

**PT50, PTP50**

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**RESISTANCE THERMOMETERS WITH HEAD****Design:****PT50 (PTP50)**

- Designed for installation in pipe or vessel wall
- With two (three) programmable wire 4-20 mA transmitter

**Resistance thermometers without a converter:**

Stem sensor is made of stainless steel AISI321 (1.4878). The metal head is equipped with IP56 junction box.

The total length of stem **X** and **Y** is determined by a customer. The basic connection is fitting G1/2.

It is possible other fittings - for example, M20x1, 75, M27x2 ..

Thermometer without transmitter can be equipped with sensor Pt100 / A or B, Pt1000, Ni1000, c KTY, PTC, thermocouples, etc., in two, three or four-wire connection.

It can also be equipped with two sensors into a single stem.

**PT50** - for liquids Ø8mm, -25 ... +120 ° C ( $\tau$  = approx. 10sec) or -25 ... +400 ° C ( $\tau$  = approx. 25sec)

<b>Specifications:</b>	Temperature sensor:	Pt100 / "B" or "A" according to IEC 751, or others, according to a customer requirements
	Ambient temperature:	-25 ... +100 ° C
	Dielectric strength:	500V, insulation resistance min. 20M $\Omega$ (between circuit and the metal housing)

**Resistance thermometers with a converter to 4-20 mA:**

Stem sensor is made of stainless steel AISI321 (1.4878). Converter PP200 with output 4..20mA is installed to the metal head with IP56.

The total length of stem **X** and **Y** is determined by a customer. The basic connection is fitting G1/2.

It is possible other fittings - for example, M20x1,5, M27x2 ..

The measuring range of the converter can be made arbitrary, min. range is 10 ° C.

Thermometer with a transmitter can be equipped with sensor Pt100 / A or B, Pt1000, Ni1000 etc. in two (three) wire connection.

**PTP50** - for liquids Ø8mm, -25 ... +120 ° C ( $\tau$  = approx 10sec) or -25 ... +400 ° C ( $\tau$  = approx 25sec)

**Specifications:** Temperature sensor: Pt100 / "B" or "A" according to IEC 751, or another customer request  
Measuring range: any in the acceptable range, min. range 10 ° C  
Accuracy:  $\pm 0.3\%$  FS  
Output signal: 4 ... 20mA linear  
Power supply: according to the transmitter - the output signal  
Ambient temperature: -25 ... +80 ° C  
Overpressure liquid: up to 15 MPa  
Dielectric strength: 500V, insulation resistance min. 20M  $\Omega$  (between circuit and the metal housing)

**Parameters of individual converters PP200, PP300, PPL100, which are intended for the thermometer you can see on our web site.**

**PT50H or PTP50H** are made **without a mounting screw**. Here are selected only stem length **X**.

### Type tests:

Standard type test: according to ČSN EN 60770-1 ed.2

EMC according to ČSN EN 61326-1

Safety assessed according to ČSN EN 61010-1

### The order should include:

#### Version without a converter:

- Type of sensor, or any other spec. requirements (four-wire connections, dual sensor ...)
- Expected maximum temperature measured
- The total stem length (X) and dive (Y) with regard to the table below
- Mounting bolts - M20x1, 5, G1/2....etc.
- Number of pieces

Table recommended distance head from the fitting:

Up to 100°C.....	at least
125°C.....	50mm
150°C.....	80mm
200°C.....	100mm
300°C.....	120mm
400°C.....	160mm

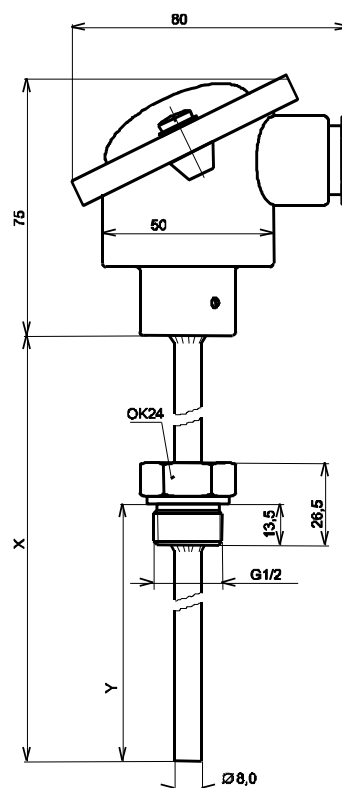
#### Version with a converter:

- Type of sensor, or any other spec. requirements
- Converter type
- Measuring range of the thermometer [° C]
- The total stem length (X) and draft (Y) with regard to the table below
- Mounting bolts - M20x1, 5, G1/2....etc.
- Number of pieces

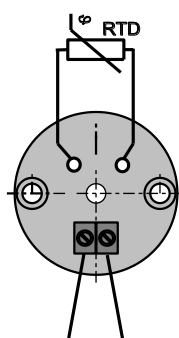
Table recommended distance head from the fitting:

