

**PT50, PT50H, PT50J, PT55, PT55H, PT55J, PT40
PTP50, PTP50H, PTP50J, PTP55, PTP55H, PTP55J
PT40, PTP40**

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RESISTANCE THERMOMETERS WITH CONNECTION HEAD

Versions: PT50 (PTP50) PT50J, PT50H (PTP50J, PTP50H) PT55 (PTP55, PTP55J) PT40 (PTP40)



- Designed for installation in pipelines or vessel walls
- Available with or without a two-wire transmitter

Resistance Thermometers Without a Transmitter:

The probe stem is made of stainless steel grade 17248. A terminal block is installed in the metal connection head with an IP65 degree of protection. The customer specifies dimensions X and Y. Other mounting fittings are available by agreement, e.g. G3/4, M27×2, M20×1.5, etc. The thermometers can be fitted with Pt100 sensors, Pt1000, Ni1000, KTY, PTC, thermocouples, etc.

- PT40** - For installation in ventilation ducts using a special mounting bracket; -25 to +100 °C; short time constant ($\tau \approx 2.5$ s in water).
- PT50** - For liquids; diameter 8 mm; -25 to +120 °C ($\tau \approx 10$ s) or -25 to +400 °C ($\tau \approx 25$ s).
- PT50H** - For liquids; bare probe without a mounting fitting; diameter 8 mm; -25 to +120 °C ($\tau \approx 10$ s) or -25 to +400 °C ($\tau \approx 25$ s).
- PT50J** - For liquids; with a thermowell, diameter 10.2 mm; -25 to +120 °C ($\tau \approx 30$ s) or -25 to +400 °C ($\tau \approx 50$ s).
- PT55** - For liquids; diameter 6 mm; -25 to +120 °C ($\tau \approx 7$ s).

Technical Specifications: Temperature sensor: Pt100, accuracy class B or A; Pt1000, Ni1000, KTY, PTC, Tc, etc.
Ambient temperature at the connection head: -25 to +100 °C
Maximum liquid pressure: 15 MPa
Electrical strength: 500 V,
Insulation resistance: min. 20 MΩ (measured between the circuit and the metal sheath)

Resistance Thermometers with a Transmitter (PP200, PP300, PPL100, PX300)

The probe stem is made of stainless steel grade 17248. A PP200 (PP300) transmitter with a 4–20 mA output is installed in the metal connection head with an IP56 degree of protection. The customer specifies dimensions X and Y. Other mounting fittings are available by agreement, e.g. G3/4, M27 × 2, M20 × 1.5, etc. The transmitter measuring range can be specified, a min. span is 50 °C.

- PTP40** - For installation in ventilation ducts using a special mounting bracket; -25 to +100 °C; short time constant ($\tau \approx 2.5$ s in water).
- PTP50** - For liquids; diameter 8 mm; -25 to +120 °C ($\tau \approx 10$ s) or -25 to +400 °C ($\tau \approx 25$ s).
- PTP50H** - For liquids; bare probe without a mounting fitting; diameter 8 mm; -25 to +120 °C ($\tau \approx 10$ s) or -25 to +400 °C ($\tau \approx 25$ s).
- PTP50J** - For liquids; with a thermowell, diameter 10.2 mm; -25 to +120 °C ($\tau \approx 30$ s) or -25 to +400 °C ($\tau \approx 50$ s).
- PTP55** - For liquids; diameter 6 mm; -25 to +125 °C ($\tau \approx 7$ s).

Technical Specifications: Temperature sensor: Pt100 class B or A; Pt1000, Ni1000, KTY, PTC, Thermocouples etc.
Measuring range: Any range within the permitted limits; minimum span 10 °C.
Accuracy: $\pm 0.5\%$ of span (maximum ± 0.25 °C).
Output signal: 4–20 mA (linearised RTD signal).
Power supply: 8–28 V DC (12–34 V DC) via the output current loop; max. ripple 0.5 V
Ambient temperature at the connection head: -25 to +80 °C
Maximum liquid pressure: 15 MPa
Electrical strength: 500 V, Insulation resistance: min. 20 MΩ (the circuit / the metal sheath)

