

T1025

Resistance Temperature Sensors up 180 °C with Thermowells without/with Transmitters 4 to 20 mA

- Measuring resistor Pt100, Pt500 and Pt1000
- Measuring range -40 to +180 °C
- Accuracy class A, B according to EN 60751
- Head form B according to DIN
- Selectable thermowell length
- Thermowell and extension piece material: stainless steel DIN 1.4541
- Nominal pressure PN 63
- Housing IP 54, IP 65
- Optional headmounted programmable transmitter with output 4 to 20 mA, including circuit isolation version and II 1G EEx ia IIC T4 ... T6 (ATEX) version

Application

Resistance temperature sensors T1025 into thermowells are intended for remote temperature measurement of flowing liquid as well as gaseous media in pipelines, tanks etc. Temperature sensors can be supplied with or without 4 to 20 mA headmounted transmitters.

Description

A sensor of the thermometer is one or two measuring resistors which are placed in the stem and connected through an inside wiring to a terminal board inside the head form B according to DIN. There is made use of sensor resistance-temperature dependence. With a version with a transmitter the resistance signal is converted to a unified linear current signal of 4 to 20 mA. The sensors thermowell is equipped with a fastening screwed fitting. The thermometer should be mounted on piping by a fixing shift pipe union into a straight or an oblique welded-on piece.

Technical Specifications

Measuring Resistor:

1xPt100, 1xPt500, Pt1000 accuracy class A, B according to EN 60751, four-wire inside wiring
2xPt100, 1xPt500, Pt1000 accuracy class B according to EN 60751, two-wire inside wiring

Measuring Range: -40 to +180 °C

Measuring Current ¹⁾:

Pt100 0.3 to 1 mA
PT500 0.1 to 0.7 mA
Pt1000 0.1 to 0.3 mA

Output signal: linearized 4 to 20 mA ²⁾

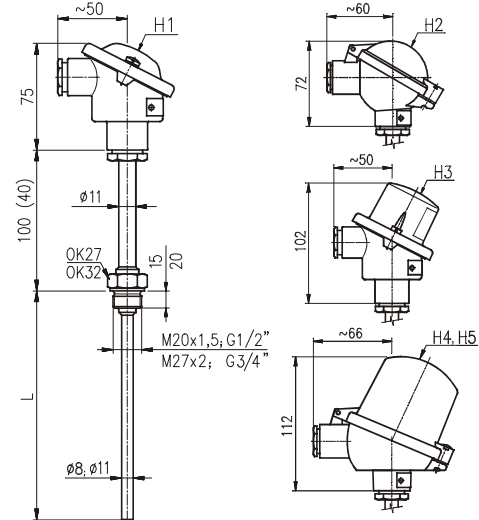
Electrical insulation resistance:

min. 100 MΩ according to EN 60751, for temperature (25 ±10)°C, max. 80 % relative humidity

Response time: 15 s

Materials: Head - Aluminium alloy
Stem - Stainless steel DIN 1.4541
Inside wiring - Cu

Housing: IP 54, IP 65 (according to head)



Operation conditions

Maximal Temperature of Head:

- 100 °C (without transmitter)
- 80 °C (with transmitter PT-011 and P3301)
- 85 °C (with transmitter P5102, P5201 and P5310)

Other specifications

EMC (Electromagnetic Compatibility):

According to EN 61326-1:98 / A1:99

Weight:

a) without transmitters with head H1:

Nominal length: 100 ... 0.65 kg
160 ... 0.70 kg
250 ... 0.75 kg
400 ... 0.80 kg
630 ... 0.95 kg

