

# KTE8000/KTU8000...CS Series

## Submersible pressure transducers

### FEATURES

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

### SERVICE

Wetted materials: PPS, ceramic  $Al_2O_3$   
NBR (Viton), PUR (PE)<sup>11</sup>

Housing: protection class IP68  
according to EN60529<sup>1</sup>

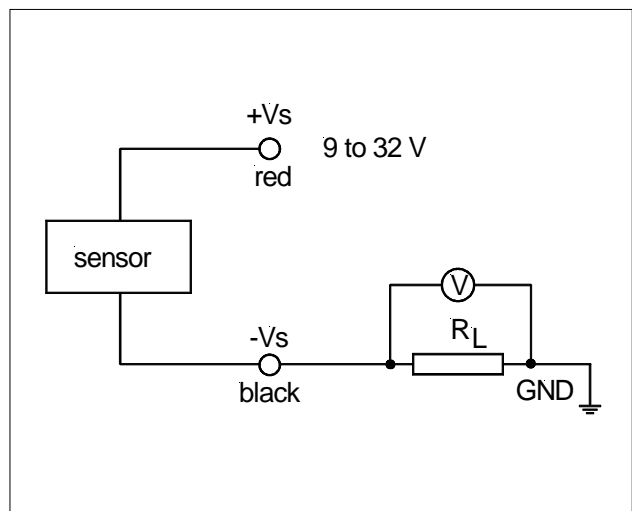


### SPECIFICATIONS<sup>9,10</sup>

#### Maximum ratings

Supply voltage <sup>2</sup> (reverse polarity protection)	9...32 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 <sub>RMS</sub>
Mechanical shock	50 g
Proof pressure <sup>3</sup>	2 x rated pressure

### ELECTRICAL CONNECTION



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### INDIVIDUAL PERFORMANCE CHARACTERISTICS

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

Characteristics		Min.	Typ.	Max.	Unit	
Operating pressure	KTEM8250...	0		250	mbar	
	KTEM8400...	0		400		
	KTEM8600...	0		600		
	KTEM81K0...	0		1000		
	KTEM81K6...	0		1600		
	KTEM82K0...	0		2000		
	KTU8005...	0		5	psi	
	KTU8010...	0		10		
	KTU8015...	0		15		
	KTU8020...	0		20		
	KTU8030...	0		30		
Zero pressure offset		3.9	4.0	4.1	mA	
Full scale span <sup>7</sup>		15.9	16.0	16.1		
Thermal effects <sup>4</sup> (0 to 70°C)	Offset	0.25 bar / 5 psi / 2.5 mH <sub>2</sub> O		±0.04	±0.08	
		< 1 bar / 15 psi / 10 mH <sub>2</sub> O		±0.03	±0.06	
		all others		±0.02	±0.04	
	Span		±0.02	±0.04	%FSO/°C	
Thermal effects (-25 to 0°C)	Offset	< 1 bar / 15 psi / 10 mH <sub>2</sub> O		±0.06		
		all others		±0.03		
		Span		±0.03		
Non-linearity, hysteresis (BSL) and repeatability <sup>5</sup>			±0.1	±0.3		%FSO
Output noise (0 < f < 1 kHz)			±0.2			
Long term stability <sup>6</sup>			±0.2			
Response time (10 to 90 %)			1	5	ms	
Power supply rejection	Offset		±0.05		%FSO/V	
	Span		±0.05			

#### 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 tested and guaranteed from 0...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.

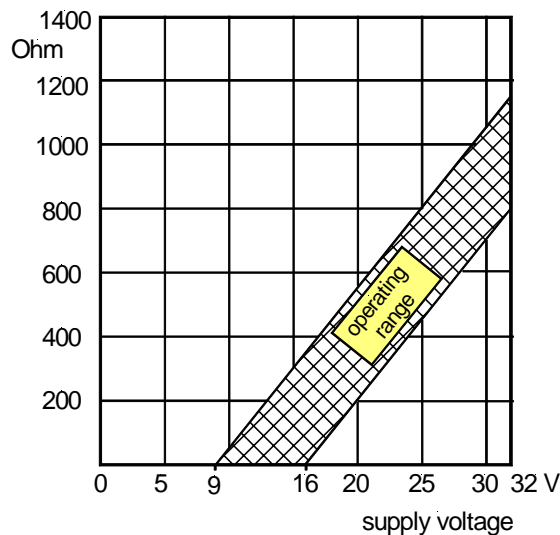
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### ELECTROMAGNETIC CAPABILITY<sup>8</sup>