Further specifications are in the documentation for the used transmitter: PP200 (or PP300RTD, PX300, PPL100)

Basic Type Test: Thermometers

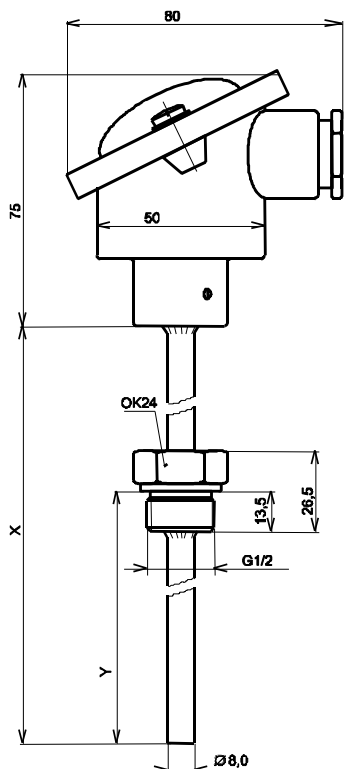
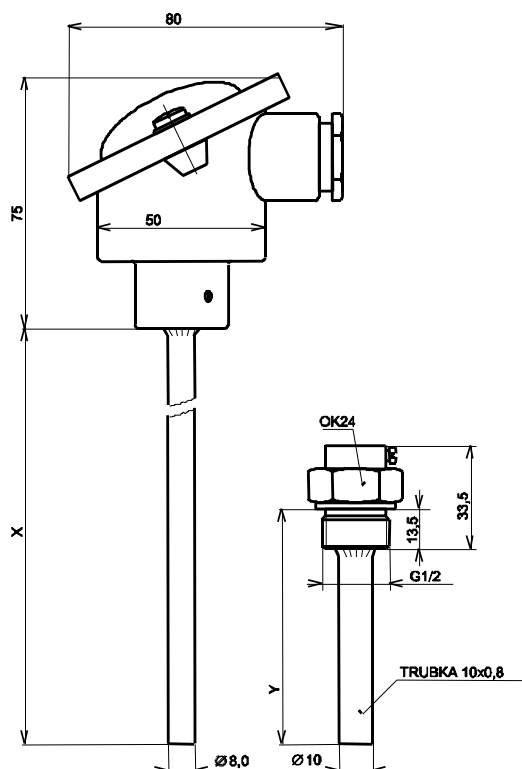
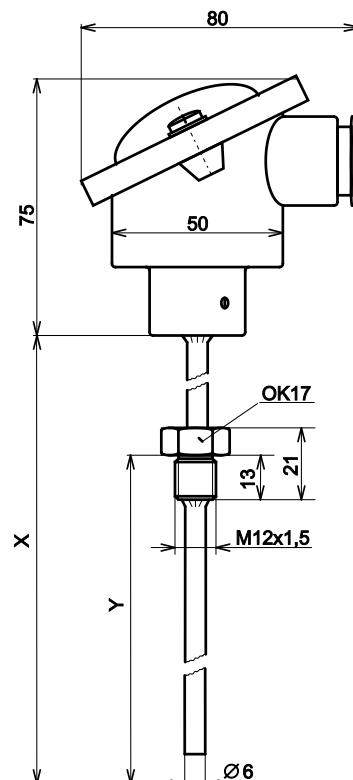
EMC:

Safety:

In accordance with ČSN EN IEC 60751 ed.2

In accordance with ČSN EN IEC 61326-1 ed.3

In accordance with ČSN EN 61010-1 ed.2

Dimensions: PT50 (PTP50)
For liquids, Ø 8mm**PT50H, PT50J (PTP50H, PT50J)**
For liquids, a thermowell**PT55 (PTP55,)**
For liquids, Ø 6mm**Information Required When Ordering:****Version Without a Transmitter:**

