simex

SPT-87

- digital temperature transmitter
- universal (SPT-87U) or Pt100 (SPT-87E) measuring input
- automatic identification of 2-, 3- and 4-wire connection
- output signal 4-20 mA, directly proportional to the temperature
- in-head mounting, DIN B housing
- configuration software

Temperature transmitters **SPT-87** are designed to work with RTD and TC sensors. They convert the chosen measured value range into the linear output signal 4 - 20 mA. In case of the measuring range exceeding or short circuit / interruption at the measuring input, the device would alarm that by one of the output current levels (3,5 mA or 21,5 mA). The design of our devices lets to mount them into the B-type head of the temperature sensors.

SPT-87 transmitters are easy to set up by using the specialized configuration software SPT Device Manager. Thanks to a lot of capabilities and low price, they can be used in many industrial applications, where the temperature conversion is useful or needed.

■ TECHNICAL DATA

	SPT-87E	SPT-87U
Power supply	8,5 ÷ 30V DC	10,5 ÷ 30V DC
Input signal; measurement range; accuracy	Pt100, 2-/3-wire: -220 ÷ +850°C; <0,1% or <0,5°C in all temp. range	Pt100, 2-/3-/4-wire: -220 ÷ +750°C; <0,5°C in all temp. range Pt1000, 2-/3-/4-wire: -220 ÷ +850°C; <0,5°C in all temp. range Ni100, 2-/3-/4-wire: -20 ÷ +180°C; <0,5°C in all temp. range Ni1000, 2-/3-/4-wire: -60 ÷ +180°C; <0,5°C in all temp. range TC K: -250 ÷ +1372°C; 5°C (T<-200°C); 1,5°C (-200°C≤T<-100°C), 0,5°C (T≥-100°C) TC J: -210 ÷ +1050°C; 1,5°C (T<-100°C); 0,5°C (T≥-100°C) TC N: -240 ÷ +1300°C; 5°C (T<-200°C); 1,5°C (-200°C≤T<-100°C), 0,5°C (T≥-100°C) TC W5: -20 ÷ +2320°C; 1,5°C (T<600°C); 0,5°C (T≥600°C) TC B: 400 ÷ +1820°C; 1,5°C (T<900°C); 0,5°C (T≥900°C) TC R i S: -50 ÷ +1768°C; 5°C (T<200°C); 1,5°C (T≥200°C) TC T: -50 ÷ +400°C; 5°C (T<-200°C); 1,5°C (-200°C≤T<-100°C), 0,5°C (T≥-100°C) TC E: 270 ÷ +800°C; 5°C (T<-200°C); 1,5°C (-200°C≤T<-100°C), 0,5°C (T≥-100°C) linear voltage: -10 ÷ 62 mV DC; <0,5°C in all temp. range resistance, 2-/3-/4-wire: 0 ... +360 Ohm; <0,5°C in all temp. range resistance, 2-/3-/4-wire: 0 ... +4000 Ohm; <0,5°C in all temp. range
Factory settings	Pt100, 2-wire, range: 0 ÷ +200°C, sensor break reaction: 21,5 mA	
Galvanic isolation	none	1500V AC
Output signal	2-wire, 4-20 mA	
Minimum range width	10°C	10°C (for RTD); 50°C (for TC)
Measurement wires resistance	(Uz - 8) / 0,0215 [Ω]	(Uz - 10) / 0,0215 [Ω]
Temperature drift	≤ 10% of accuracy / 1°C	
Sensor break reaction	< 3,5 or > 21,5 mA (default), programmable	
Response time	< 2 s (warm-up time 5 min)	
Programmability	configuration software SPT Device Manager (option)	
Environmental conditions	operating and storage temperature: -40°C ÷ 85°C; humidity: 5 - 95%, no condensation	
Protection class	IP 00 (connectors)	
Dimensions	Ø44 x 21,6 mm	
Weight	40 g	

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DIMENSIONS

Case dimensions

Side view

Ø44 mm

Ø6

33 mm

21,6 mm

WIRING

Pt100,
Two-wire circuit

Pt100,
Three-wire circuit

RTD

4-20 mA

meter
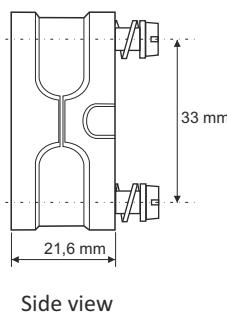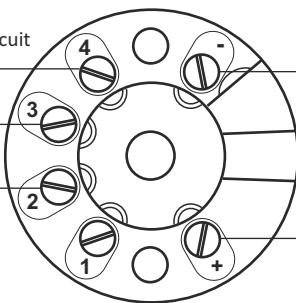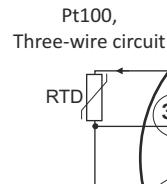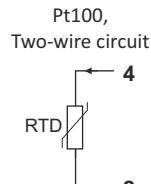
8,5 ÷ 30V DC

SPT-87E: Electrical connections

Voltage
measurement

Thermocouple

Pt100,
Two-wire
circuit

Pt100,
Three-wire
circuit

Pt100,
Four-wire
circuit

RTD

TC

RTD

RTD

RTD

4-20 mA

meter
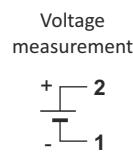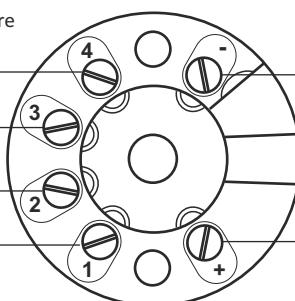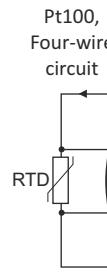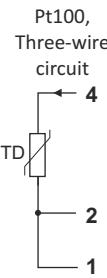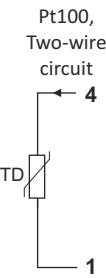
10,5 ÷ 30V DC

SPT-87U: Electrical connections

ORDERING

SPT-87X

input:
E : Pt100
U : universal

Accessories:
SPT-USB/87 - USB cable and **SPT Device Manager** software
for programming transmitters type SPT-87

SIMEX Ltd., Wielopole 11, 80-556 Gdańsk, Poland, tel. (+48) 58 762-07-77, fax 58 762-07-70, www.simex.pl

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SPT-87.2