

KTE3000 / KTU3000 Series

OEM pressure transmitters for industrial media



FEATURES

- 0...-1 to 0...50 bar,
0...-15 to 0...750 psi
gage or absolute
- For many industrial gases and liquids
- 0...10 V, 0.5...4.5 V, 0...5 V and
4...20 mA output
- Field interchangeable
- For industrial use

SERVICE

Pressure inlet: all media compatible with PPS,
ceramic Al₂O₃ and NBR⁸

Housing: stainless steel 1.4404 (316L),
protection class IP65 according to
DIN40050, respectively NEMA4X¹



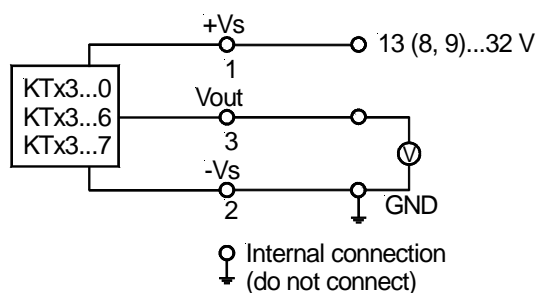
SPECIFICATIONS^{10,11}

Maximum ratings

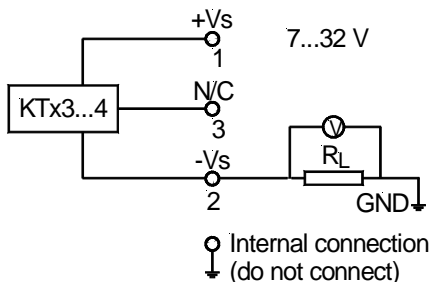
Supply voltage (reverse polarity protection)	
KTx3...0	13...32 V
KTx3...6	9...32 V
KTx3...7	8...32 V
KTx3...4 ²	7...32 V
Maximum load current	
Source/Sink	1 mA
Temperature limits	
Storage	-40...100°C
Operating	-25...85°C
Compensated	0...70°C
Humidity limits	0 - 95 %RH
Vibration (5 to 500 Hz)	10 g _{RMS}
Mechanical shock	50 g
Proof pressure ³	2 x rated pressure

ELECTRICAL CONNECTION

0...10 V, 0.5...4.5 V, 0...5 V output



4... 20 mA output



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COMMON PERFORMANCE CHARACTERISTICS

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

Characteristics		Min.	Typ.	Max.	Unit	
Operating pressure	KTE3001...	0		1	bar	
	KTE3N01G..	-1		1		
	KTE3P01G..	-1		0		
	KTE3002...	0		2		
	KTE3005...	0		5		
	KTE3010...	0		10		
	KTE3016...	0		16		
	KTE3020...	0		20		
	KTE3025...	0		25		
	KTE3035...	0		35		
	KTE3050...	0		50		
	KTU3015...	0		15		psi
	KTU3N15G..	-15		15		
	KTU3P15G..	-15		0		
KTU3030...	0		30			
KTU3050...	0		50			
KTU3100...	0		100			
KTU3200...	0		200			
KTU3300...	0		300			
KTU3500...	0		500			
KTU3750...	0		750			
Thermal effects (0...70°C) ⁴	Offset		0.02	0.05	%FSO/°C	
	Span		0.02	0.05		
Thermal effects (-25...0°C, 70...85°C)	Offset		0.03			
	Span		0.03			
Non-linearity, hysteresis (BSL) and repeatability ⁵			±0.15	±0.25	%FSO	
Long term stability ⁶			±0.3			
Output noise (0 < f < 1 kHz)			±0.04			
Response time (10 to 90 %)			1		ms	
Power supply rejection			0.005		%FSO/V	

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INDIVIDUAL PERFORMANCE CHARACTERISTICS

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

0...10 V output

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset	KTx3N...	4.9	5	5.1	V
	all others		0	0.1	
Full scale span ⁷	KTx3N...	4.9	5	5.1	
	all others	9.9	10	10.1	
Output impedance				25	Ω
Current consumption (no load)			3		mA

0.5...4.5 V output

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset	KTx3N...	2.450	2.5	2.550	V
	all others	0.450	0.5	0.550	
Full scale span ⁷	KTx3N...	1.950	2	2.050	
	all others	3.950	4	4.050	
Output impedance				25	Ω
Current consumption (no load)			3		mA

0...5 V output

Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset	KTx3N...	2.45	2.5	2.55	V
	all others		0	0.05	
Full scale span ⁷	KTx3N...	2.45	2.5	2.55	
	all others	4.95	5.0	5.05	
Output impedance				25	Ω
Current consumption (no load)			3		mA

