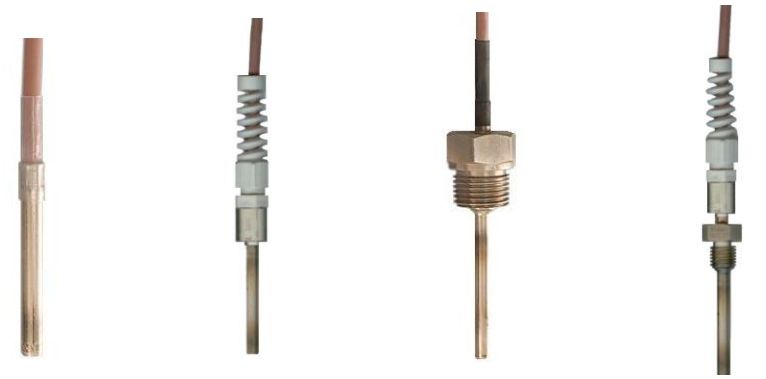
Čapkova 22
678 01 Blansko
tel.: +420 516 416942, 419995
fax: +420 516 416963

PT30, PT31,

RESISTANT CABLE THERMOMETERS

Design: (scale does not match!)

PT30 **PT30IP68** **PT31** **PT31IP68**



PT30 - Ø6mm, cable entry **PT31 - Ø6mm, fixed fittings**

Wire thermometers include all designs that have conductors that are firmly connected to the thermometer housing. The metal parts are made of AISI 304 stainless steel. The length of leads and mechanical design happy to adapt to customer requirements. These thermometers are designed for mounting on and into the pipeline, on and into the vessel wall.

PT30 Cable type ∅ 6mm (by agreement ∅ 4–8mm), suitable for well or pipes - is attached with the strap.
We also produce IP68.

Technical data:

Basic design:	6x50mm Pt100/B with cable 4w 1m max. 200°C	
Measuring range:	-30…+80°C with cable from PVC	(τ=approx 7sec)
	-30…+80°C with cable from PVC IP68	(τ=approx 7sec)
	-60…+200°C with cable MCBE-AFEP	(τ=approx 7sec)
	-40…+200°C with the teflon cable	(τ=approx 7sec)
	-10…+350°C with cable BIMV-CNTEVS	(τ=approx 7sec)
Dielectric strength:	500V, insulation resistance: 20M at least (circuit to stem)	

PT31 Cable type ∅ 6mm (by agreement ∅ 4–8mm), on the stem is welded attachment fittings.
Selection of fittings: M12x1,5 M12x1,75; G1/4, G1/2; M20x1,5; M27x2, G3/4.
Dive **„Y“** according to customer requirements.

Technical data:

Basic design:	6x100mm M12x1,5 Pt100/B with cable 4w 1m max. 200°C	
Measuring range:	-30…+80°C with cable from PVC	(τ=approx 7sec)
	-30…+80°C with cable from PVC IP68	(τ=approx 7sec)
	-60…+200°C with cable MCBE-AFEP	(τ=approx 7sec)
	-40…+200°C with Teflon cable	(τ=approx 7sec)
	-10…+350°C with cable BIMV-CNTEVS	(τ=approx 7sec)
Dielectric strength:	500V, insulation resistance: 20M at least (circuit to stem)	

Used sensors :

Pt100/A,B	PT1000/A,B
Ni1000/5000	Ni1000/6180
NTC ….	KTY …
PTC ….	SMT 160-30-92
DALAS..	Bimetal contact and others

Into the thermometers we can insert also dual sensors to one stem.

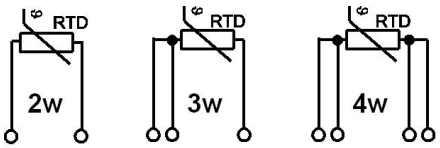
Type test:

Basic type test	according to ČSN EN 60751
EMC	according to ČSN EN 61326-1 ed.2
Safety	according to ČSN EN 61010-1 ed.2

The most commonly used cables:

