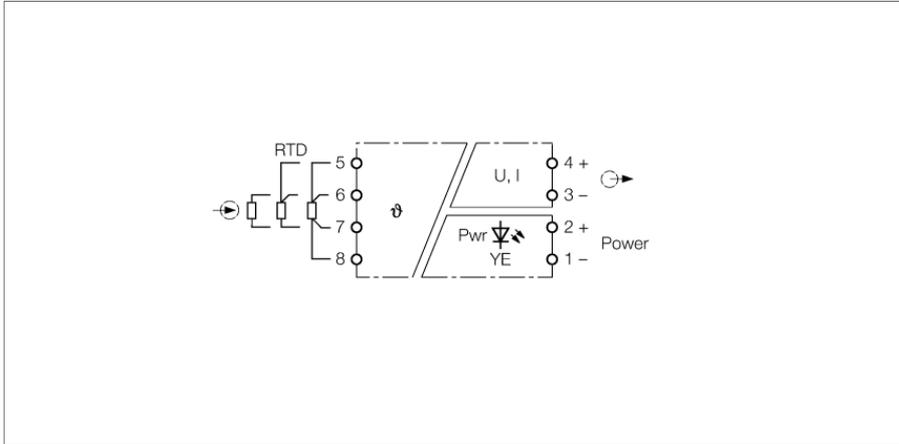


Temperature measuring amplifier

1-channel

IMS-TI-PT100/24V



The 1-channel temperature measuring amplifier IMS-TI-PT100/24V is designed to evaluate the temperature-dependent changes of Pt100 RTDs, to isolate them galvanically and to output them as temperature-linear voltage or current signals of 0...10 V, 0...20 mA or 4...20 mA.

Alternatively, Pt100 RTDs in 2, 3 or 4-wire technology can also be operated at the input circuit of the measuring amplifier.

The number of Pt100 wires, the transmission characteristic (0...20 mA, 4...20 mA or 0...10 V) as well as the measuring range are adjusted via DIP switch.

The device offers wire-break and short-circuit monitoring. In the event of error, 12 V or 22 mA are provided at the output and the error is additionally signalled by the flashing power LED.

The following measuring ranges can be adjusted:

- 50...+150 °C
- 0...+100 °C
- 0...+200 °C

In the event of error (wire-break or short-circuit), 12 V or 22 mA are provided at the output and the error is additionally signalled by the flashing power LED.

The IM34 temperature measuring amplifiers from TURCK offer more solutions for applications with other measuring ranges and temperature probes.

- Connection of temperature probe Pt100
- Output circuit: 0/4...20 mA or 0...10 V
- Accuracy < 0.3% of full scale
- Complete galvanic isolation
- Input reverse-polarity protected
- 6.2 mm width
- UL: Class1, Div2, Group A, B, C, D; GOST

Dimensions

Type	IMS-TI-PT100/24V
ID	7504012
Nominal voltage	
Nominal voltage	24 VDC
Operating voltage U_s	16.8...30 VDC
Power consumption	≤ 0.32 W
Residual ripple	≤ 5 mV _{ss}
Pt100	
Pt100	-50...150°C; 0...100°C; 0...200°C
Input resistance (voltage)	≥ 1000 k Ω
Output circuits	
Output current	0/4...20 mA
Output voltage	0...10 V
Load resistance voltage output	≥ 1 k Ω
Load resistance current output	≤ 0.4 k Ω
Response characteristic	
Rise time (10...90 %)	≤ 30 ms
Fall time (90...10 %)	≤ 30 ms
Measuring accuracy (including linearity, hysteresis and repeatability)	≤ 0.3 % of full scale
Temperature drift	≤ 0.00015 % of full scale/K
Galvanic isolation	
Test voltage	1.5 kV
Displays/Operating elements	
Operational readiness	Yellow
Mechanical data	
Protection class	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature	-20...+60 °C
Storage temperature	-40...+80 °C
Dimensions	114.5 x 6.2 x 90 mm
Weight	60 g
Mounting instructions	DIN rail (NS35)
Housing material	Plastic, Polycarbonate/ABS
Electrical connection	Screw terminals
Terminal cross-section	2.5 mm ²
Tightening torque	0.5 Nm