4...20 mA output

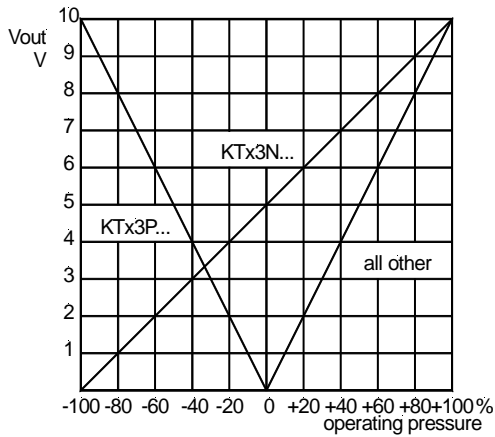
Characteristics		Min.	Typ.	Max.	Unit
Zero pressure offset	KTx3N...	11.9	12.0	12.1	mA
	all others	3.9	4.0	4.1	
Full scale span ⁷	KTx3N...	7.9	8.0	8.1	
	all others	15.9	16.0	16.1	

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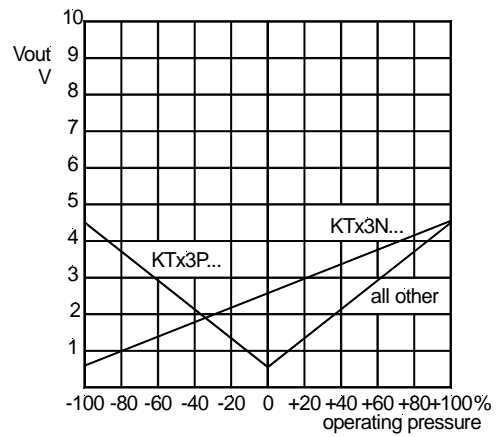
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OUTPUT CHARACTERISTICS

