



AP 108

Miniature, angular Pt100 sensor suitable for temperature measurement of small parts of machines and devices where precision is required.

Specification

Temperature range / sensing element

-50÷150°C **Pt100** class B

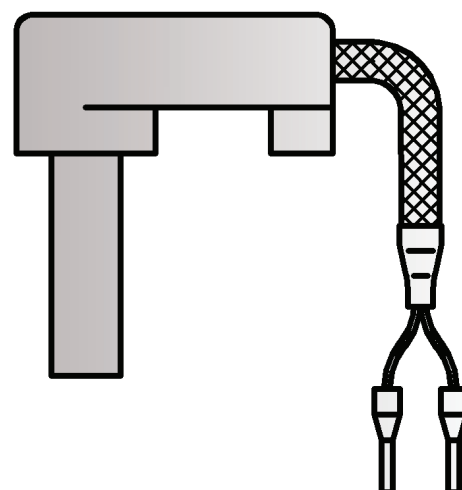
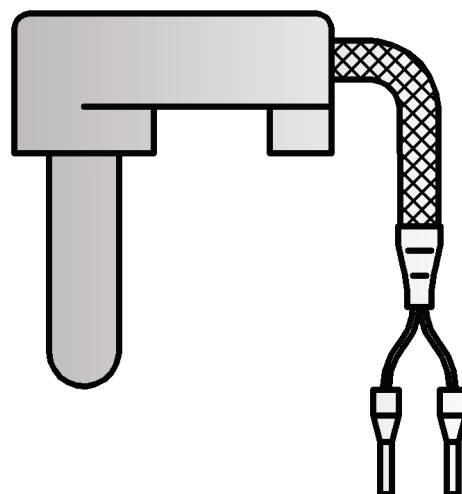
Sheath

- TOPMK-1 unsheathed resistor
- TOPMK-2 sheathed resistor
- material: steel 1.4541
- diameter [mm]: 5
- length L [mm]: 30÷100

Lead wire

- stranded Cu wire 2 or 3x0,35mm², teflon insulation, metal overbraid
- length L_p [m:]: 1,5 (standard)
- Cu wire resistance -0,105 Ω/m

Other parameters acc. to requirements



Options

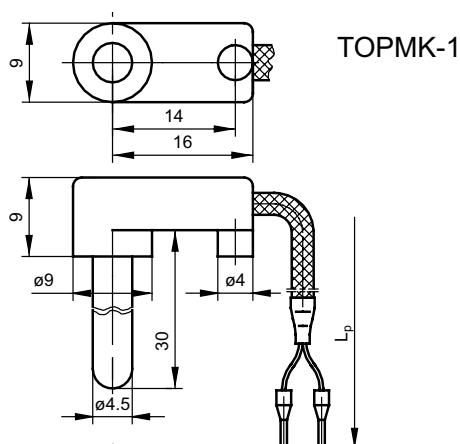
Temperature transmitter application

Temperature transmitter with standard 4÷20mA, 0÷10V output signals and with the HART or PROFIBUS communication protocols can be installed in the control cabinet.

Non-standard design

Immersion length and other parameters can be customized per client request.

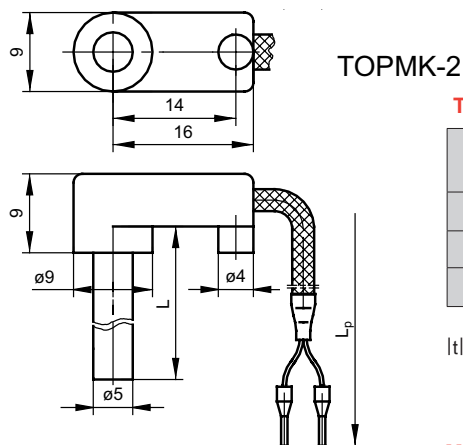
Calibrations performed by Limatherm Sensor Sp. z o.o. are confirmed with the Calibration Certificate of the Accredited Laboratory for Temperature Measurements.



Response time to temperature change

Thermowell diameter [mm]	Response time [s]
ø10	$t_{0,5} = 35$
	$t_{0,9} = 100$

test carried out in mixed water 0,4 m/s acc. to PN-EN 60751



Tolerance for classes of sensors with resistors Pt acc. to PN-EN 60751

Sensor classes	Range of application [°C]	Formula for calculating acceptable deviations [°C]
AA	0÷150	$T = \pm(0,10 + 0,0017 t)$
A	-30÷300	$T = \pm(0,15 + 0,002 t)$
B	-50÷500	$T = \pm(0,3 + 0,005 t)$

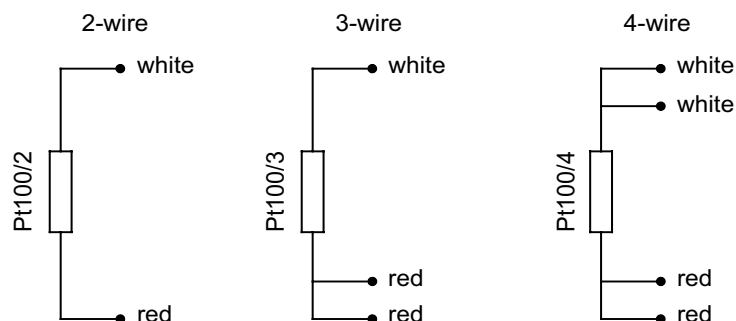
|t| - absolute value of temperature

Measurement circuit

1 x Pt100			2 x Pt100			1 x TC	2 x TC
2-wire	3-wire	4-wire	2-wire	3-wire	4-wire	2-wire	2-wire
✓	✓	✓	x	x	x	x	x

Connection schemes

Pt100 (thermometric resistor)



Product code

		Thermowell type	
1	<input type="text"/>	1	unsheathed resistor
		2	metal sheath ø5mm
2	<input type="text"/>	Accuracy	
		A or B	for measuring resistor
		Measurement circuit	
		2	2 - wire
		3	3 - wire
3	<input type="text"/>	4	4 - wire
		Sheath length for TOPMK-2	
		50	50mm
4	<input type="text"/>		other parameters acc. to requirements
		Lead wire length	
		2	2m
5	<input type="text"/>		other parameters acc. to requirements

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Ordering example:

TOPMK-1-B-2 m sensor with Pt100, class B, unsheathed resistor, lead wire length $L_p=2$ m