

CTE8000 / CTU8000...CS Series

OEM submersible pressure transducers



FEATURES

- 0...250 to 0...2000 mbar,
0...5 to 0...30 psi gage
- For corrosive media
- 4...20 mA output
- Field interchangeable

MEDIA COMPATIBILITY

Wetted materials:
stainless steel 1.4404 (316L), ceramic Al_2O_3 , NBR¹¹,
PUR, PE, ABS, Loctite 603

Housing:
protection class IP 68 (according to DIN EN 60529)
respectively NEMA 6P¹

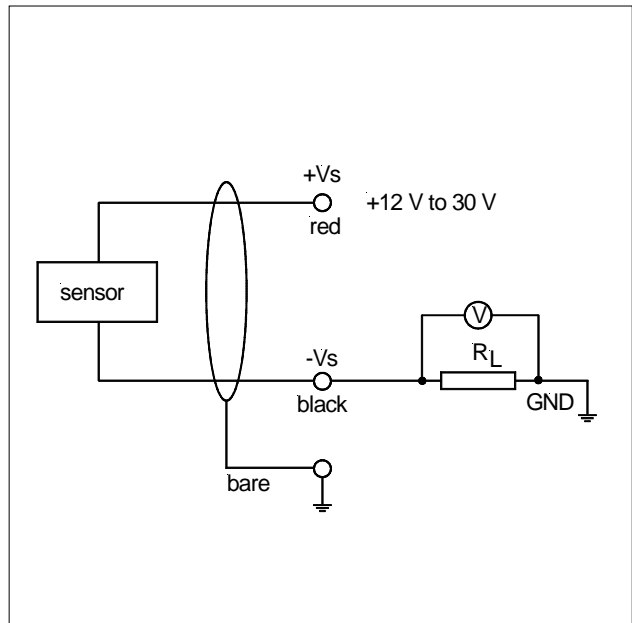


SPECIFICATIONS^{9,10}

Maximum ratings

Supply voltage (reverse polarity protection) ²	12...30 V
Temperature limits	
Storage	-40 to 70°C
Operating	-25 to 70°C
Compensated	0 to 70°C
Vibration (5 to 500 Hz)	10 g _{RMS}
Mechanical shock	50 g
Proof pressure ³	2 x rated pressure

ELECTRICAL CONNECTION



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INDIVIDUAL PERFORMANCE CHARACTERISTICS

(unless otherwise noted, $V_s = 15\text{ V}$, $R_L = 100\ \Omega$, $t_{amb} = 25^\circ\text{C}$)

Characteristics		Min.	Typ.	Max.	Unit
Operating pressure	CTEM8250...	0		250	mbar
	CTEM8400...	0		400	
	CTEM8600...	0		600	
	CTEM81K0...	0		1000	
	CTEM81K6...	0		1600	
	CTEM82K0...	0		2000	
	CTU8005...	0		5	psi
	CTU8010...	0		10	
	CTU8015...	0		15	
	CTU8020...	0		20	
CTU8030...	0		30		
Zero pressure offset		3.8	4.0	4.2	mA
Full scale span ⁷		15.8	16.0	16.2	
Thermal effects (0 to 70°C) ⁴	Offset	0.25 bar / 5 psi	0.04	0.08	%FSO/°C
		< 1 bar / 15 psi	0.03	0.06	
		all others	0.02	0.04	
Span			0.02	0.04	
Thermal effects (-25 to 0°C)	Offset	< 1 bar / 15 psi	0.06		
		all others	0.03		
		Span			0.03
Non-linearity, hysteresis (BSL) and repeatability ⁵			±0.1	±0.3	%FSO
Output noise (0 < f < 1 kHz)			±0.04		
Long term stability ⁶			±0.2		
Response time (10 to 90 %)			1	5	ms
Power supply rejection	Offset		0.05		%FSO/V
	Span		0.05		
Power consumption ($I_L = 20\text{ mA}$)			260		mW

Specification notes (for all devices):

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 diagrams](#).
3. Proof pressure is the maximum pressure which may be applied without causing damage to the sensing element.
4. Thermal effects tested and guaranteed from 0 to 70°C relative to 25°C. All specifications shown are relative to 25°C.
5. Non-linearity refers to the **Best Straight Line** fit measured for offset, full scale span and 1/2 full scale span.
6. Long term stability is the change in output after one year or 1 million pressure cycles.
7. Span is the arithmetic difference in transmitter output signal measured at zero pressure and the maximum operating pressure.
8. Tests are in accordance with EN61000-6-2, April 1999.
9. CE-labelling is in accordance with 89/336/EEC.
10. The pressure transmitters must not be used as safety accessories according to article 1, 2.1.3 of the directive 97/23/EC.
11. Other sealing materials are available on request.