	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 ±4 kV, contact discharge ± 8kV, air 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
Surge immunity	EN61000-4-5: Grade 1 ±0.5 kV, symmetric/asymmetric Grade 2 ±1 kV, asymmetric	B	<1 % FSO

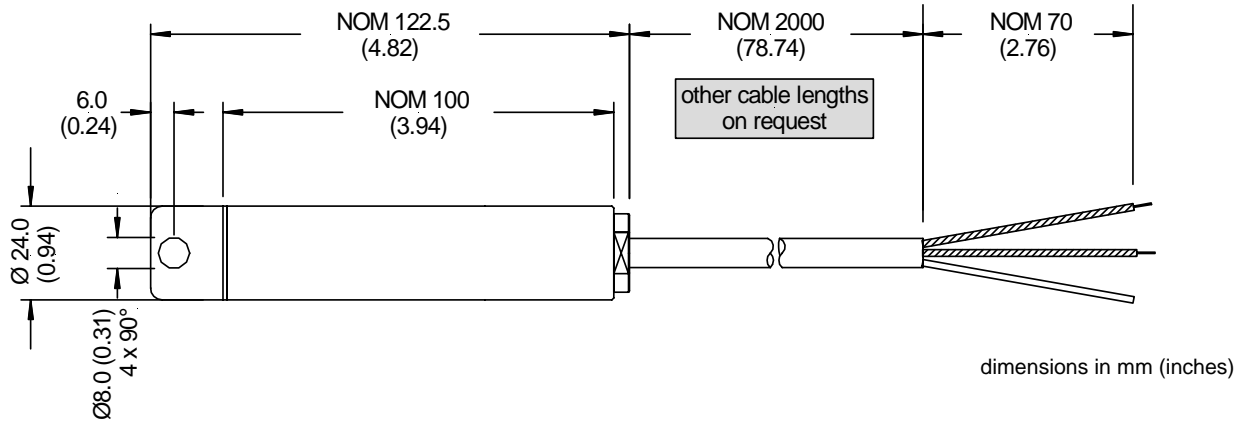
### LOAD LIMITATION



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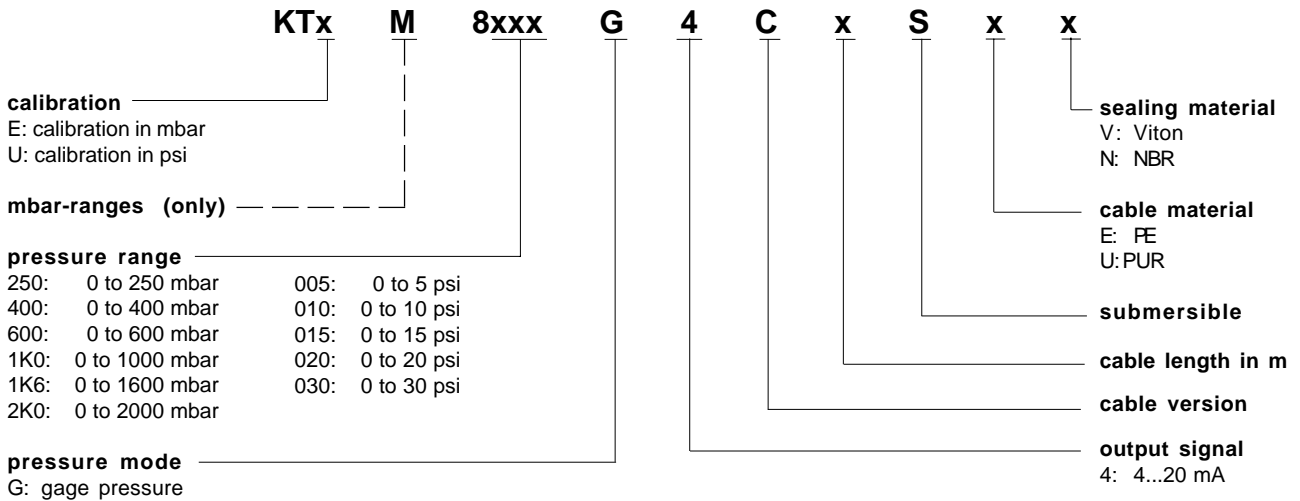
## Submersible pressure transducers

### OUTLINE DRAWING



WIRE CONNECTION	
Color	Electrical connection
red	+Vs
black	-Vs
transparent	vent tube <sup>1</sup>

### ORDERING INFORMATION



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

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