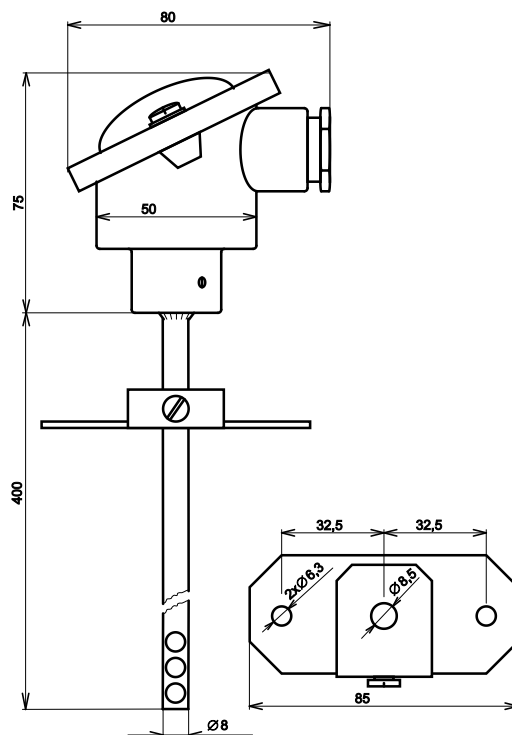
- Thermometer type
- Pt100 sensor accuracy class A or B, or other special requirements (four-wire connection, dual sensor, etc.)
- Expected maximum measured temperature (determines the manufacturing technology)
- Total probe stem length (X) and immersion length (Y)
- Mounting fitting, if different from G1/2 (G3/4, M27 × 2, M20 × 1.5, etc.)
- Quantity

Version with a Transmitter:

- Thermometer type
- Measuring range [°C]
- Total probe stem length (X) and immersion length (Y)
- Mounting fitting, if different from G1/2 (G3/4, M27 × 2, M20 × 1.5, etc.)
- Quantity

Ordering Examples:

PT50 8x160/80mm G1/2 Pt100/B max. 120°C, 1pc
 PTP50J 8x240/160mm M20x1,5 Pt100/B 2w 0...+300°C, 10pcs
 PT55 6x125/100mm M12x1,5 2xPt1000/A 3w max. 300°C, 1pc
 PTP40 8x400mm Pt100/B 2w -20...+80°C, 2pcs

PT40 (PTP40)
For ventilation systems

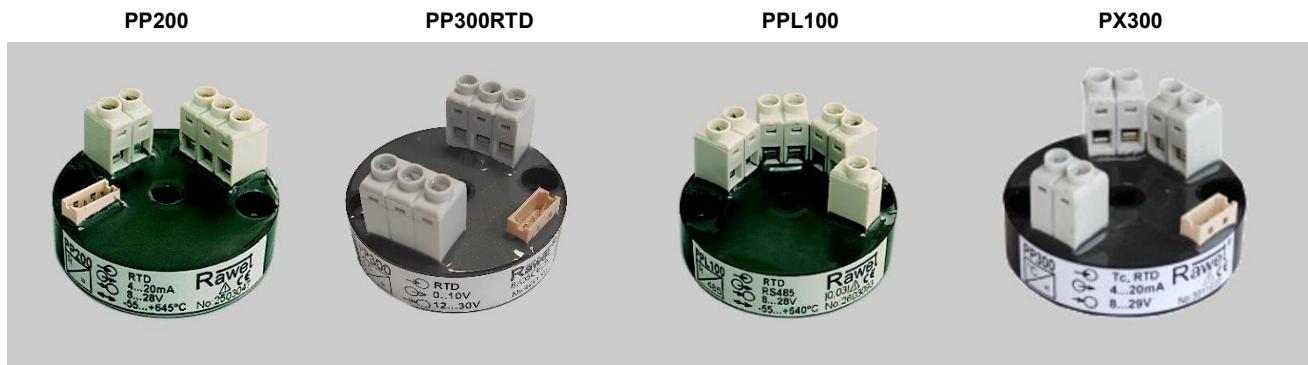
A calibration certificate can be supplied with the thermometers.

We also offer installation and configuration of transmitters in the connection heads of thermometers supplied by other manufacturers.