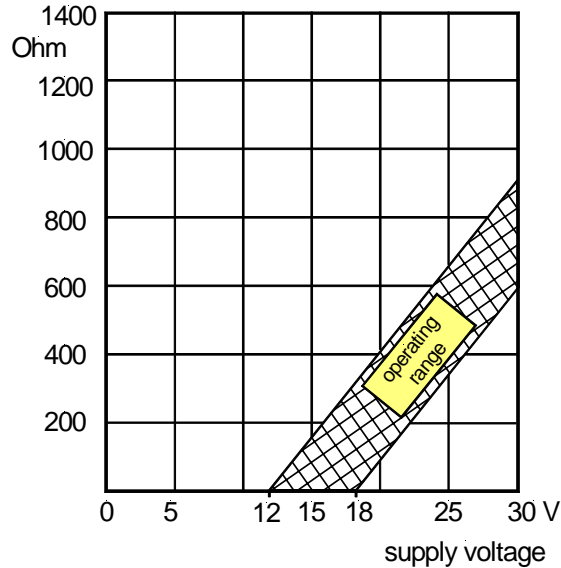
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ELECTROMAGNETIC CAPABILITY⁸

	Test conditions	Criterion	Interference
Radiated, radio frequency electromagnetic field immunity (RFI)	EN61000-4-3: Grade 3 10 V/m, 80 MHz to 1000 MHz 80 % AMC (1 kHz)	A	<1 % FSO
Electrical fast transient / burst immunity (EFT)	EN61000-4-4: Grade 3 ±2 kV	B	<1 % FSO
Electrostatic discharge immunity test (ESD)	EN61000-4-2: Grade 4 ±8 kV, contact discharge	B	<1 % FSO
Immunity to conducted disturbances induced by radio-frequency fields	EN61000-4-6: Grade 3 0,15 to 80 MHz 10 V, 80 % AMC (1 kHz)	A	<1 % FSO

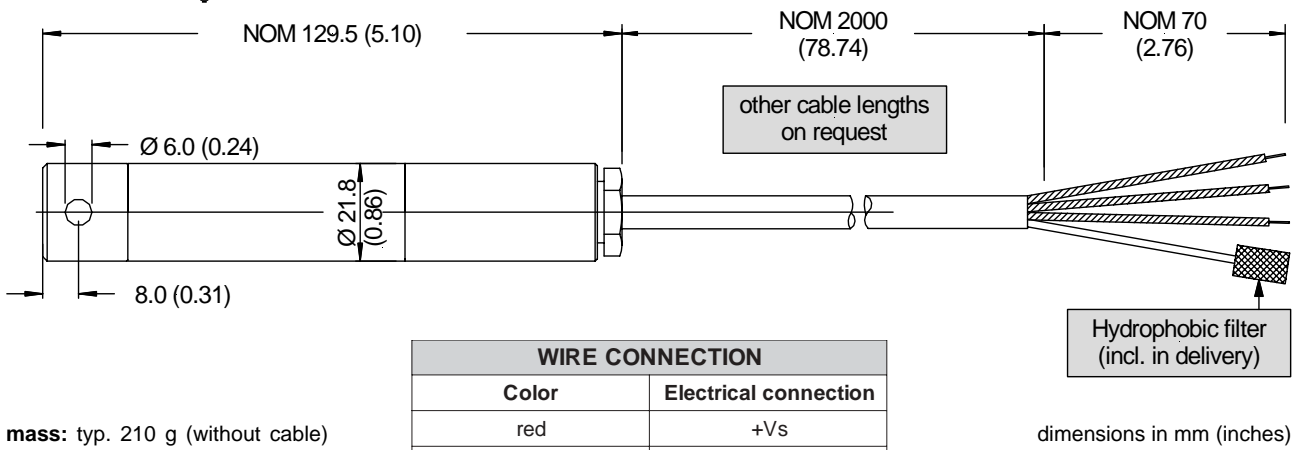
LOAD LIMITATION



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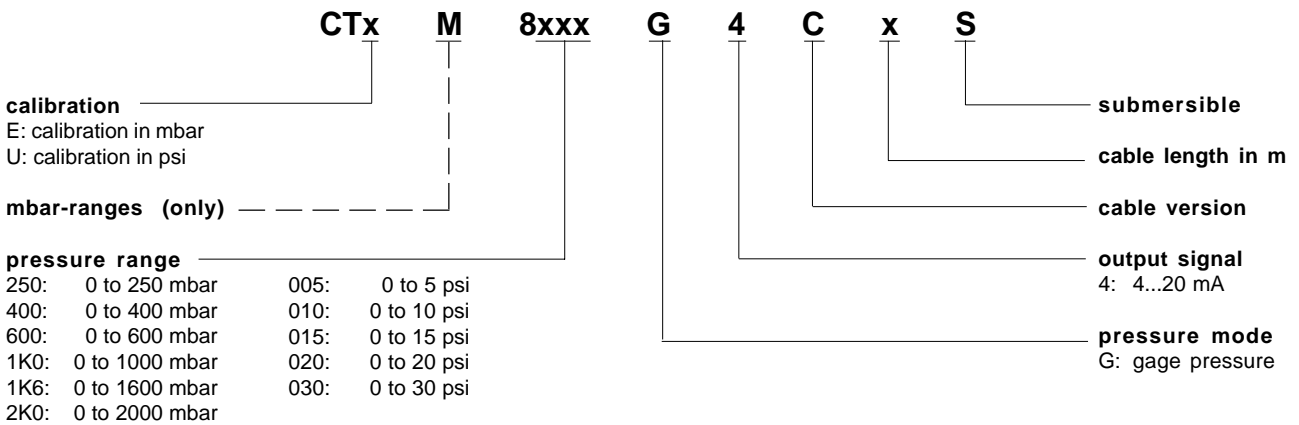
OUTLINE DRAWING



mass: typ. 210 g (without cable)

WIRE CONNECTION	
Color	Electrical connection
red	+Vs
black	-Vs
transparent	vent tube ¹
bare	case/shield

ORDERING INFORMATION



Note: Other pressure ranges and options are widely available. Please contact your nearest Sensortechinics sales representative.

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