b) with head H2 plus 0.04 kg

H3 plus 0.05 kg

H4, H5 plus 0.20 kg

c) with transmitter PT-011 plus 0.02 kg

with transmitter P5102 plus 0.04 kg

with transmitter P5201 plus 0.05 kg

with transmitter P5310 plus 0.04 kg

with transmitter P3301 plus 0.04 kg

¹⁾... Only for sensor without transmitter

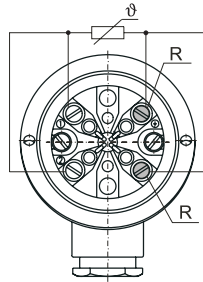
²⁾... Only for sensor with transmitter

Resistance Temperature Sensors with Thermowells T1025

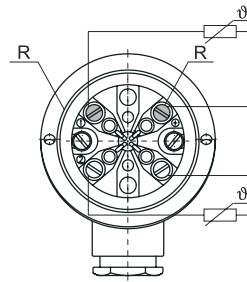
Electrical Connections

R - red

1xPt100, 1x Pt500, 1x1000, 4-wire



2xPt100, 2x Pt500, 2x1000, 2-wire



Type	Description
o T1025-3 →	Resistance Temperature Sensors T1025 with Thermowells
Code	Temperature Sensor Measuring Range
o 01 →	1xPt100, Four-wire Inside Wiring -40 to +180 °C
02	1xPt500, Four-wire Inside Wiring -40 to +180 °C
o 03	1xPt1000, Four-wire Inside Wiring -40 to +180 °C
o 04	2xPt100, Two-wire Inside Wiring -40 to +180 °C
05	2xPt500, Two-wire Inside Wiring -40 to +180 °C
o 06	2xPt1000, Two-wire Inside Wiring -40 to +180 °C
99	Other
Code	Accuracy Class according to EN 60751
o 1 →	B
2	A (for Sensors with Four-wire Inside Wiring Only)
Code	Nominal Length L
o 110 →	100
o 116	160
o 125	250
o 140	400 (standard for Thermowell \varnothing 11 mm only)
o 163	630 (standard for Thermowell \varnothing 11 mm only)
999	Other
Code	Thermowell
Code	Outside Diameter Material
o J10 →	\varnothing 8 mm, Cylindrical Stainless Steel DIN 1.4541
J20	\varnothing 11 mm, Cylindrical Stainless Steel DIN 1.4541
J99	Other
Code	Extension Piece
Code	Outside Diameter Length [mm] Material
o N1 →	\varnothing 11 mm (no for Thermowell \varnothing 11mm) 40 DIN 1.4541
N2	\varnothing 11 mm 100 DIN 1.4541
N9	Other
Code	Head
o H1	Al Alloy, Cable Outlet M20x1.5, Housing IP 54, with Terminal Board
o H2	Al Alloy, Cable Outlet M20x1.5, Housing IP 65, with Terminal Board
o H3 →	Al Alloy, with High Cap for Mounting of Transmitter \varnothing 44 mm into Cap, Cable Outlet M20x1.5, Housing IP 54, with Terminal Board
o H4	Al Alloy, with High Cap for Mounting of Transmitter up to \varnothing 62 mm and High 50 mm, Span of Mounting Bolts 33 mm, Cable Outlet M20x1.5, Housing IP 65, with Terminal Board
H5	Al Alloy, with High Cap for Mounting of Transmitter up to \varnothing 62 mm and High 50 mm, Span of Mounting Bolts 33 mm, Cable Outlet M20x1.5, Housing IP 65, with Terminal Board, Outside and Inside Ground Clamp
H9	Other
Code	Connection Thread
o P1 →	M20x1.5
o P2	G1/2"
P3	M27x2 - no for Thermowell \varnothing 8 mm (Code J10)
P4	G3/4" - no for Thermowell \varnothing 8 mm (Code J10)
P9	Other
Code	OPTIONAL ACCESSORIES
Code	Calibration
o KTE3	Sensor Calibration in Three Customer's Given Temperature Points (0 to +180 °C)
KTE9	Other
Code	Transmitters for Headmounting
• P5310	Programmable Transmitter P5310 with LHP Communication, Input Accuracy up to 0.1 % from Set Range (See Data Sheet No. 824)
• PT-011	Programmable Transmitter for Resistance Sensors PT-011, Base Accuracy 0,15 % from Input Range (See Data Sheet No. 471)
• P5102	Programmable Transmitter P5102 H11, Base Accuracy to 0,07 % from Set Range (See Data Sheet No. 451)
• P5102EEx	Intrinsically Safe Programmable Transmitter P5102 H11EEx, Base Accuracy to 0,07 % from Set Range (See Data Sheet No. 451)
• P5201 →	Universal Programmable Transmitter P5201 H10 with Circuit Isolation, Base Accuracy to 0,05 % from Set Range (See Data Sheet No. 288)
o P5201EEx	Intrinsically Safe Universal Programmable Transmitter P5201 H10EEx with Circuit Isolation, Base Accuracy to 0,05 % from Set Range (See Data Sheet No. 288)
• P3301	Universal Programmable Transmitter P3301 SMART with Circuit Isolation, Base Accuracy to 0,065 % from Set Range HART Communication Interface (See Data Sheet No. 507)

Example of Order: T1025-3 01 1 110 J10 N1 H3 P1 P5201 H10 R11 C3 RL 0 °C RH 100 °C ECL

• ... Ex Stock Version

• ... Marked Version can be Dispatched up to 10 Working Days