

Temperature sensors with non-replaceable measuring inserts **TOPP-1, TTJP-1, TTKP-1**

**Dane techniczne**

Measuring range* / sensing element		
(-200 ÷ 600) °C	<b>Pt100</b>	class B
(-40 ÷ 600) °C	<b>J</b>	class 2
(-40 ÷ 800) °C	<b>K</b>	class 2
Measuring insert		
– non-replaceable		
Sheath		
– material: steel 1.4541 for: ø9, ø10, ø11, ø12, ø14, ø15; operating temperature up to 700 °C		
– material: steel 1.4841, 1.4762 for d [mm]: ø15; operating temperature up to 800 °C		
– length L [mm]: 50÷2000		
Connection head		
– BA, IP54, (-40 ÷ 100) °C		
Options		
– local display built into the DANAWwin head connection – p. 220		
– Pt500, Pt1000, Ni100, Ni1000, N, T		
– connection heads: p. 217÷218 (eg. stainless BEG; aluminium NA, IP65; NA with snap lock)		
– Pt100: class A (-100 ÷ 450) °C, class AA (-50 ÷ 250) °C; TC: class 1		
Additional accessories		
– temperature transmitters – p. 225÷241		
– process protection tubes and thermowells – p. 200÷214		
– compensation cables – p. 197		
– mounting brackets: UG-1, UG-3, UG-8, UZK-1 – p. 215÷216		

\* for clean air

Response time T05/T09

Sensor type	ø9	ø11
<b>Pt</b>	≤33/≤95	≤40/≤120
<b>J, K</b> insulated junction	≤22/≤62	≤27/≤90
<b>J, K</b> grounded junction	≤3/≤8	≤6/≤15

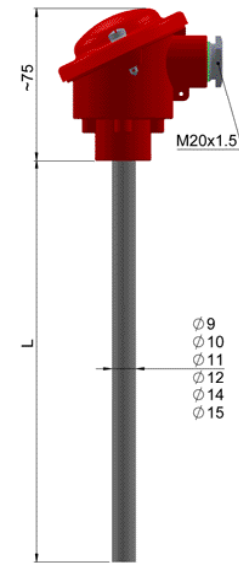
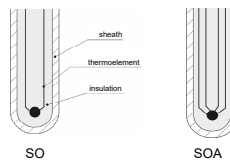
Resistors tolerance acc. to PN-EN 60751

Class	Wire wound resistor	
	Range [°C]	Tolerance [°C]
<b>AA</b>	(-50÷250)	±(0,1+0,0017· t )
<b>A</b>	(-100÷450)	±(0,15+0,002· t )
<b>B</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]
<b>J</b> Fe-CuNi	(-40÷375) (375÷750)	±1,5 ±0,004  t	(-40÷333) (333÷750)	±2,5 ±0,0075  t
<b>K</b> 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	...	P-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Single																						
Double		no sign																				
With transmitter		2																				
Resistor Pt				OP																		
Thermocouple Fe-CuNi				TJ																		
Thermocouple NiCr-NiAl				TK																		
Junction insulated from the sheath		for						SO														
Double junction insulated from the sheath		TC						SOA														
Sheath length L [mm]													100*									
Thermowell diameter [mm]																						
Material of the sheath																						
Resistor class																					A, B*	
Thermocouple class																						1, 2*
Measuring circuit for RTD																						2, 3, 4*
Type of transmitter																						RT-01*
Setting of transmitter temperature																						(0 ÷ 400) °C*

\* or others acc. to requirements

**Ordering example**

**TOPP-1-500-12-A-3**