

Cable resistance thermometer For shipbuilding industry Model TR195, with bayonet coupling

WIKA data sheet TE 69.10



Applications

- Temperature measurement on bearings, axles and moving parts in aggregate

Special features

- Robust
- Ingress protection IP 67
- PTFE cable with plastic laminated aluminium foil
- GL and LR approval



Cable resistance thermometer, model TR195

Description

Resistance thermometers for measuring surface temperature on solid bodies or moving parts, such as axles and bearings. The spring-loaded probe tip has been especially designed for such applications.

The standard temperature range is -50 ... +200 °C.

The bayonet coupling can be adjusted to any point on the cable relief spring, thus allowing variable insertion lengths. Due to the spring-loading via the cable relief spring the probe tip is always firmly in contact with the area where the temperature has to be measured.

In addition the bayonet coupling allows quick and easy probe change.

Sensor

The sensor is located in the measuring insert. This is exchangeable and spring-loaded.

Sensor connection method

- 2-wire The lead resistance is recorded as an error in the measurement.
- 3-wire With a cable length of approx. 30 m or longer, measuring errors can occur.
- 4-wire The internal lead resistance of the connecting wires is negligible.

Sensor tolerance value per DIN EN 60751

- Class B
- Class A (not with 2-wire connection)

The combination of a 2-wire connection with Class A is not permissible, since the lead resistance of the measuring insert negates the higher sensor accuracy.

For detailed specifications for Pt100 sensors, see Technical Information IN 00.17 at www.wika.com.

Probe

Design:	rigid tube
Diameter:	8 mm, others on request
Length:	47 mm, others on request
Process connection:	Bayonet coupling with G ¼ adapter, adjustable on cable relief spring
Material:	Tube: stainless steel 1.4571 Cable relief spring: stainless steel Adapter: copper alloy, nickel-plated
Insertion length:	variable, from 50 to 355 mm
Protection class:	IP 67

Cable

Insulation:	PTFE
Screen:	plastic laminated aluminium foil
Cable relief:	Spring
Permissible ambient temperature:	-200 ... +200 °C
Wire material:	Cu (strands)
Wire cross-section:	0.25 mm ²
Number of wires:	according to the number of sensors and the sensor connection method
Wire ends:	blank
Cable length:	to customer specification

Connection box, mounted to cable (option)

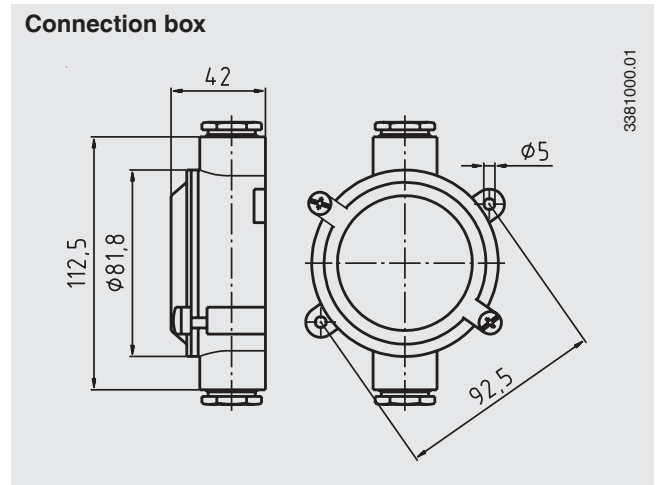
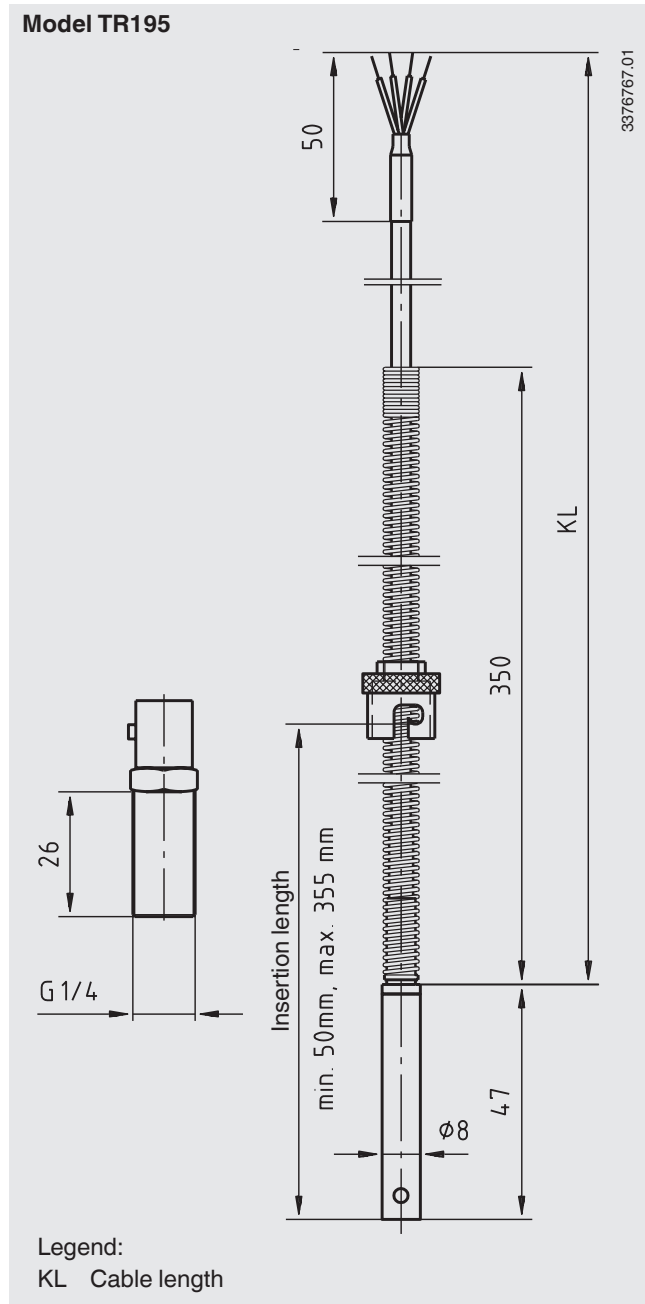
Material:	Aluminium, epoxy coated
Cover:	detachable, 2 mounting screws, EPDM flat seal
Cable glands:	Pg 16
Protection class:	IP 67
Terminal block:	ceramic, max. 1.5 mm ² , screws captive
Ground terminal:	present

