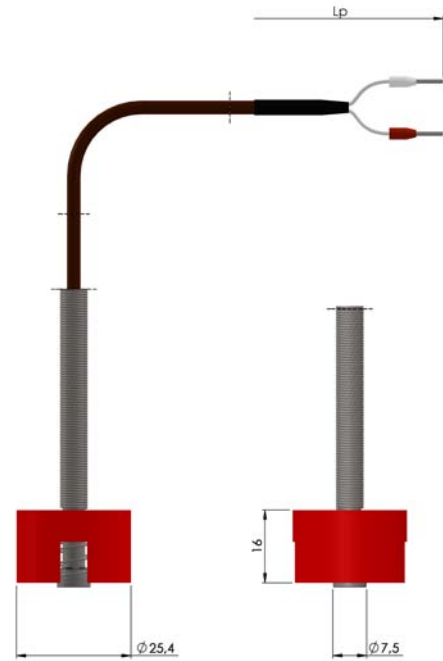


Temperature sensors for surface measurement **TOP-AL3, TTJ-AL3, TTK-AL3**

Technical description

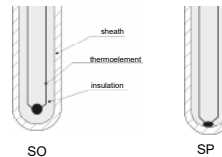
Measuring range / sensing element		
(-50 ÷ 400) °C	Pt100	class B
(-50 ÷ 250) °C	Ni100	
(-40 ÷ 400) °C	J, K	class 2
Thermowell		
– material: steel 1.4541		
– mounting: Alnico magnet 22-36		
– max. working temperature: 450°C (above 180°C, the paint coat burns out)		
– magnet adhesion: ±3 kg		
Wire		
– Cu wire or thermocouple wire: 2x0,22 mm ²		
– fiberglass insulation with metal braid		
– measuring junction for TC: insulated SO		
– length L _p =1,5m (standard)		
– wires resistance Cu ~0,14 Ω/m~0,36 °C		
Options		
– Pt500, Pt1000, Ni100, Ni1000		
– other cable insulations acc. to requirements: silicone insulation, operating temperature up to 180 °C, teflon insulation, operating temperature up to 200 °C		
– measuring junction for TC: grounded SP		
– 3-, 4-wire connection for RTD		
– Pt100: class A (-30 ÷ 300) °C, class AA (0 ÷ 150) °C; TC: class 1		



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 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	...	AL3	-	...	-	...	-	...
Resistor Pt		OP								
Resistor Ni		ON								
Thermocouple Fe-CuNi		TJ								
Thermocouple NiCr-NiAl		TK								
Resistor type										Pt100*
Junction insulated from the sheath	for									SO
Junction grounded	TC									SP
Resistor class										A, B*
Thermocouple class										1, 2
Measuring circuit for RTD										2, 3, 4
Cable length L _p [m]										1,5m*

* or others acc. to requirements

Ordering example

TOP-AL3-Pt100-A-3-1m sensor with Pt100, class A, 3-wire connection, lead wire length L_p=1m

TTJ-AL3-2-SO-1,5m sensor with thermocouple Fe-CuNi, class 2, insulated junction SO, lead wire length L_p=1,5m