Up to 80°C.....	at least
100°C.....	50mm
125°C.....	80mm
150°C.....	100mm
200°C.....	120mm
300°C.....	140mm
400°C.....	180mm

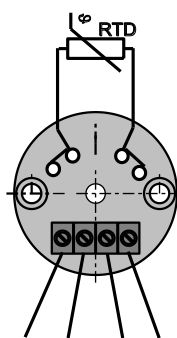
### PT50 (PTP50) for liquid, Ø 8mm



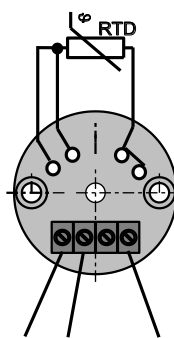
### Connection terminals:



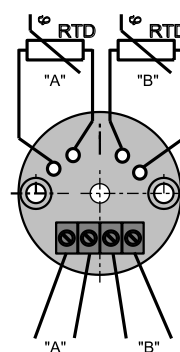
Two-wire connection



Four-wire connection:

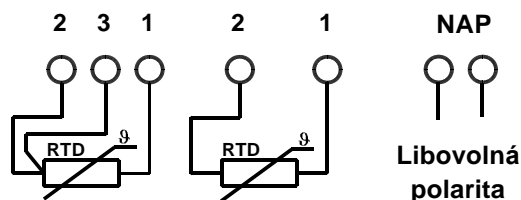
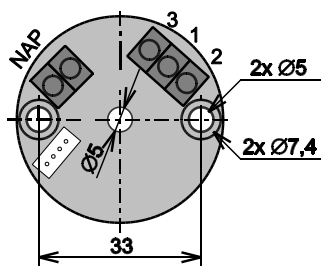


Three-wire connection:



Two sensors, two-wire connection:

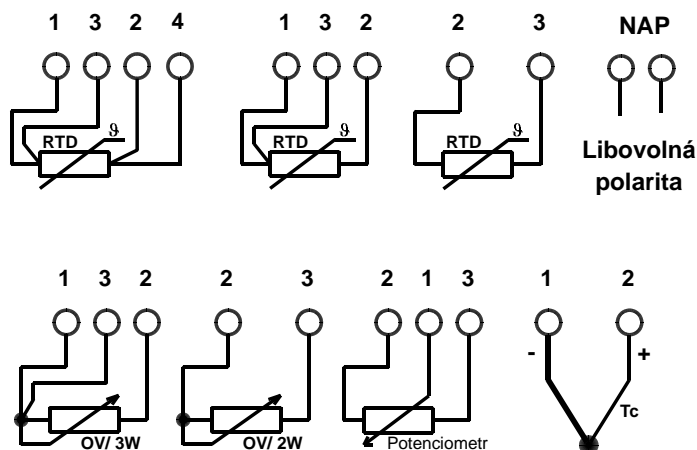
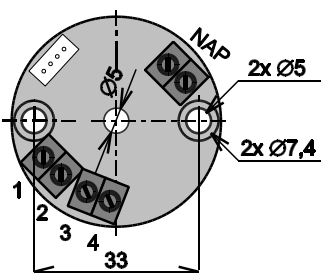
### P200



Connection terminals:

NAP: power 8 ... 28V DC, output current loop (polarity insensitive)

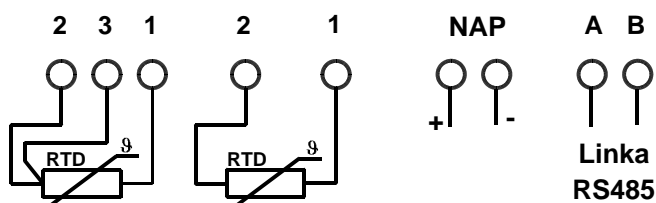
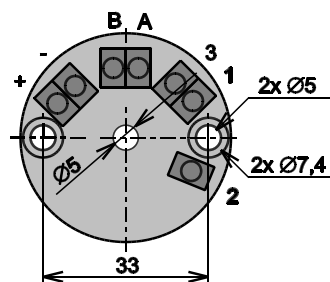
### P300



Connection terminals:

NAP: power 8 ... 28V DC, output current loop (polarity insensitive)

### PPL100



Connection terminals:

NAP: (-), (+): power 8 ... 28V DC

All terminals accept wires with cross sections up to 2.5 mm<sup>2</sup>.

### Examples of orders:

PT50160/80mm G1/2 P100/B max. 150°C, 2pcs  
PT50H 80mm P100/A 3w max. 150°C, 1pcs  
PTP50 300/160mm M20x1,5 0...+300°C / ASCII, 10pcs  
PT50 min/100mm M27x1,5 2xPt1000/B max. 100°C, 3pcs  
PTP50H 280mm 0...+300°C / 4-20mA 4pcs

The thermometer can be ordered exposure calibration.