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## PT55, PTP55

### RESISTANCE THERMOMETERS WITH HEAD

Design:

PT55 (PTP55)



- 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 M12x1, 5.

It is possible other fittings - for example, M12x1, 75, G1 / 2, M20x1, 5 ..

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.

**PT55** - for liquids  $\varnothing 6\text{mm}$ , -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 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 M12x1, 5.

It is possible other fittings - for example, M12x1, 75, G1 / 2, M20x1, 5 ..

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.

**PTP55** - for liquids  $\varnothing 6\text{mm}$ , -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.**

**PT55H or PTP55H** 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 - M12x1, 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

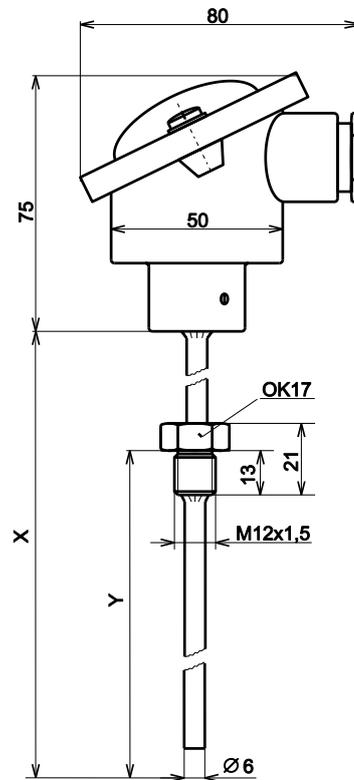
**Version with a converter:**

- 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 - M12x1, 5, G1/2....etc.
- Number of pieces

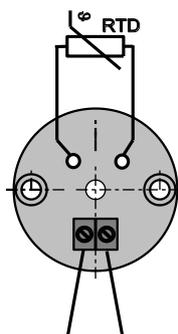
Table recommended distance head from the fitting:

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

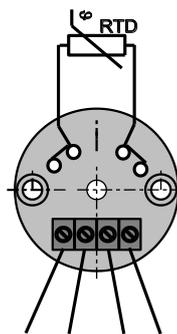
**PT55 (PTP55)  
pro kapaliny, Ø 6mm**



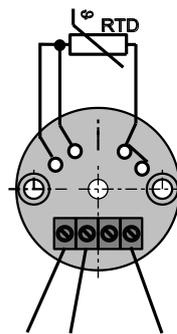
**Connection terminals:**



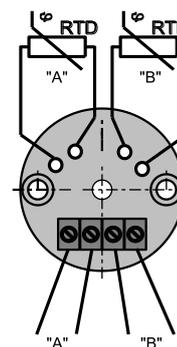
Two-wire connection



Four-wire connection:

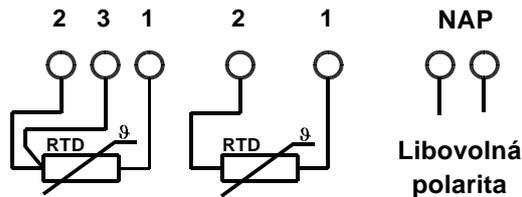
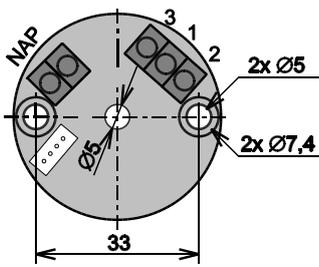


Three-wire connection:



Two sensors, two-wire connection:

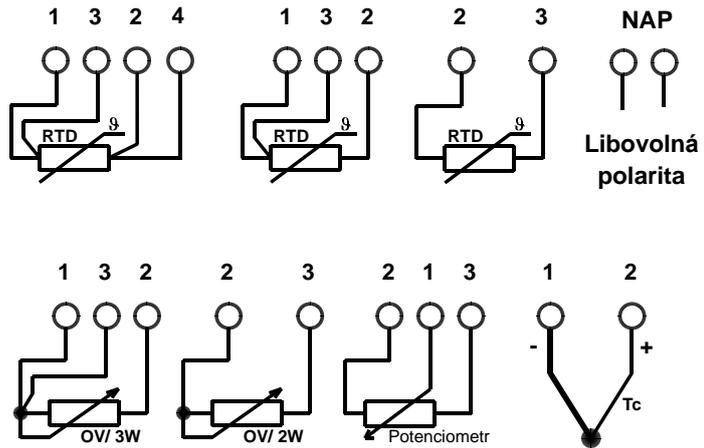
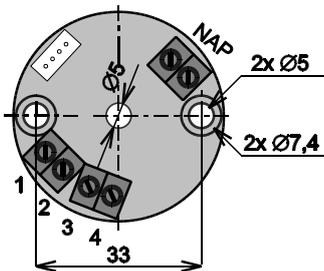
**P200**



Connection terminals:

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

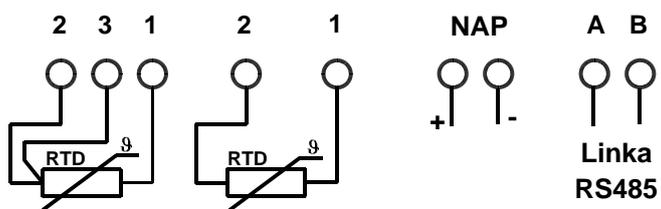
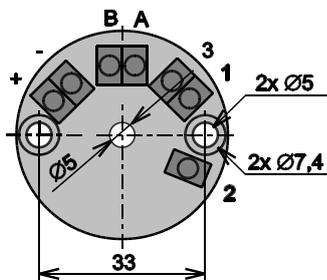
**P300**



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:**

- PT55 160/80mm G1 / 2 P100 / B max 150 ° C, 1
- PT55H 170 mm P100 / A up to 150 ° C, 2 pieces
- PTP55 300/160mm M20x1, 5 0th .. +300 ° C / ASCII, 10pcs
- PT55 min/100mm M12x1, 5 2xPt1000 / B 100 ° C, 3 pieces
- 320 mm PTP55H 0th .. +200 ° C / 4-20mA, 9 pieces

The thermometer can be ordered exposure calibration.