

Temperature sensors for food industry TOPGNS, TTJGNS, TTKGNS

Technical description

Measuring range / sensing element		
(-200 ÷ 400) °C	Pt100	class B
(-40 ÷ 400) °C	J, K	class 2
Thermowell		
– material: steel 1.4541		
– length L [mm]: 30÷1000		
– diameter d [mm]: ø6 mm with thread M10x1 ø8 mm with thread M12x1,5		
Construction version		
– PZH approval		
– measuring junction for TC: insulated SO, grounded SP		
Connection head		
– MBEG - material: steel 1.4541, IP65 (-40 ÷ 100) °C		
Options		
– Pt1000, Ni100, Ni1000		
– Pt100: class A (-30 ÷ 300) °C, class AA (0 ÷ 150) °C; TC: class 1		
– other threads (inch and metric) acc. to requirements		
Additional accessories		
– temperature transmitters – p. 225÷241		

Response time T05/T09

Sensor type	ø9	ø11
Pt	≤33/≤95	≤40/≤120
J, K insulated junction	≤22/≤62	≤a27/≤90
J, K grounded junction	≤3/≤8	≤6/≤15

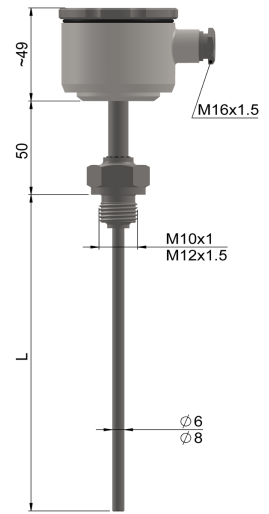
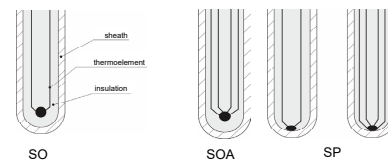
Resistors tolerance acc. to PN-EN 60751

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	...	GNS	-	-	-	-	-	-	-	...
Single		no sign										
Double		2										
With transmitter		AP										
Resistor Pt			OP									
Thermocouple Fe-CuNi			TJ									
Thermocouple NiCr-NiAl			TK									
Sheath length L [mm]				200*								
Thermowell diameter d [mm]					6, 8*							
Thread dimension					M10x1; M12x1,5*							
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

TOPGNS-200-6-M10x1-A-3 sensor with Pt100, class A, 3-wire connection, sheath diameter ø6 mm, sheath length L = 200 mm, with threaded fastener M10x1

TTJGNS-500-8-M20x1,5-2 sensor with thermocouple Fe-CuNi, class 2, sheath diameter ø8 mm, sheath length L=500 mm, with threaded fastener M20x1,5