

KFK01

Duct-/Immersion temperature sensor

thermokon
Sensortechnik GmbH

Data Sheet

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Application

Duct-/Immersion temperature sensor for measuring temperature in gaseous media of heating, cooling and air-conditioning systems (e.g. fresh air/exhaust air ducts).

Designed for control and display systems.

In conjunction with an immersion pocket also suitable for temperature measurement in liquid fluids (e.g. pipeline systems).

Types available

KFK01 sensor xxx.06 KFK01, mounting length xxx*, $\varnothing=6\text{mm}$, passive**

* Mounting lengths $\varnothing=6\text{ mm}$: 50 mm, 100 mm, 150 mm, 200 mm, 250 mm, 300 mm, 450 mm

** e.g.: PT100, PT1000, NI1000, NI1000TK5000, LM235Z, NTC..., PTC... and other sensors on request.

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 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

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.



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 product may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

Technical Data

Measuring value		temperature
Measuring range temperature	passive	depending on used sensor
Working range temperature	optional	-50..+160 °C
	passive	-80..+260 °C
Accuracy temperature	passive	depending on used sensor
Sensor	passive	2-wire (default), 3-wire or 4-wire
Enclosure		aluminium
Protection		IP65 according to EN 60529
Cable entry		M16 for cable with max. $\varnothing=8$ mm
Connection electrical		terminal block, max. 1,5 mm ²
Pocket		stainless steel V4A, $\varnothing=6$ mm,
Ambient condition		-25..+90 °C
Weight		approx. 140 g

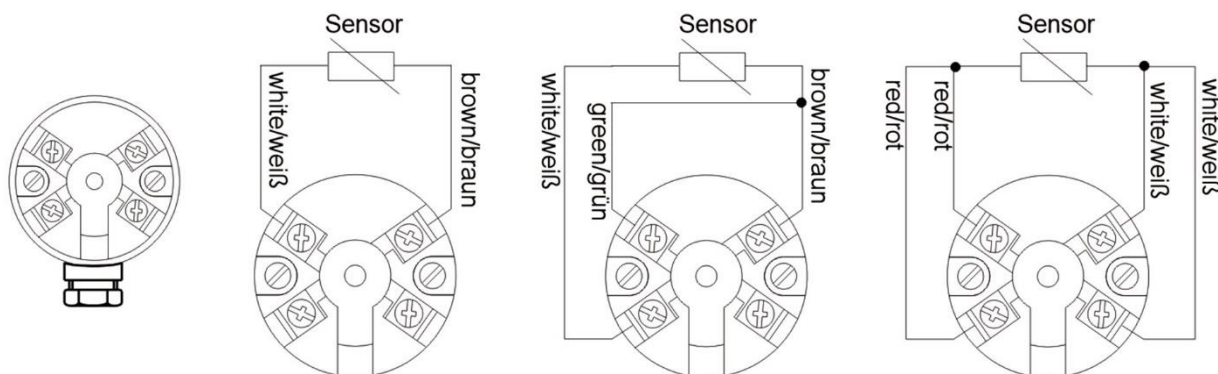
Mounting Advices

The sensor can be mounted on the ventilation duct by means of a mounting flange.

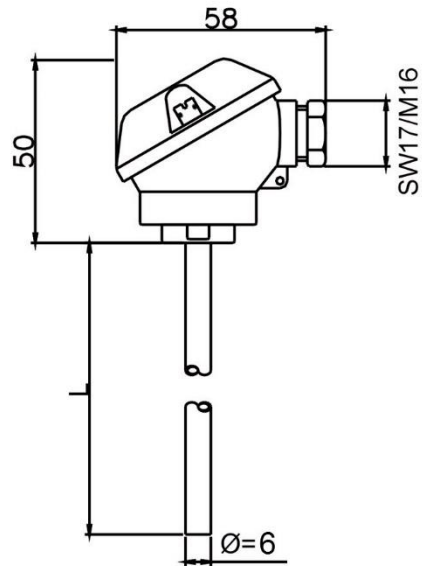
For risk of condensate permeation in the sensor tube respectively in the immersion pocket the bushing must be installed in a position that occurred condensate can run off.

Please also note the general remarks in our INFOBLATT THK.

Terminal connection plan



Dimensions (mm)



Accessories (optional)

Thermowell pocket for $\varnothing=6$ mm, material brass nickel-plated, safe up to 16 bar (THMSDSxxx)

Thermowell pocket for $\varnothing=6$ mm, material stainless steel, safe up to 40 bar (THVADSxxx)

Mounting flange MF6 flexible (for $\varnothing=4|6|7$ mm) Item No. 399098

Mounting flange MF6 (brass) for $\varnothing=6$ mm (+260 °C) Item No. 3407