KFK01

Duct-/Immersion temperature sensor

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
Issue date: 04.02.2025 • A140 • 757495

»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

Duct/Immersion sensor temperature – passive

- KFK01 <sensor> <xxx>.06

<sensor>: PT100/PT1000/NI1000/NI1000TK5000/LM235Z/NTC.../PTC...other sensors on request
<xxx>: Mounting length 50/100/150/200/250/300/450 mm
0x: .06 = Pocket Ø 6 mm

»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

The crossed-out wheelie bin symbol indicates that the product or removable batteries must not be disposed of with household or commercial waste. Within the EU, you are legally obliged to dispose of the product separately and appropriately in accordance with the national laws of your country. Alternatively, please contact your supplier or Thermokon Sensortechnik GmbH. Further information can be found at: www.thermokon.com

»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 (±0,2 V). When switching the supply voltage on/off, onsite power surges must be avoided.

»TECHNICAL DATA

Measuring value	temperature		
Output passive	PT100 | PT100 1/3 DIN | PT1000 | PT1000 1/3 DIN | Ni1000 | Ni1000TK5000, NTC10k | NTC 10k Precon | NTC5k | NTC20k | NTC1,8k, LM235Z		
Measuring range temperature	PT / Ni: -50..+160 °C (T160), NTC / KTY: -50..+150 °C (T150), LM235Z: -50..+120 °C (T120), depending on used sensor		
Operating temperature range *max. permissible working temperature*	depending on used sensor	**sensor pocket** -50..+160 °C, optional -80..+260 °C (T260)	**Enclosure** -35..+90 °C
Accuracy temperature	depending on used sensor		
Sensor	2-wire (default), 3-wire or 4-wire		
Enclosure	shape J, aluminium		
Protection	IP65 according to EN 60529		
Cable entry	M16 for cable with max. Ø=8 mm		
Connection electrical	terminal block, max. 1,5 mm²		
Pocket	stainless steel V4A, Ø=6 mm, mounting length: 50 | 100 | 150 | 200 | 250 | 300 | 450 mm		
Ambient condition	max. 85% rH short term condensation		
Weight	approx. 140 g		

»PRODUCT TESTING AND CERTIFICATION

CE

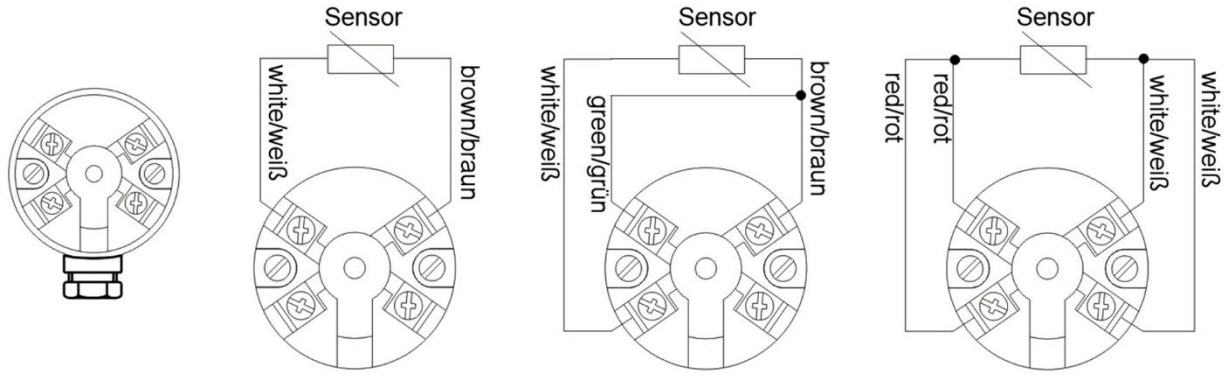
Declaration of conformity
The declaration of conformity of the products are available on our website
https://www.thermokon.de/direct/en-gb/categories/kfk01

»MOUNTING ADVICES

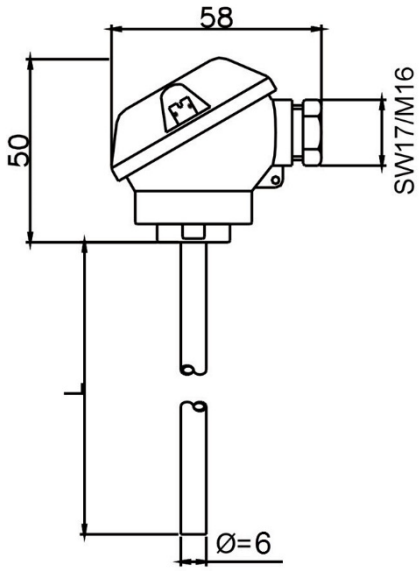
The sensor can be mounted on the ventilation duct by means of a mounting flange.

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.

» TERMINAL CONNECTION PLAN



» DIMENSIONS (MM)



» ACCESSORIES (OPTIONAL)

Thermowell pocket for ∅=6 mm, material brass nickel-plated, safe up to 16 bar (THMSDSxxx)
Thermowell pocket for ∅=6 mm, material stainless steel, safe up to 40 bar (THVADSxxx)
Mounting flange MF6 flexible (for ∅=4|6|7 mm) Item No. 399098
Mounting flange MF6 (brass) for ∅=6 mm (+260 °C) Item No. 003407