- 2w cable 80°C has isolation of 2 wire 0,34mm^2 PVC, externaly PVC, increased resistance to oils (external ∅4,8mm)
- 4w cable 80°C has isolation of 4 wire 0,25mm^2 PVC, externaly PVC, increased resistance to oils (external ∅4,8mm)
- 4w cable 200°C has teflon isolation of 4 wire 0,09mm^2, without metal braid, externaly teflon (external ∅2,5mm)
- 2w cable 200°C has Teflon isolation of 2 wire 0,22mm^2, metal braid, externaly teflon (external ∅3,8mm)
- 4w cable 200°C has teflon isolation of 4 wire 0,22mm, metal braid, externaly teflon (external ∅3,5mm)
- 2w cable 200°C has teflon isolation of 2 wire 0,22mm^2, without metal braid, externaly silicone (external ∅3,6mm)
- 2w cable 200°C has teflon isolation of 2 wire 0,15mm^2, metal braid, externaly silikcone (external ∅3mm)
- 3w cable 200°C has teflon isolation of 3 wire 0,15mm^2, metal braid, externaly silikcone (external ∅3,1mm)
- 3w cable 200°C has teflon isolation of 3 wire 0,22mm^2, metal braid, externaly silikcone (external ∅4,5mm)
- 4w cable 200°C has teflon isolation of 4 wire 0,22mm^2, metal braid, externaly silikcone (external ∅4,5mm)
- 6w cable 200°C has teflon isolation of 6 wire 0,22mm^2, metal braid, externaly silikcone (external ∅5,2mm)
- 2w cable 350°C has glass fabric isolation of 2 wire 0,34mm^2, externaly metal braid (external ∅4mm)
- 3w cable 350°C has glass fabric isolation of 3 wire 0,22mm^2, externaly metal braid (external ∅3,6mm)
- 4w cable 350°C has glass fabric isolation of 4 wire 0,22mm^2, externaly metal braid (external ∅4,3mm)

Basic electric connection :



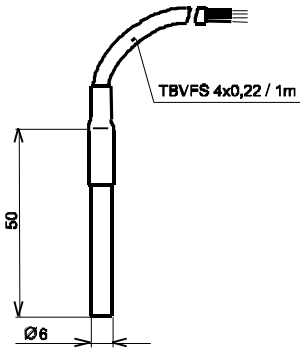
Wire connection:

Design with one sensor, four-wire 80°C:	white + yellow, brown + green
Design with one sensor, four-wire 200°C:	black + white, red + blue (or red + red, white + white)
Design with one sensor, three-wire 200°C:	white, red + blue
Design with two sensors 80°C:	white + yellow - sensor "A", brown + green - sensor "B"
Design with two sensors 200°C:	black, white - sensor "A", red, blue - sensor "B" (or 2 x red - sensor "A", 2 x white - sensor "B")
Design with two sensors three-wire 200°C	red + blue, white - sensor "A", black + brown, yelow - sensor "B"
Design with one sensor, two-wire:	two wires of different colours

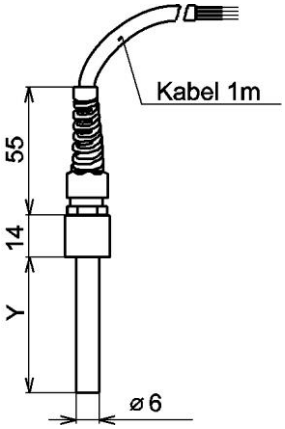
The ends of the conductors are stripped and tinned. For temperature above 200°C is used crimp barrels.

Dimensions:

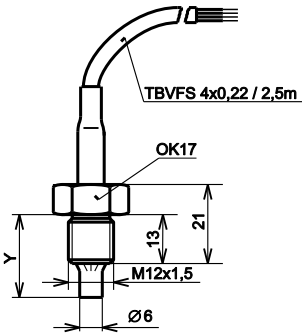
PT30:



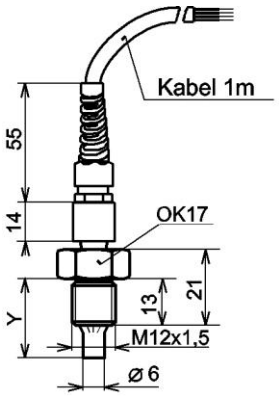
PT30 IP68



PT31:



PT31 IP68



The order must include:

- type of thermometer
- accuracy of sensors Pt100 A, B or other specifications (double sensor, other type of sensor – e.g. Pt1000, Ni1000, KTY, PTC, thermocoupler…) (if not specified, PT100/B will be fitted)
- length of stem
- length of cable
- fitting
- expected maximum temperature (determines cable type)
- quantity

Examples of orders:

Most frequently ordered execution

PT30 6x50mm Pt100/A 1m 4w cable 200°C 1ks
PT30 6x120mm Pt100/B 1m 4w cable 80°C 1ks
PT30 6x50mm Pt100/B 1m 2w cable 350°C 1ks
PT31 6x80mm Pt100/B 1m 4w cable 80°C 1ks
PT31 6x110mm Pt100/A 2m 3w cable 200°C 1ks
PT30 6x120mm 2xPt100/A 2m 6w cable 200°C 3ks

A calibration protocol can be ordered for the thermometers.

Dispose of disposal after end of life by separate collection..
Rawet s.r.o. member of RETELA association www.retela.cz

Rawet s.r.o. IČO: 47901411 tel.: 516 419995, 516 416942
Čapkova 22 DIČ: CZ47901411 fax: 516 416963
Blansko ČSOB Blansko E-mail: rawet@rawet.cz
678 01 č. ú. 106093786/0300 Internet: www.rawet.cz