OEM stainless steel submersible pressure transducers

FEATURES

- 100 to 1000 mbar, 1 to 10 mH₂O gage¹ pressure
- · For corrosive media
- 0...10 Vor 4...20 mA output
- · Field interchangeable
- EMC according to EN 61326-111



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)1



SPECIFICATIONS^{8,9}

Maximum ratings

Supply voltage (reverse polarity protection)

CT...0... 12...32 V CT...4...² 9...32 V

Load current

CT...0... 1 mA

Proof pressure³ 2 x rated pressure

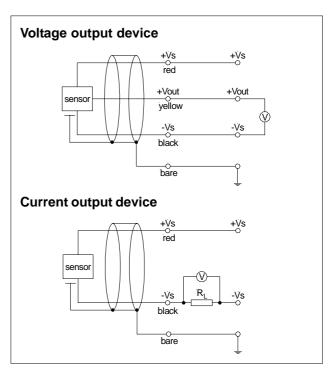
Environmental

Temperature limits

Storage -25...70 °C
Operating -10...70 °C
Compensated 0...50 °C

Vibration (5 to 500 Hz) $10 g_{RMS}$ Mechanical shock 50 g

ELECTRICAL CONNECTION



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COMMON PERFORMANCE CHARACTERISTICS

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

Ch	naracteris	Min.	Тур.	Max.	Unit		
Thermal effects	Offset	100 mbar, 1 mH ₂ O		±0.04	±0.08		
(050 °C) ⁴		all others		±0.02	±0.05		
	Span	100 mbar, 1 mH ₂ O		±0.04	±0.08	0/500/90	
		all others		±0.02	±0.05		
Thermal effects (-100 °C, 5070 °C) ⁴	Offset	100 mbar, 1 mH ₂ O		±0.04		%FSO/°C	
		all others		±0.02			
	Span	100 mbar, 1 mH ₂ O		±0.04			
		all others		±0.02			
Non-linearity (BSL) and h		±0.1	±0.3				
Repeatability		±0.1		%FSO			
Long term stability ⁶		±0.1					
Output noise (0 < f < 1 kl		±0.1					
Response time (10 to 90		35		ms			
D/A resolution			11	bit			
Power supply rejection		Offset		±0.01		0/ ESO//	
		Span		±0.02		%FSO/V	

INDIVIDUAL PERFORMANCE CHARACTERISTICS

 $(V_S=15 V \pm 0.1 V, T_A=25 °C, RH=50 %)$

0...10 V output $(R_1 > 100 \text{ k}\Omega)$

Characteristics	Min.	Тур.	Max.	Unit	
Zero pressure offset		0	0.1	V	
Full scale span ⁷	9.9	10 10		V	
Output impedance			25	Ω	
Current consumption (no load)		4		mA	

4...20 mA output ($R_L = 100 \Omega$)

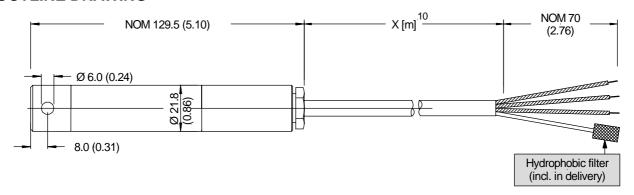
Characteristics	Min.	Тур.	Max.	Unit	
Zero pressure offset	3.8	4.0	4.2	A	
Full scale span ⁷	15.8	16.0	16.2	mA mA	
Power consumption (I _L = 20 mA)		250		mW	





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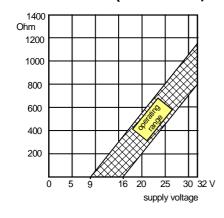
OUTLINE DRAWING¹



mass: typ. 210 g (without cable)

dimensions in mm (inches)

LOAD LIMITATION (4...20 mA output version)



ELECTRICAL CONNECTION (cont.)

WIRE CONNECTION								
Colour	010 V	420 mA						
red	+Vs	+Vs						
black	-Vs	-Vs						
yellow	Vout	-						
bare	case / shield	case / shield						
transparent	vent tube ¹	vent tube ¹						

RECOMMENDED ACCESSORY (not included in delivery)

ZA000850: Cable hanger ZA004151: Desiccant filter box

Specification notes:

- 1. The package is an all-sealed housing. For proper function the gage port is vented to the atmosphere through the connecting cable. Thus the vent tube of the cable end must have access to the ambient pressure.
- 2. The minimum supply voltage is directly proportional to the load resistance seen by the transmitter. For more details see the load limitation diagram.
- 3. Proof pressure is the maximum pressure which may be applied without causing damage to the sensing element.
- 4. Thermal effects are relative to 25 $^{\circ}$ C. Signal is clamped at 0 V.
- 5. Non-linearity refers to **B**est **S**traight **L**ine fit. Hysteresis is the maximum output difference at any point within the operating pressure range for increasing and decreasing pressure.
- 6. Long term stability is the change in output after one year.
- 7. Span is the arithmetic difference in transmitter output signal measured at zero pressure and the maximum operating pressure.
- 8. CE-labelling is in accordance with 2004/108/EC.
- 9. The pressure transmitters must not be used as safety accessories according to article 1, 2.1.3 of the directive 97/23/EC.
- 10. Cable length for 0...10 V versions is max. 10 m.
- 11. Surge immunity according to EN 61000-4-5 for current output devices with cable lenghts longer than 10 m. For shorter cable lenghts please contact First Sensor.

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ORDERING INFORMATION

Series/Pressure range		Pressure mode		Output signal		Cable length ¹⁰		Cable material		Sealing material		
CTEM9100	0100 mbar	G	Gage	0	010 V	C5S	5 m	Е	PE	٧	Viton (FKM)	
CTEM9200	0200 mbar			4	420 mA	C10S	10 m	U	PUR	N	NBR	
CTEM9500	0500 mbar					Note: Oth				Note: Older part no.		
CTEM91K0	01000 mbar					lengins o	n request.	l	Noto: Older part pa		do not contain this digit. Without this digit	
CTW9001	01 mH ₂ O							digit. Without this digit PUR will be used.		NBR will be used.		
CTW9002	02 mH ₂ O											
CTW9005	05 mH ₂ O							useu				
CTW9010	010 mH ₂ O											
Example: CTEM91K0G4C5SFV												
Devices highlighted in grey are preferred items.				For all other devices MOQ may apply.								

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

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