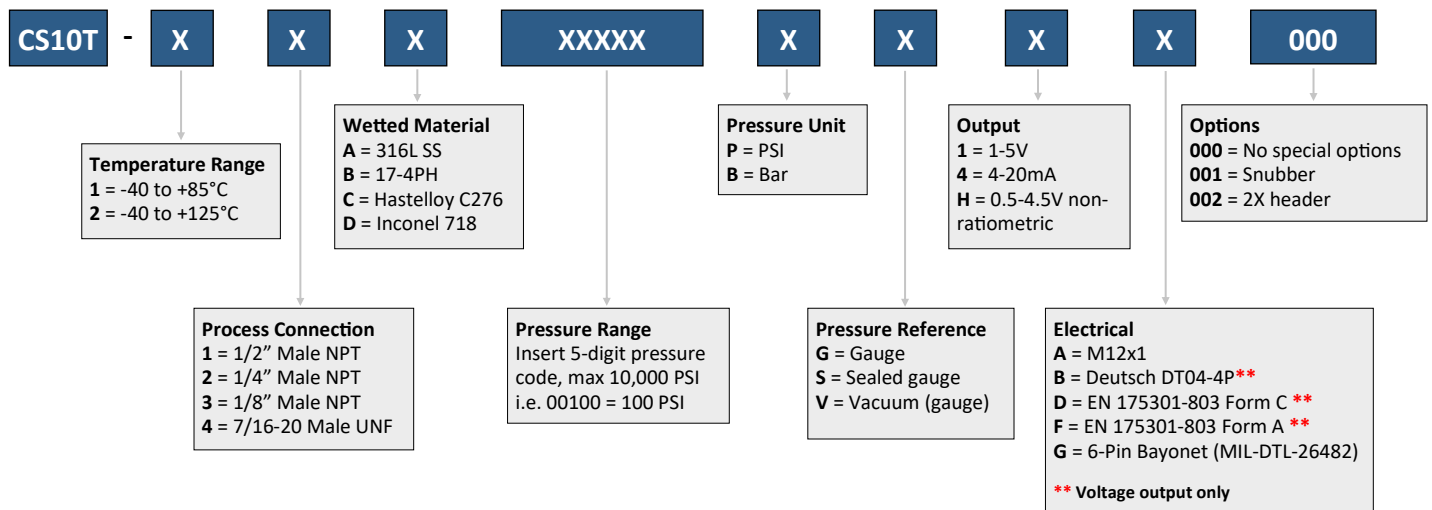
For wiring information, visit pages [4-8](#).

DIMENSIONS

*Dimensions are for reference only



MODEL NUMBER CONFIGURATION



Ordering Example: CS10T-12A01000PS4A000-00 (-40 to +85°C, 1/4" Male NPT, 316L SS, 0-1000 PSI sealed gauge, 4-20mA, M12x1)

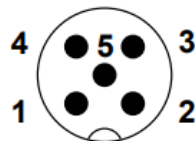
Not all configurations are available. Our sales team can recommend the closest available configuration based on your requirements. Contact Core Sensors for configurations not shown.

Visit our [How To Buy](#) page or [contact us](#) for a quote.

Warranty information can be found online at core-sensors.com.

M12x1

Electrical connection option “A”



STANDARD MODELS

Output	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
Voltage	+V	Pressure	Ground	Temperature	N/A
4-20mA	+V Pressure	+V Temperature	-V Pressure	-V Temperature	N/A

+V	Supply Voltage
-V	4-20mA Signal/Electrical Ground
Ground	Voltage Electrical Ground
Pressure/Temperature	Voltage Output Signal
N/A	Not Applicable

NOTE: This wiring guide is for models with dual pressure and temperature outputs only! Wiring guides for pressure only models can be found at core-sensors.com/wiring.

****See [Page 5](#) for M12x1 mating cordset guides****

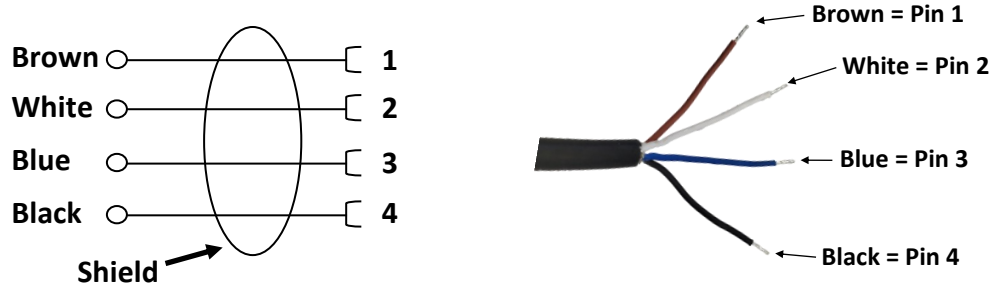


Thoroughly read and understand these wiring instructions prior to installation. **Please call Core Sensors at (862) 245-2673** if you are unsure about any of the instructions.



