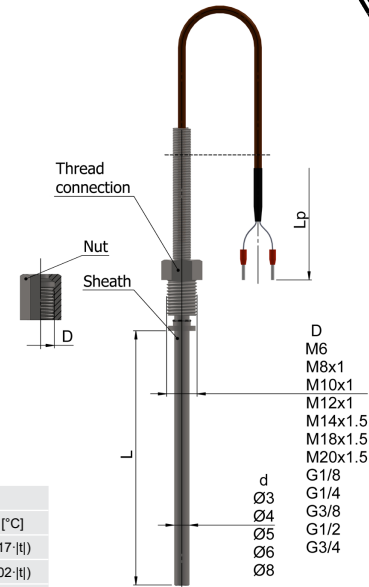


Intrinsically safe temperature sensors of machinery and device parts **TOPE-365Exi, TTJE-365Exi, TTKE-365Exi, TTNE-365Exi**



Technical description

Measuring range / sensing element		
(-50 ÷ 400) °C	Pt100	class B
(-40 ÷ 400) °C	J, K	class 2
Thermowell		
– material: steel 1.4541		
– movable threaded connector or nut		
– length L [mm]: 50÷1000		
Wire		
– Cu wire or thermocouple wire: 0,22 mm ² in mineral insulated insulation with metal braid, operating temperature up to 400 °C,		
– Cu wire or thermocouple wire: 0,22 mm ² in silicone insulation, operating temperature up to 180 °C for d>5		
– cable length L _p = 1,5 m (standard)		
– wires resistance Cu ~0,14Ω/m ~0,36 °C		
Construction version		
– Exi acc. to ATEX		
– WE Type-Examination Certificate: KDB 07ATEX055		
II 2G Ex ia IIC T6		
II 1D Ex ia IIC T85°C		
– measuring junction: isolated SO (Single), SOA (double)		
Options		
– Pt500, Pt1000, T, N		
– 3-, 4-wire connection for RTD		
– Pt100: class A (-30 ÷ 250) °C, class AA (0 ÷ 150) °C; TC class 1		



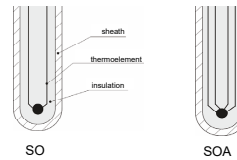
Resistors tolerance acc. to PN-EN 60751

Class	Wire wound resistor	
	Range [°C]	Tolerance [°C]
AA	(-50÷250)	±(0,1+0,0017·|t|)
A	(-100÷450)	±(0,15+0,002·|t|)
B	(-196÷600)	±(0,3+0,005·|t|)

Tolerance for thermocouples class acc. to PN-EN 60584

Thermocouple	Class 1		Class 2	
	Range [°C]	Tolerance [°C]	Range [°C]	Tolerance [°C]
J Fe-CuNi	(-40÷375) (375÷750)	±1,5 ±0,004 |t|	(-40÷333) (333÷750)	±2,5 ±0,0075 |t|
K, Na NiCr-NiAl	(-40÷375) (375÷1000)	±1,5 ±0,004 |t|	from (-40÷333) (333÷1200)	±2,5 ±0,0075 |t|

Types of measuring hot junction



Ordering code

Temperature sensor	...	T	...	E-365Exi	-	...	...	...	...	...	...	...	...	...	...
Single		no sign													
Double		2													
Resistor Pt															
Thermocouple Fe-CuNi; NiCr-NiAl															
Thermocouple Cu-CuNi; NiCrSi-NiSi															
Sheath length L [mm]															100*
Thermowell diameter d [mm]															6*
Cable insulation: silicone															Si
Cable insulation: braided fiberglass															Ws
Resistor type															Pt100*
Hot junction type for TC															SO, SOA
Resistor class															A, B*
Thermocouple class															1, 2
Measuring circuit for RTD															2, 3, 4
Connector thread dimension															KM12x1*
Nut thread dimension															NM12x1*
Cable length L _p [m]															1,5m*

* or others acc. to requirements

Ordering example

TOPE-365Exi-80-6-Si-Pt100-A-4-KM20x1,5-1,5m single sensor Pt100, class A, 4-wire connection, sheath length = 80 mm and diameter 6 mm with a rotating connector M20x1,5, lead wire in silicone insulation, lead wire length L_p=1,5m