PP200, PP300RTD,PPL100, PX300

RTD AND THERMOCOUPLE TRANSMITTERS

Versions:



- Designed for installation in a standard Type B thermometer connection head
- Power supply: 8–28 V DC by output loop 4..20mA (PP200, PX300)
- Power supply: 12–30 V DC, 0–10 V output (PP300RTD)
- Power supply: 8–28 V DC, RS485 output (Modbus or ASCII) (PPL100)

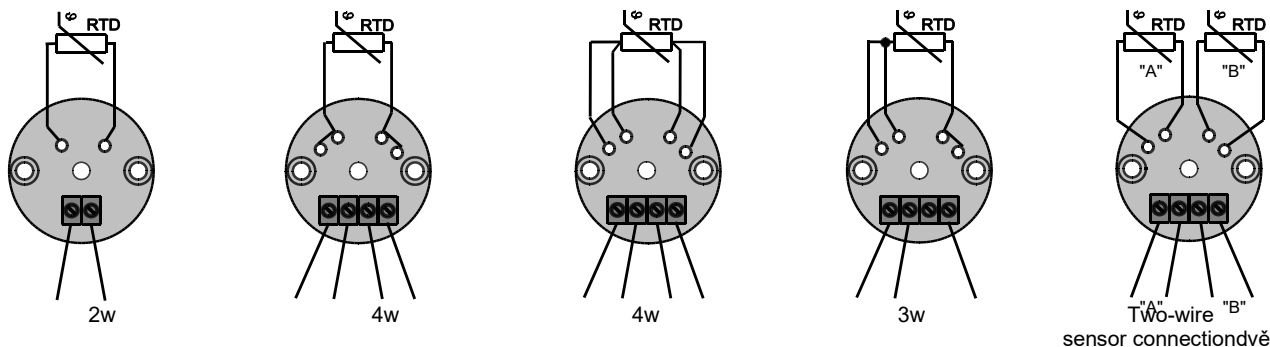
These modules convert signals from resistance thermometers or thermocouples into standardised output signals of 4–20 mA or 0–10 V. The PPL100 transmitter provides an RS485 interface using the Modbus or ASCII protocol.

Resistance sensors can be connected using two-wire, three-wire or four-wire configurations. The modules support all standard platinum and nickel sensors, with linearisation of their resistance / temperature characteristics, as well as all standard thermocouple types. The transmitter compensates the cold-junction temperature of the thermocouple at the transmitter terminals. It also linearises the thermocouple output voltage as a function of temperature.

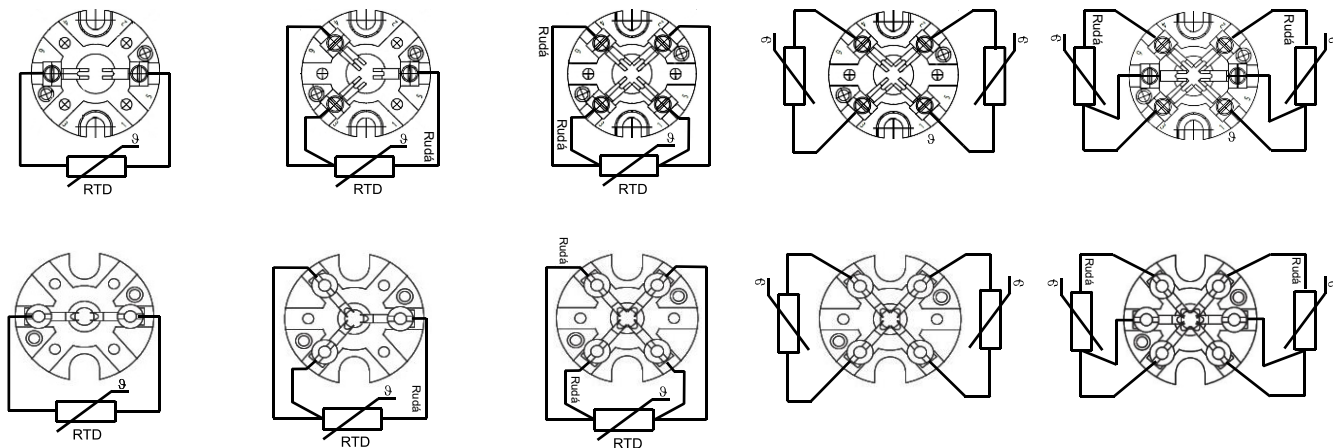
The PX300 transmitter provides galvanic isolation between the input and output.

