

RTD measuring insert model R146

mounting in protection tube according or similar to DIN 43772

In general

Reckmann GmbH temperature sensors (R58®) are used exclusively for measuring process temperatures in solid, liquid or gaseous media. The exchangeable measuring insert (fig. 1) is, so to speak, the carrier of the sensor element of our R15 thermometers. The measuring insert with free ends (fig 1) is prepared for mounting a transmitter instead of the connection socket.

Application area:

Standard installed in designs according to or similar to DIN 43772 or for non-critical measurements in the laboratory.

For installation please see our stock-number-code: 1R14-F.

Technical datas

- **measuring insert** (fig. 1) according or similar to DIN 43735
- **Sensor** depending on use:
thin film or ceramic according to IEC / EN 60751,
in 1 x 3- , 1 x 4- , 2 x 3- or 2 x 4 - wire circuit.
Recommended operating temperature on the measuring tip depended on accuracy class according to IEC / EN 60751
Operating temperature PT100
- 50°C up to + 500°C for thin film sensors,
- 200°C up to + 600°C for ceramic sensors,
- 200°C up to +450°C for glass sensor.
- **Sheath material** according to IEC / EN 61515.
Standard material 1.4404,
Standard diameter 3 or 6 mm.
- **Optional materials on request**

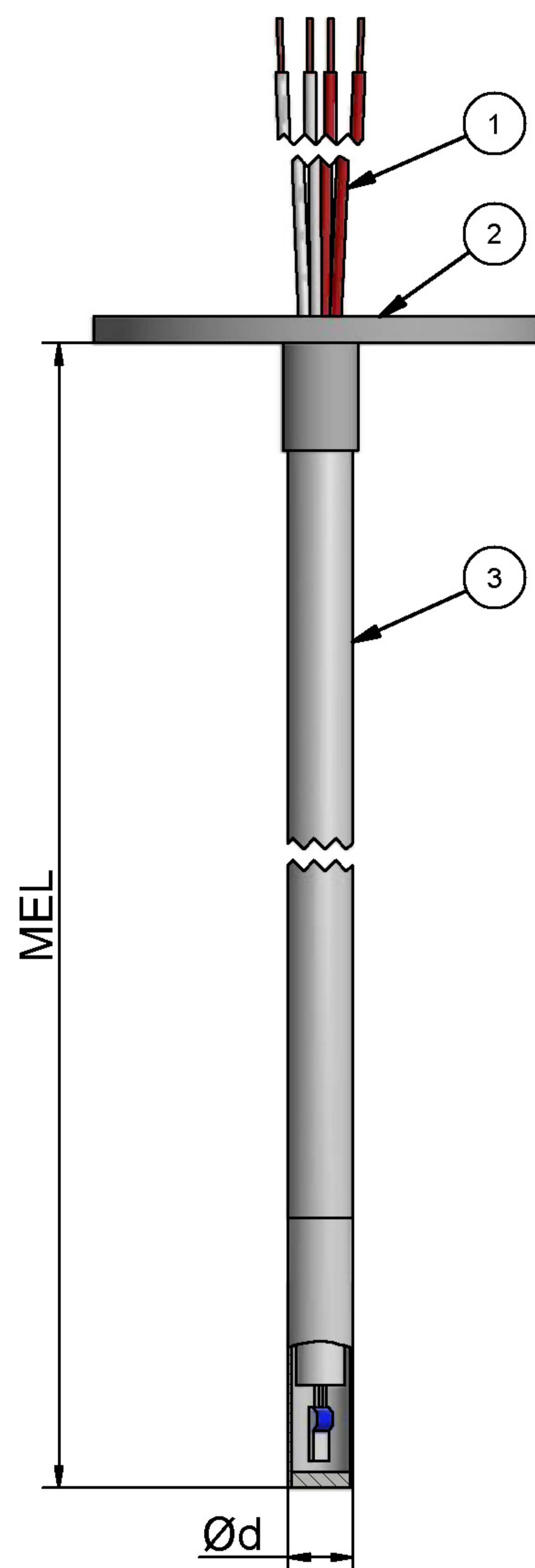


fig. 1

Deviations according to the sensor type

Resistance temperature detector with PT 100 sensor

table 1

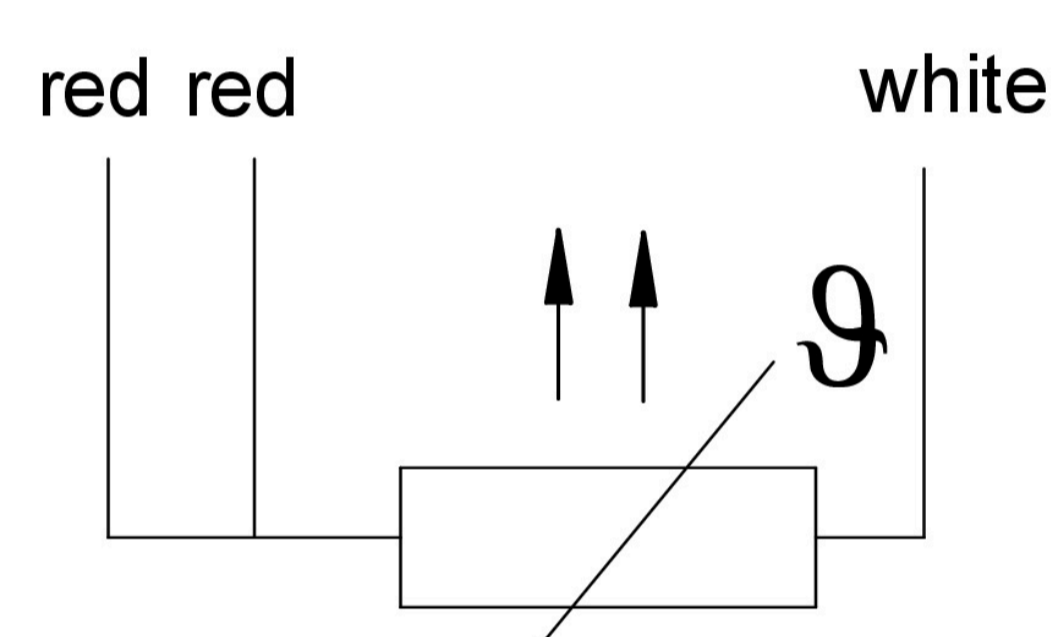
class	accuracy in °C		Deviations in °C
	ceramic	thin film	
AA ¹⁾	-50 bis +250	0 bis +150	$\pm (0,1 + 0,0017 \times t)$ ²⁾
A	-100 bis +450	-30 bis 300	$\pm (0,15 + 0,002 \times t)$ ²⁾
B	-196 bis +600	-50 bis +500	$\pm (0,3 + 0,005 \times t)$ ²⁾
C	-196 bis +600	-50 bis +600	$\pm (0,6 + 0,01 \times t)$ ²⁾

¹⁾ out of date marking 1/3 DIN, ²⁾ t = unsigned amount of the measured temperature in °C