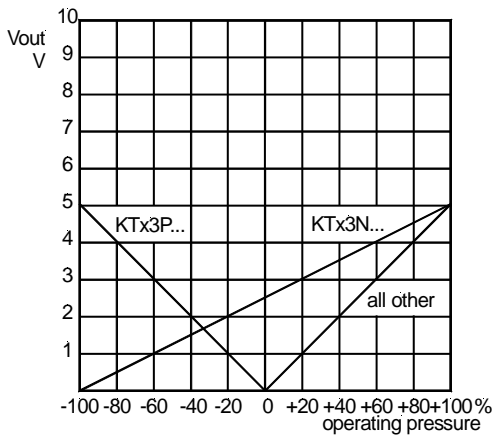
0...10 V output version



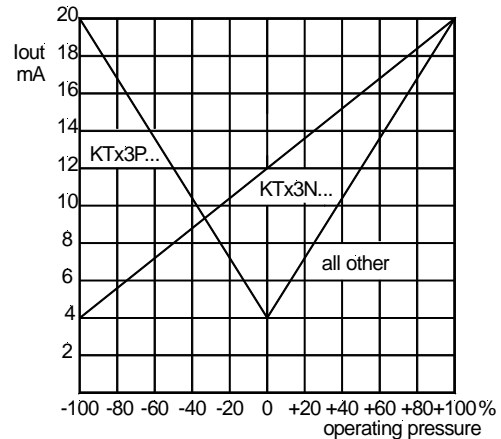
0.5...4.5 V output version



0...5 V output version



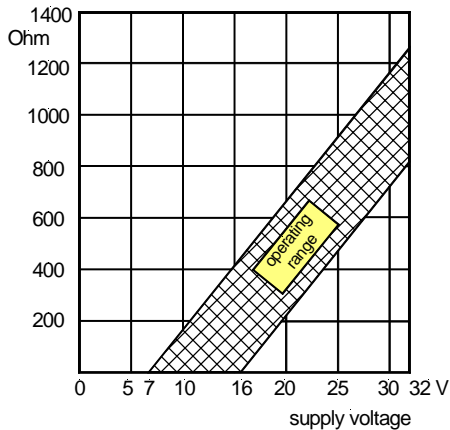
4...20 mA output version



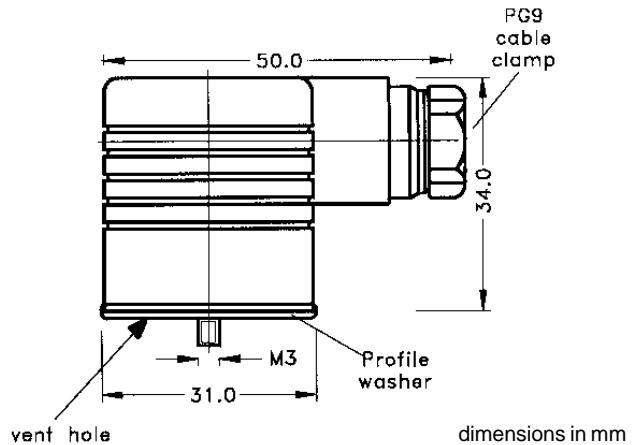
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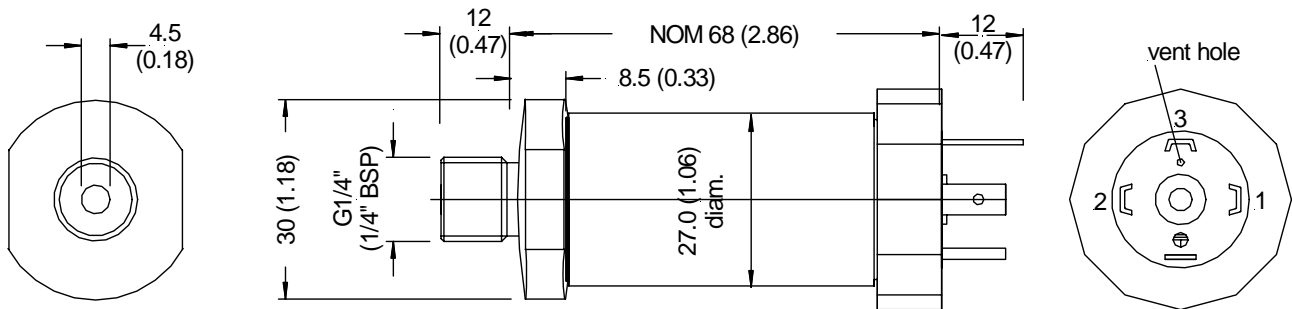
LOAD LIMITATION 4...20 mA output version



RECOMMENDED PLUG (DIN43650A) Plug and profile washer included in delivery!



OUTLINE DRAWING



mass: 210 g

dimensions in mm (inches)

Specification notes:

1. The package is a all-sealed housing. IP65 (NEMA4X) protection is given when the connector is locked with a rubber washer. For proper function the gage port is vented to the atmosphere through the connector/cable assembly. Thus 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. Other sealing materials are available on request.
9. Test are in accordance with EN61000-6-2, April 1999.
10. CE-labelling is in accordance with 89/336/EEC.
11. The pressure transmitters must not be used as safety accessories according to article 1, 2.1.3 of the directive 97/23/EC.

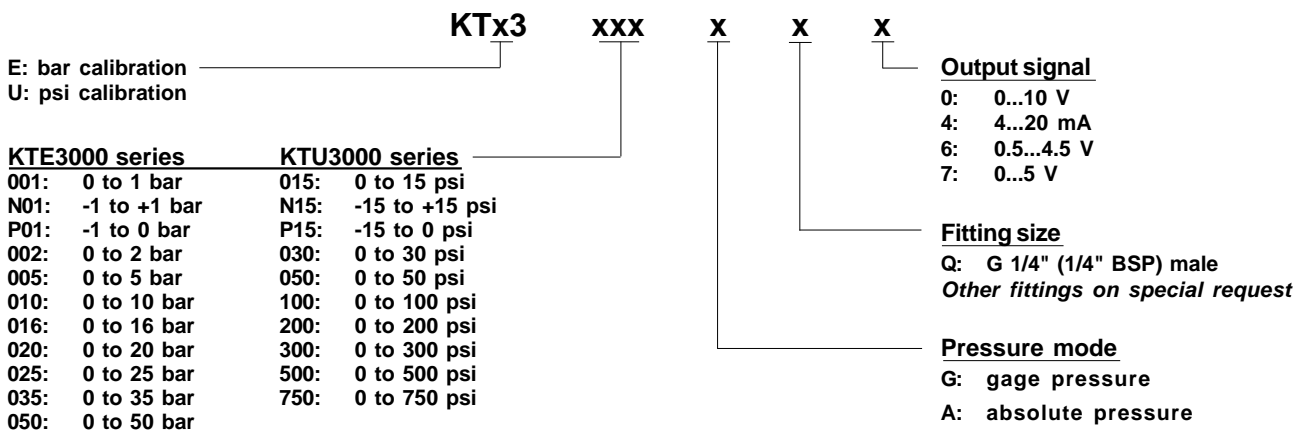
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ELECTROMAGNETIC CAPABILITY⁹

	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

ORDERING INFORMATION



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

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