

Temperature sensors with replaceable measuring inserts TOPT-11, TTJT-11, TTKT-11

Technical description

Measuring range / sensing element		
(-200 ÷ 550) °C	Pt100	class B
(-40 ÷ 550) °C	J, K	class 2
Measuring insert – p. 43+44		
– tube or mineral insulated W2 i W3		
– 2-, 3-, 4-wire connection (for Pt100)		
– 2-, 3-wire connection (for 2xPt100)		
– insert length: $L_w = L + 155$ mm		
Sheath		
– material: steel 1.4541		
– flange: DN20; 25; 32; 40; 50 PN6; 10; 16; 25; 40, with rebate B1 acc. to PN-EN 1092		
– diameter [mm]: $\phi 11$, $\phi 14$		
– length L [mm]: 100+2000		
Connection head		
– BA, IP55, (-40 ÷ 100) °C		
Options		
– local display built into the DANAWin head connection – p. 220		
– Pt500, Pt1000, Ni100, Ni1000, N, T		
– other flanges acc. to requirements		
– measuring junction types – p. 13		
– 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		
– compensation cables – p. 197		

Response time T05/T09

Sensor type	$\phi 9$	$\phi 11$
Pt	$\leq 33/\leq 95$	$\leq 40/\leq 120$
J, K insulated junction	$\leq 22/\leq 62$	$\leq 27/\leq 90$
J, K grounded junction	$\leq 3/\leq 8$	$\leq 6/\leq 15$

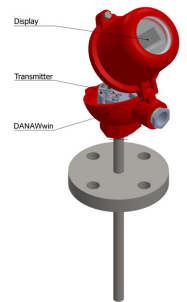
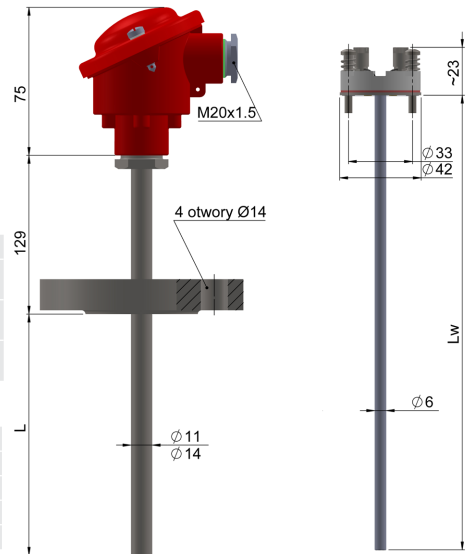
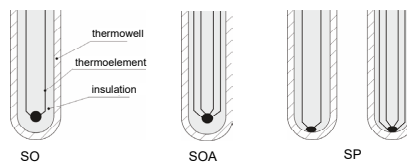
Resistors tolerance acc. to PN-EN 60751

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

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)	$\pm 1,5$ $\pm 0,004 t $	(-40+333) (333+750)	$\pm 2,5$ $\pm 0,0075 t $
K NiCr-NiAl	(-40+375) (375+1000)	$\pm 1,5$ $\pm 0,004 t $	from (-40+333) (333+1200)	$\pm 2,5$ $\pm 0,0075 t $

Types of measuring hot junction



Ordering code

Temperature sensor	...	T	...	T-11
Single		no sign											
Double		2											
Single with transmitter		AP											
Double with transmitter (only one circuit)		AP2											
Double with two transmitters		2AP2											
With local display (single)		APW											
Resistor Pt			OP										
Thermocouple Fe-CuNi			TJ										
Thermocouple NiCr-NiAl			TK										
Sheath length L [mm]				250*									
Thermowell diameter [mm]					11, 14								
Junction isolated from the sheath								SO					
Double junction isolated from the sheath		for						SOA					
Grounded junction		TC						SP					
Resistor class									A, B*				
Thermocouple class										1, 2			
Measuring circuit for RTD											2, 3, 4		
Type flangea												DN20PN16B1*	
Type of transmitter													RT-01*
Setting of transmitter temperature													(0 ÷ 400) °C*

* or others acc. to requirements

Ordering example

APTTKT-11-400-14-SO-1-DN25PN16D-Tx-(0 ÷ 550) °C