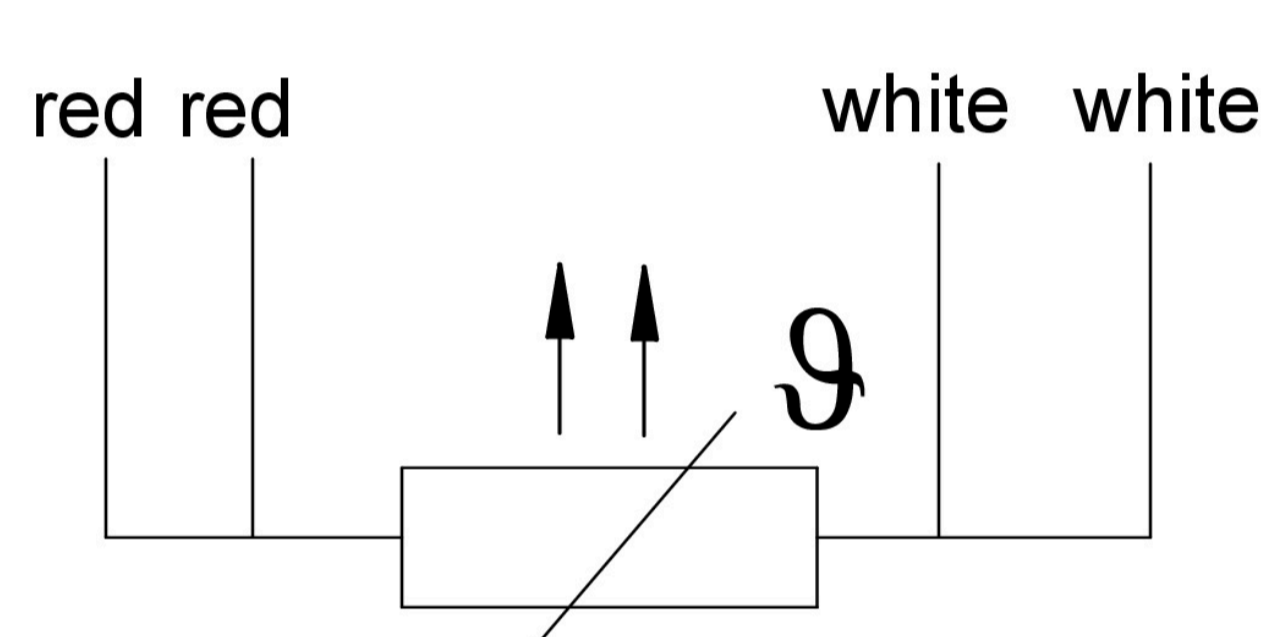
Source: Technical dates from IEC / EN 60751:2009-05 chapter 5.1.3

