

TFK01

Compact Resistance Thermometer

- With angle connector as per DIN EN 175301-803
- Compact design
- Replaceable measuring insert
- Integral transmitter
- Resistance-current and voltage output
- Parts in contact with liquids/gases are made of stainless steel
- -200°C...600°C
- Short response times
- Very easy to service



Description:

The TFK01 features a temperature-dependent electrical resistor integrated in a protective stainless steel tube. The resistance value changes as a function of the liquid temperature. In the model with an integral transmitter, this resistance value is transformed into a current signal (4...20 mA) or a voltage signal (0...10 V). The respective signal is then output at the 5-pin plug connection. In the model with no transmitter, the unconverted resistance value can be picked up directly at the plug connection. For short response times, there is also a version available with a tapered immersion shank. However, the best performance will be obtained when using an angle connector (DIN EN 175301-803).

Typical Applications:

The resistance thermometer and thermocouples (DIN 43650) are very well suited for general use in industrial machinery and systems, plants, tanks and piping as well as in applications in the chemical industry, process engineering and food processing, where they are preferred for measuring the temperatures of liquids and gases. Their compact design make them especially suitable for installation in restricted locations and confined spaces.

Models:

TFK01.xPx: Pt100 output, 2-, 3 or 4-wire
Single or dual element
TFK01.A04: 4...20 mA output, 2-wire
TFK01.V10: 0...10 V output, 3-wire

Technical Specifications:

Sensor: Pt100 as per DIN IEC 75, Class B

Electrical connection: Angle connector (DIN EN 175301-803 Form A), IP65

Protective tube:

Diameter: 6 or 8 mm
Materials: Stainless steel 1.4571

Process

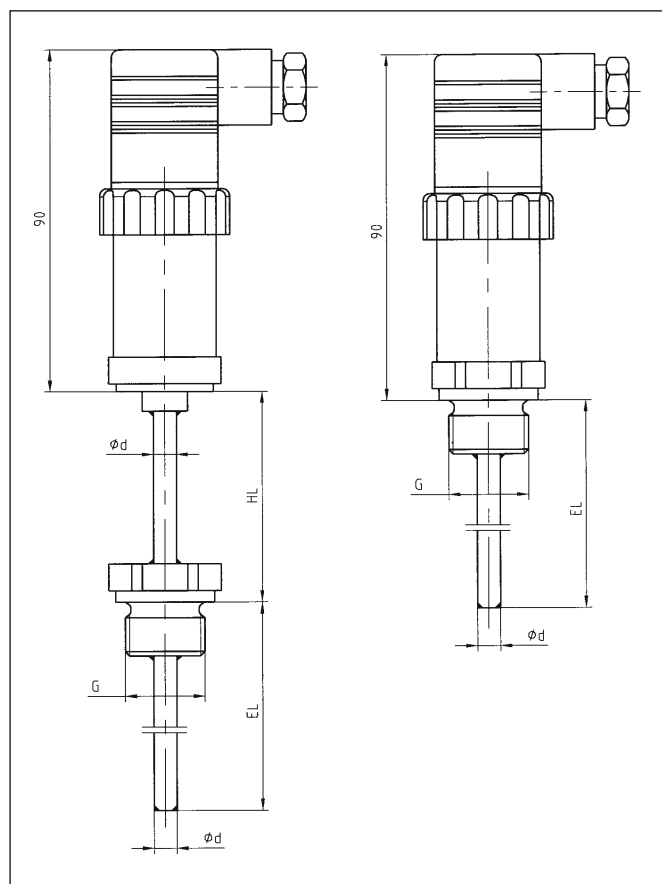
Connections: Fixed or sliding compression fitting

Max. pressure

at 20°C: Diameter of protective tube: 6 mm: 40 bar
Diameter of protective tube: 8 mm: 100 bar

Transmitter: Supply voltage: 12...30 VDC
Output: 4...20 mA, 2-wire
0...10 V, 3-wire
Min. measuring range: 50 Kelvin
Max. measuring range: 800 Kelvin

Dimensions:



Model Coding:

Order Number: TFK01. 1P2. 6. 08F. 0050. 200. 0

Compact Resistance Thermometer

Sensor:

1P2 = 1 x Pt100, 2-wire
1P3 = 1 x Pt100, 3 wire
1P4 = 1 x Pt100, 4 wire
2P2 = 2 x Pt100, 2-wire
A04 = 4-20 mA (please specify measuring range desired)*
V10 = 0-10 V (please specify measuring range desired)*

* preferably 0...50°C, 0...100°C, 0...120°C

Diameter of immersion shank:

6 = 6 mm
8 = 8 mm (not for compression fitting)

Process Connections:

08F = G 1/4 A, fixed
10F = G 3/8 A fixed
15F = G 1/2 A, fixed
2NF = 1/2 NPT fixed
08V = G 1/4, sliding
10V = G 3/8, sliding
15V = G 1/2, sliding
1NV = 1/4" NPT sliding
2NV = 1/2" NPT sliding

Installation length: (from edge of seat)

0050 = 50 mm
0075 = 75 mm
0100 = 100 mm
0160 = 160 mm
0200 = 200 mm
0300 = 300 mm
0400 = 400 mm
0500 = 500 mm
xxxx = as specified by the customer

Temperature range:

200 = -50...200°C, without protective tube
400 = -200...400°C, with protective tube: 50 mm
600 = -200...600°C, with protective tube
a) without transmitter: 50 mm
b) with transmitter: 100 mm, as well as fixed measuring insert

Options:

0 = None
VR = Tapered protective tube (for description, see "Options" section)

Options:

For faster response times, a protective tube tapered down to 3 mm diameter may be used. This arrangement is only intended for models with fixed threaded connection and a protective tube with a diameter of 6 mm. With installation lengths greater than 100 mm, the device is fitted with a reinforced tube with a diameter of 8 mm.