

## Temperature sensors with replaceable measuring inserts **TOPGN-54, TTJGN-54, TTKGN-54**

### Technical description

Measuring range / sensing element		
(-200 ÷ 550) °C	<b>Pt100</b>	class B
(-40 ÷ 550) °C	<b>J, K</b>	class 2
Measuring insert – p. 45		
– tube for ø8, ø9, ø10		
– mineral insulated for ø6, ø8, ø9, ø10		
– 2-, 3-, 4-wire for 1xPt100		
– 2-wire connection for 2xPt100		
– insert length: L <sub>w</sub> =L+108 mm		
Sheath		
– material: steel 1.4541		
– length L [mm]: 50÷2000		
Connection head		
– MA, IP54, (-40 ÷ 100) °C		
Options		
– Pt500, Pt1000, Ni100, Ni1000, N, T		
– other threads (inch and metric) acc. to requirements		
– measuring junction types – p. 13		
– connection head - stainless MBEG – p. 218		
– Pt100: class A (-100 ÷ 450) °C, class AA (-50 ÷ 250) °C; TC: class 1		
Additional accessories		
– temperature transmitters (only 1xPt100, 2-wire connection) – p. 237		
– compensation cables – p. 197		

#### Response time T05/T09

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

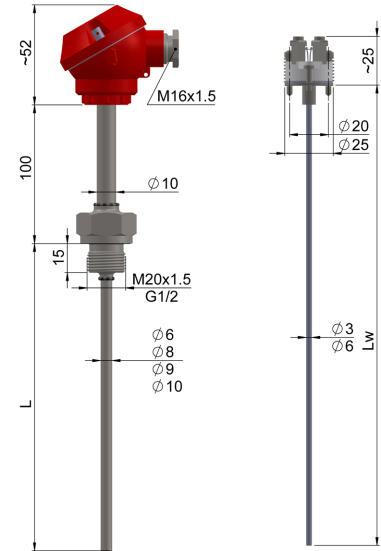
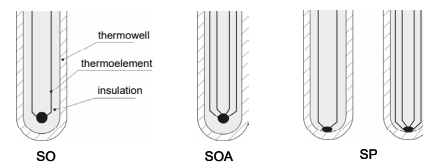
#### Resistors tolerance acc. to PN-EN 60751

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 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	...	GN-54	-	...	...	...	...	...	...	...	...	...	...
Single		no sign													
Double		2													
With transmitter (for 1xPt100)		AP													
Resistor Pt			OP												
Thermocouple Fe-CuNi			TJ												
Thermocouple NiCr-NiAl			TK												
Sheath length L [mm]				230*											
Thermowell diameter [mm]				6, 8, 9, 10											
Thread dimension				G½; M20x1,5*											
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															
Single															2, 3, 4
Double															2
Type of transmitter (tylko for Pt100, 2-przew.)															LTT-03J*
Setting of transmitter temperature															(0 ÷ 200) °C*

\* or others acc. to requirements

### Ordering example

**APTOPGN-54-100-6-G½-B-2-(0 ÷ 300) °C**