electric connection sheme

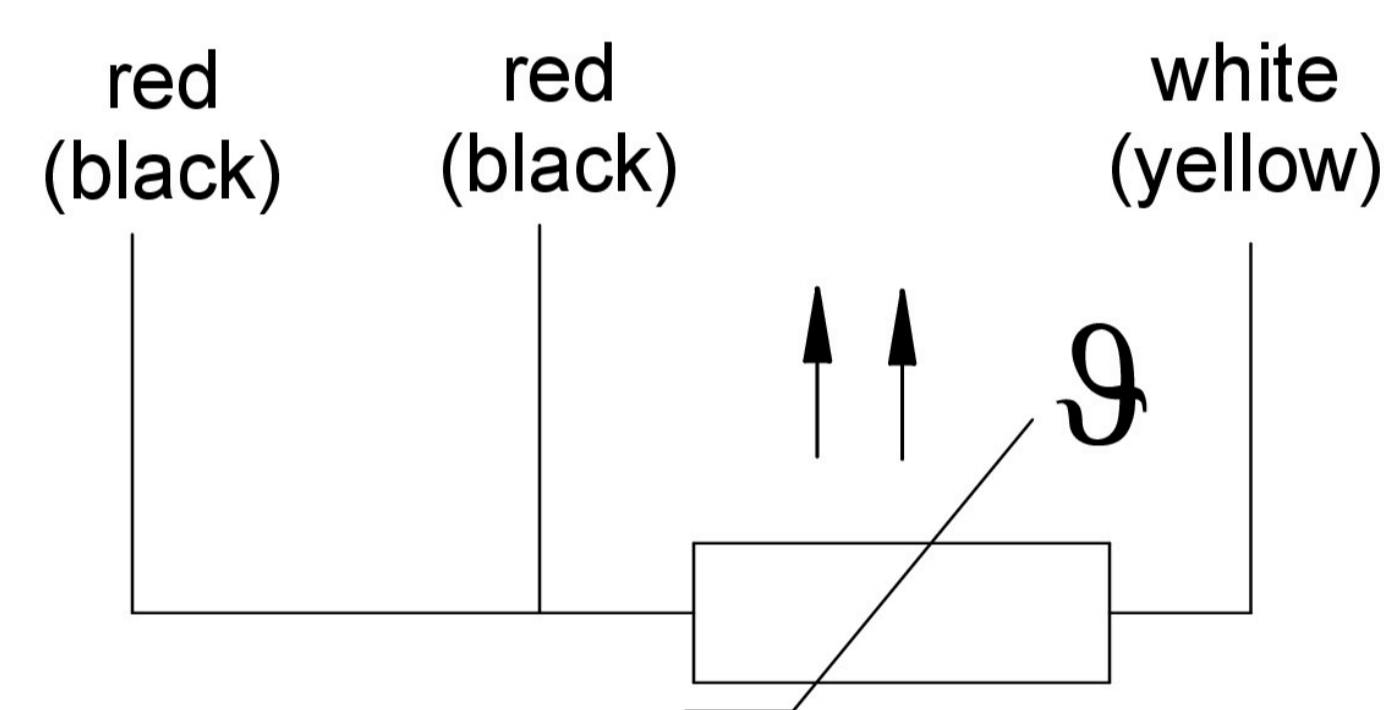
color code according IEC / EN 60751



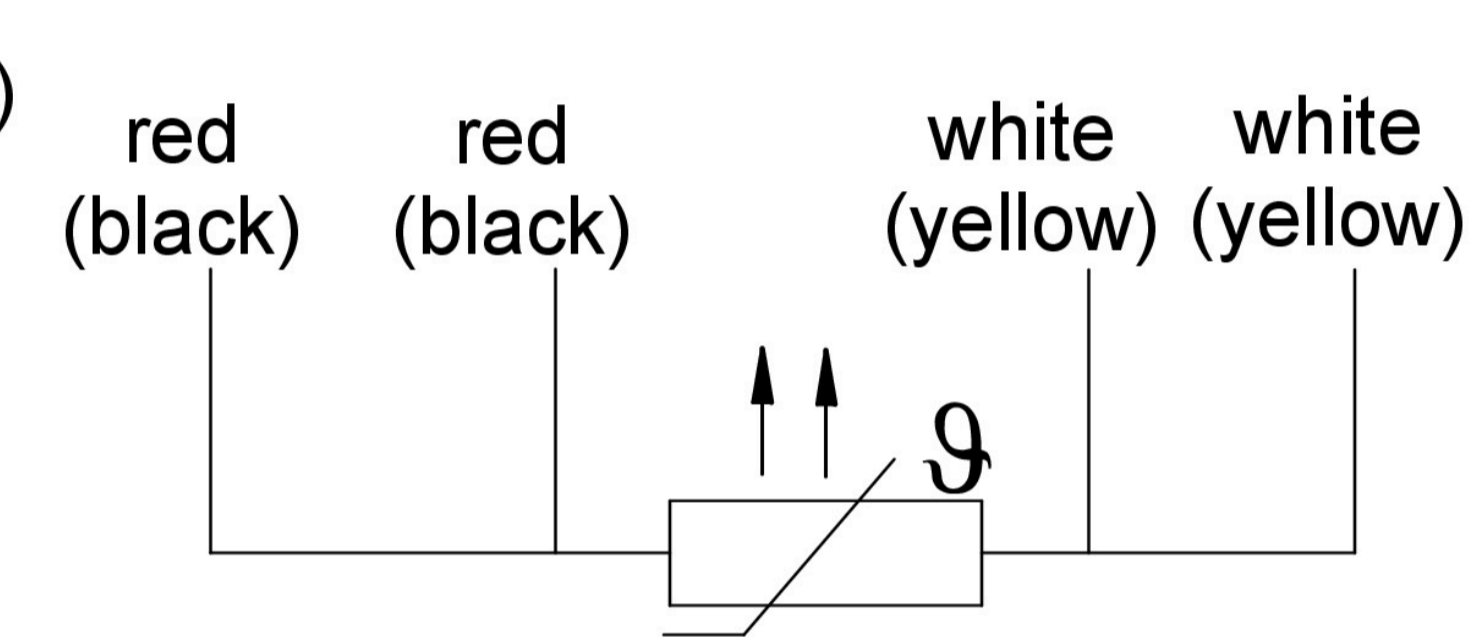
connection diagram 1 x PT100
3 - wire circuit



connection diagram 1 x PT100
4 - wire circuit



connection diagram 2 x PT100
2 x 3 - wire circuit



connection diagram 2 x PT100
2 x 4 - wire circuit