

# CTE / CTW9000...CS Series

## OEM stainless steel submersible pressure transducers



### FEATURES

- 100 to 1000 mbar, 1 to 10 mH<sub>2</sub>O gage<sup>1</sup> pressure
- For corrosive media
- 0...10 V or 4...20 mA output
- Field interchangeable
- EMC according to EN 61326-1<sup>11</sup>

### MEDIA COMPATIBILITY

Wetted materials:  
 Stainless steel 1.4404 (316L), NBR (FKM),  
 PUR (PE/FEP), POM, Loctite 603

Protection class:  
 IP 68 (according to DIN EN 60529, NEMA 6P)<sup>1</sup>



### SPECIFICATIONS<sup>8,9</sup>

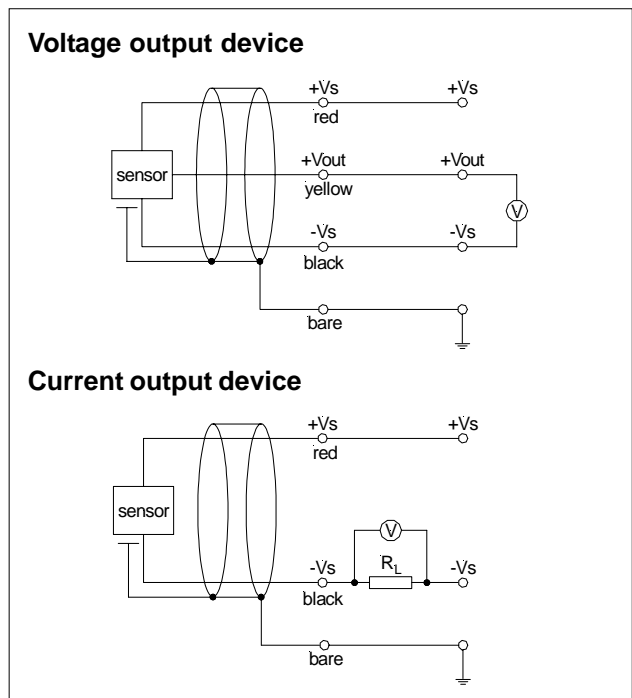
#### Maximum ratings

Supply voltage (reverse polarity protection)	
CT...0...	12...32 V
CT...4... <sup>2</sup>	9...32 V
Load current	
CT...0...	1 mA
Proof pressure <sup>3</sup>	2 x rated pressure

#### Environmental

Temperature limits	
Storage	-25...70 °C
Operating	-10...70 °C
Compensated	0...50 °C
Vibration (5 to 500 Hz)	10 g <sub>RMS</sub>
Mechanical shock	50 g

### ELECTRICAL CONNECTION



# CTE / CTW9000...CS Series

## OEM stainless steel submersible pressure transducers

### COMMON PERFORMANCE CHARACTERISTICS

( $V_S=15\text{ V} \pm 0.1\text{ V}$ ,  $T_A=25\text{ }^\circ\text{C}$ , RH=50 %)

Characteristics			Min.	Typ.	Max.	Unit
Thermal effects (0...50 °C) <sup>4</sup>	Offset	100 mbar, 1 mH <sub>2</sub> O		±0.04	±0.08	%FSO/°C
		all others		±0.02	±0.05	
	Span	100 mbar, 1 mH <sub>2</sub> O		±0.04	±0.08	
		all others		±0.02	±0.05	
Thermal effects (-10...0 °C, 50...70 °C) <sup>4</sup>	Offset	100 mbar, 1 mH <sub>2</sub> O		±0.04		
		all others		±0.02		
	Span	100 mbar, 1 mH <sub>2</sub> O		±0.04		
		all others		±0.02		
Non-linearity (BSL) and hysteresis <sup>5</sup>				±0.1	±0.3	%FSO
Repeatability				±0.1		
Long term stability <sup>6</sup>				±0.1		
Output noise (0 < f < 1 kHz)				±0.1		
Response time (10 to 90 %)				35		ms
D/A resolution					11	bit
Power supply rejection	Offset			±0.01		%FSO/V
	Span			±0.02		

### INDIVIDUAL PERFORMANCE CHARACTERISTICS

( $V_S=15\text{ V} \pm 0.1\text{ V}$ ,  $T_A=25\text{ }^\circ\text{C}$ , RH=50 %)

#### 0...10 V output ( $R_L > 100\text{ k}\Omega$ )

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset		0	0.1	V
Full scale span <sup>7</sup>	9.9	10	10.1	
Output impedance			25	$\Omega$
Current consumption (no load)		4		mA

#### 4...20 mA output ( $R_L = 100\text{ }\Omega$ )

Characteristics	Min.	Typ.	Max.	Unit
Zero pressure offset	3.8	4.0	4.2	mA
Full scale span <sup>7</sup>	15.8	16.0	16.2	
Power consumption ( $I_L = 20\text{ mA}$ )		250		mW



# CTE / CTW9000...CS Series

## OEM stainless steel submersible pressure transducers

### ORDERING INFORMATION

Series/Pressure range		Pressure mode		Output signal		Cable length <sup>10</sup>		Cable material		Sealing material	
<b>CTEM9100</b>	0...100 mbar	<b>G</b>	Gage	<b>0</b>	0...10 V	<b>C5S</b>	5 m	<b>E</b>	PE	<b>V</b>	Viton (FKM)
<b>CTEM9200</b>	0...200 mbar			<b>4</b>	4...20 mA	<b>C10S</b>	10 m	<b>U</b>	PUR	<b>N</b>	NBR
<b>CTEM9500</b>	0...500 mbar					Note: Other cable lengths on request.		<b>F</b>	FEP	Note: Older part no. do not contain this digit. Without this digit NBR will be used.	
<b>CTEM91K0</b>	0...1000 mbar							Note: Older part no. do not contain this digit. Without this digit PUR will be used.			
<b>CTW9001</b>	0...1 mH <sub>2</sub> O										
<b>CTW9002</b>	0...2 mH <sub>2</sub> O										
<b>CTW9005</b>	0...5 mH <sub>2</sub> O										
<b>CTW9010</b>	0...10 mH <sub>2</sub> O										
<b>Example: CTEM91K0G4C5SFV</b>											
<b>Devices highlighted in grey are preferred items.</b>							<b>For all other devices MOQ may apply.</b>				

**Custom pressure ranges and other fittings are available on request. MOQ applies. Contact First Sensor.**

First Sensor reserves the right to make changes to any products herein. First Sensor does not assume any liability arising out of the application or use of any product or circuit described herein, neither does it convey any license under its patent rights nor the rights of others.