Transmitter (option)

An optional transmitter can be mounted into the connection box.

The model T24 temperature transmitter can be delivered with separate certification according to Germanischer Lloyd.

Dimensions in mm

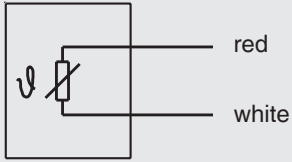


Electrical connection

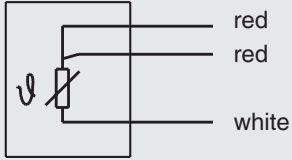
Cable

3160696.01

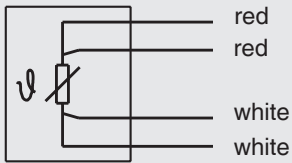
1 x Pt100
2-wire



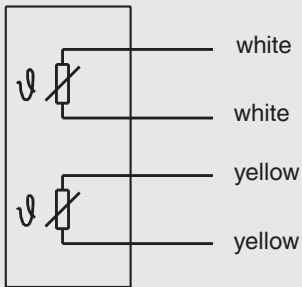
1 x Pt100
3-wire



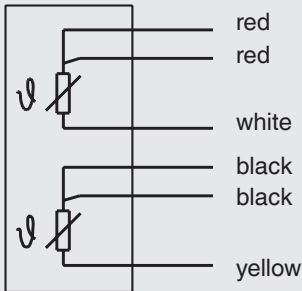
1 x Pt100
4-wire



2 x Pt100
2-wire



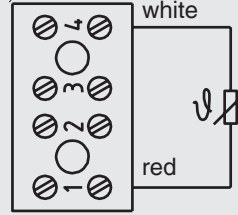
2 x Pt100
3-wire



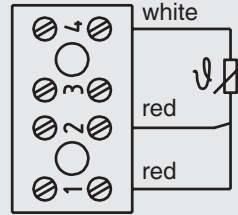
Connection box

3376695.01

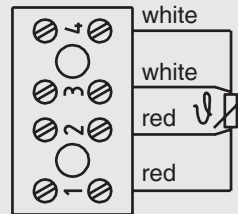
1 x Pt100
2-wire



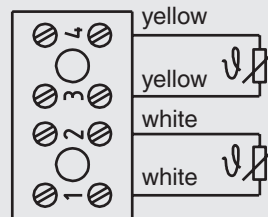
1 x Pt100
3-wire



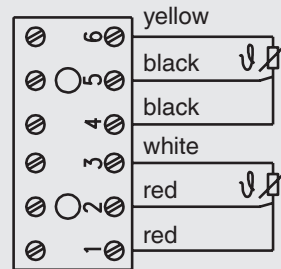
1 x Pt100
4-wire



2 x Pt100
2-wire



2 x Pt100
3-wire



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