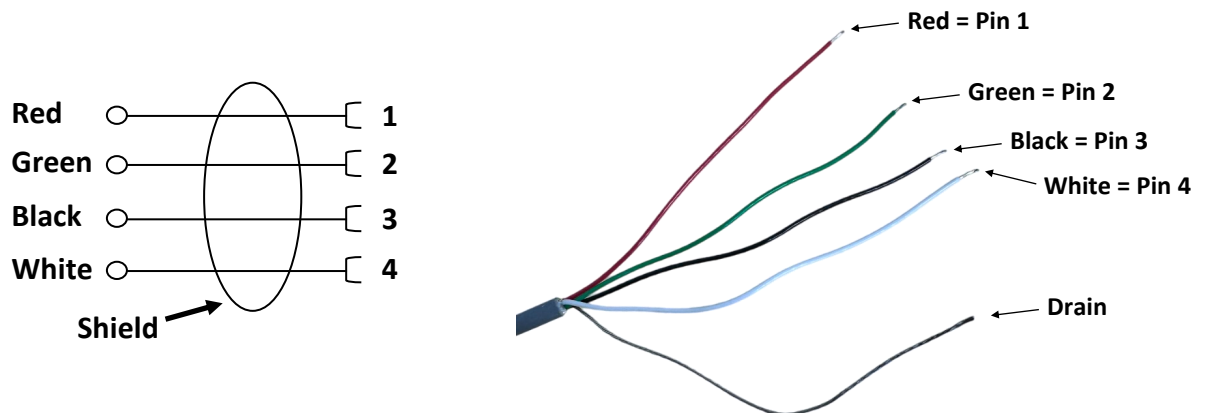
M12x1 Mating Cordset Guides

For part numbers beginning with “00959-”



***Note:** This guide is only for M12x1 mating cordsets purchased directly from Core Sensors with a part number beginning with “00959-”. We cannot guarantee assemblies purchased from a third party will follow the same conductor/pin designations.

For part numbers beginning with “01663-” and “01665-”



***Note:** This guide is only for M12x1 mating cordsets purchased directly from Core Sensors with a part number beginning with “01663-” and/or “01665-”. We cannot guarantee assemblies purchased from a third party will follow the same conductor/pin designations.

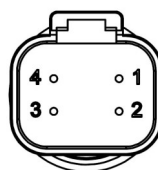


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DEUTSCH DT04-4P

Electrical connection option “B”



STANDARD MODELS

Output	Pin 1	Pin 2	Pin 3	Pin 4
Voltage	Ground	+V	Temperature	Pressure

+V	Supply Voltage
Ground	Voltage Electrical Ground
Pressure/Temperature	Voltage Output Signal
N/A	Not Applicable

NOTE: This wiring guide is for models with dual pressure and temperature outputs only! Wiring guides for pressure only models can be found at core-sensors.com/wiring.

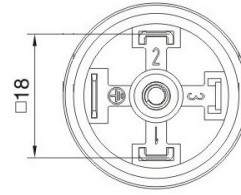


Thoroughly read and understand these wiring instructions prior to installation. **Please call Core Sensors at (862) 245-2673** if you are unsure about any of the instructions.

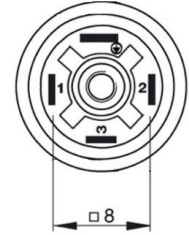


EN 175301-803

Electrical connection option “F” & “D”



Form A



Form C

STANDARD MODELS

	Output	Pin 1	Pin 2	Pin 3	Wide Pin
Form A	Voltage	+V	Ground	Pressure	Temperature
Form C	Voltage	Pressure	+V	Temperature	Ground

+V	Supply Voltage
Ground	Voltage Electrical Ground
Pressure/Temperature	Voltage Output Signal
N/A	Not Applicable

NOTE: This wiring guide is for models with dual pressure and temperature outputs only! Wiring guides for pressure only models can be found at core-sensors.com/wiring.



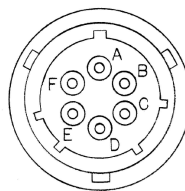
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6-PIN BAYONET

MIL-DTL-26482

Electrical connection option “G”



STANDARD MODELS

Output	Pin A	Pin B	Pin C	Pin D	Pin E	Pin F
Voltage	+V	Pressure	Ground	N/A	Temperature	N/A
4-20mA	+V Pressure	-V Pressure	+Temperature	-V Temperature	N/A	N/A

+V	Supply Voltage
-V	4-20mA Signal/Electrical Ground
Ground	Voltage Electrical Ground
Pressure/Temperature	Voltage Output Signal
N/A	Not Applicable

NOTE: This wiring guide is for models with dual pressure and temperature outputs only! Wiring guides for pressure only models can be found at core-sensors.com/wiring.



Thoroughly read and understand these wiring instructions prior to installation. **Please call Core Sensors at (862) 245-2673** if you are unsure about any of the instructions.

