

T1023

Resistance Temperature Sensors into Thermowells without/with Transmitters 4 to 20 mA

- Measuring resistor Pt100
- Measuring range -50 to +600 °C ¹⁾
- Accuracy class A, B according to EN 60751
- Head form B according to DIN
- Bulb and extension piece material: stainless steel DIN 1.4541 and DIN 1.4571
- Available including weld thermowell according to DIN 43763
- 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 T1023 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 measuring insert stem and connected to a terminal board inside the head. 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 thermometer should be mounted on piping by a connecting pipe union into thermowell which can be supplied too.

Technical Specifications

Measuring Resistor:

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

Measuring Range: -50 to +540 °C (for material thermowell DIN 1.7335)
 -50 to +600 °C (for material thermowell DIN 1.4571)

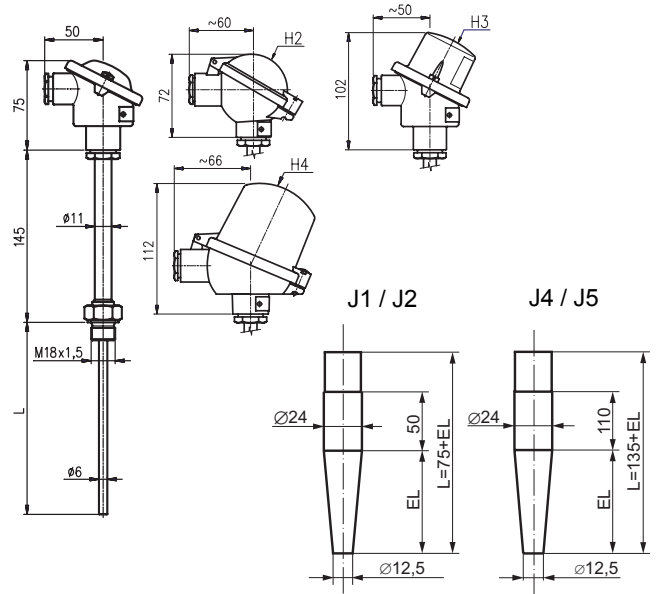
Measuring Current ²⁾: recommended ≤1 mA
 maximal 3 mA

Output signal: linearized 4 to 20 mA ³⁾

Dielectric Strength: 500 V eff

Materials: Head - Aluminium alloy
 Stem - Stainless steel DIN 1.4541
 Thermowell - 1.7335 DIN
 - 1.4571 DIN
 Inside wiring - Cu

Housing: IP 54, IP 65



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 and thermowell with head H1:
 Nominal length L: 140 ... 0.53 kg
 260 ... 0.55 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⁾... The range of measurement of whole sensor depends on temperature resistance of thermowell applied.

²⁾... Only for sensor without transmitter

³⁾... Only for sensor with transmitter