For the detailed electrical specifications of the instruments, please visit our website: www.rawet.cz.

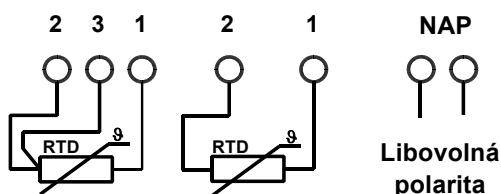
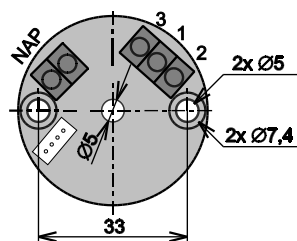
Dimensions and Terminal Connections:



Ceramic Terminal Block Wiring



PP200

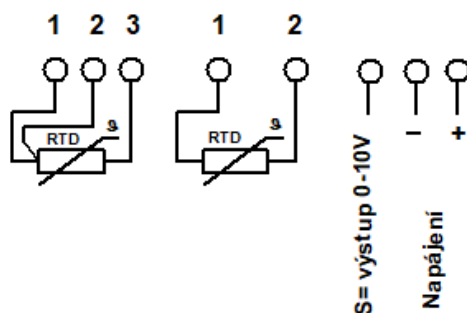
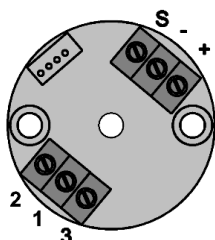


Terminal Connections:

SUPPLY: 8–28 V DC power supply via the output current loop, polarity-independent connection.

PP300RTD

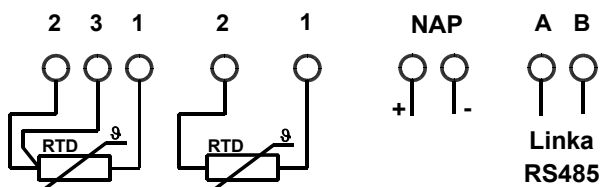
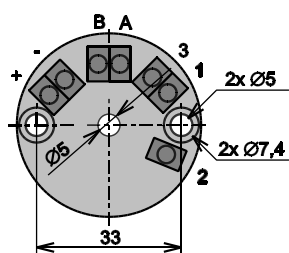
PP300RTD



Terminal Connections:

+, -, S: 0–10 V output; 12–30 V DC power supply.

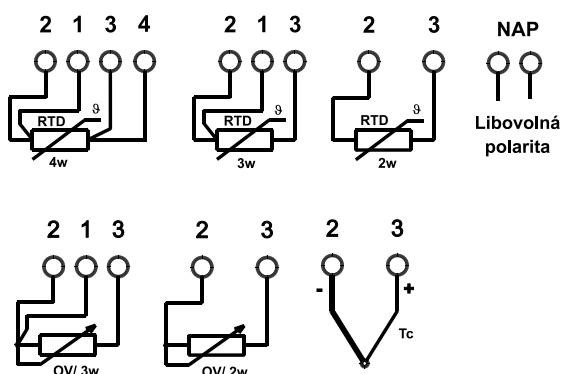
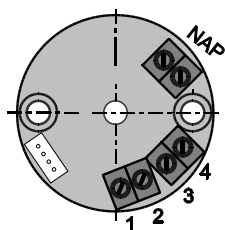
PPL100



Terminal Connections:

SUPPLY (-), (+): 8–28 V DC power supply
A, B: RS485 interface

PX300



Terminal Connections:

4–20 mA output; 8–30 V DC power supply via the output current loop; polarity-independent connection.

Wires with a cross-sectional area of up to 2.5 mm² can be connected to the terminals.

To place an order, please use the calculator available on our website: [Price calculator for thermometer with head](#)

ver.6.3