

## » AF25

Contact temperature sensor

**thermokon**<sup>®</sup>  
HOME OF SENSOR TECHNOLOGY

### Datasheet · 208345

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### » APPLICATION

Contact sensor with connection cable and brass strap used to measure the surface temperature of pipes (cold or hot water) and other contact surfaces. Tightening strap/tension clamp and thermal contact fluid are available as accessories.

### » TYPES AVAILABLE

AF25      Sensor      passive, with Sensor according to customer's need\*

### » SECURITY ADVICE – CAUTION



The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

### » NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

## » GENERAL REMARKS CONCERNING SENSORS

Especially with regard to passive sensors in 2-wire conductor versions, the wire resistance of the supply wire has to be considered. If necessary the wire resistance has to be compensated by the follow-up electronics. Due to self-heating, the wire current affects the measurement accuracy, so it should not exceed 1 mA.

When using lengthy connection wires (depending on the cross section used) the measuring result might be falsified due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one for the measuring current.

Sensing devices with a transducer should always be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of the transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage ( $\pm 0,2$  V). When switching the supply voltage on/off, onsite power surges must be avoided.

## » TECHNICAL DATA

Measuring values	temperature
Output passive	PT100   PT100 1/3 DIN   PT1000   PT1000 1/3 DIN   Ni1000   Ni1000TK5000, NTC10k   NTC 10k Precon   NTC5k   NTC20k   NTC1,8k
Measuring range temperature	-35..+100 °C, optional: -50..+135 °C
Operating temperature range *max. permissible working temperature	-35..+100 °C, optional: -50..+135 °C (T135)
Accuracy temperature	depending on length of connection wire, depending on used sensor
Sensor	2-wire (standard), 3-wire or 4-wire
Protection	IP65 according to EN 60529, SI-Protection
Pocket	brass, $\varnothing=6$ mm, mounting length 35 mm
Ambient condition	-35..+100 °C, optionally: -50..+135 °C, max. 85% rH short term condensation
Notes	other sensors and cable lengths on request

## » PRODUCT TESTING AND CERTIFICATION



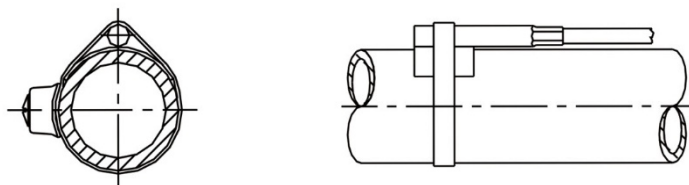
### Declaration of conformity

The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>.

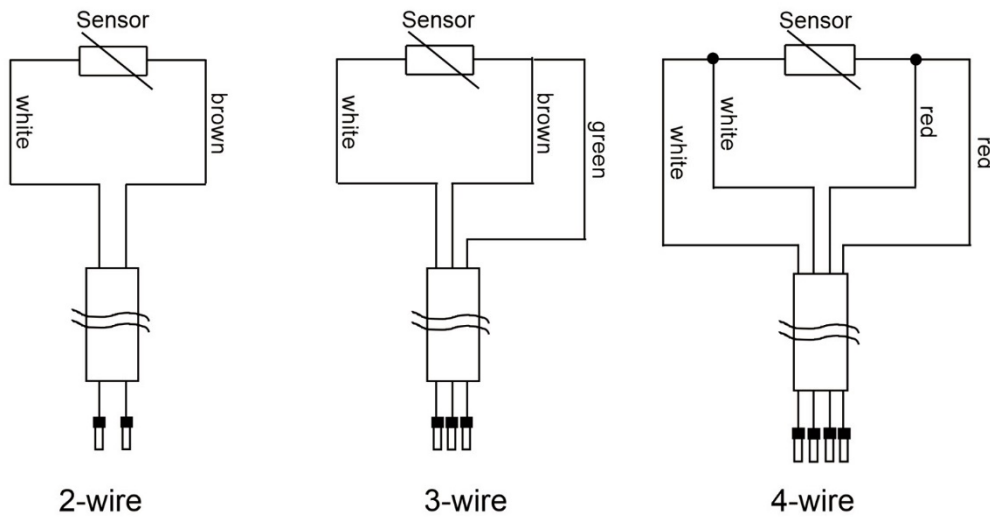
## » MOUNTING ADVICES

Fixing is done by tightening strap. Use contact fluid for a better heat transfer between the sensor and measuring medium.

To avoid permeation of condensate, mount sensor on top of the tube, if possible.



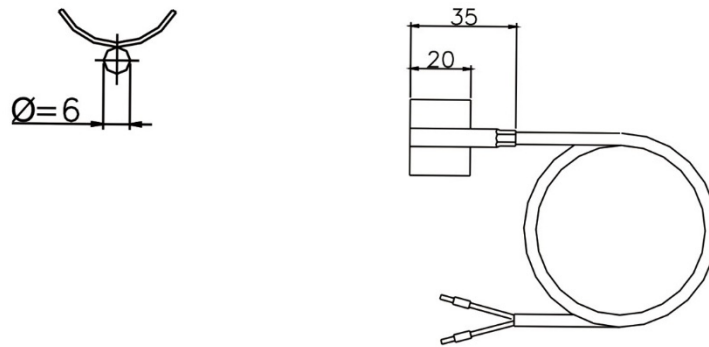
» **CONNECTION PLAN**



**Caution**

With electronic sensors e.g. AD592, SMT160, LM235, DS1820 use: brown= plus (+), white= minus (-) , green=out

» **DIMENSIONS (MM)**



» **ACCESSORIES (OPTIONAL)**

Tension clamp for pipes  $\varnothing$  up to 110 mm with contact fluid  
 Tension clamp for pipes  $\varnothing$  up to 250 mm with contact fluid  
 Tightening strap PA for pipes  $\varnothing$  up to 100 mm with contact fluid

Item No. 658911  
 Item No. 648103  
 Item No. 668071