

SFK(H)01

Immersion temperature sensor

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration

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» APPLICATION

Passive immersion sensor with integrated thermowell pocket for high temperature measurement of liquids in duct applications. Types SFKH01 with a 70 mm neck pipe are designed for applications with insulation materials.

» TYPES AVAILABLE

Immersion sensor temperature – passive

- SFK(H)01 <sensor> <xxx>.08

<Sensor>: PT100/PT1000/Ni1000/Ni1000TK5000/LM235Z/NTC.../PTC...other sensors on request

<xxx>: mounting length 50/100/150/200/250/450 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 wheeled 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 ($\pm 0,2$ V). When switching the supply voltage on/off, onsite power surges must be avoided.

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

The declaration of conformity of the products are available on our website
<https://www.thermokon.de/direct/en-gb/categories/sfk01>

» TECHNICAL DATA

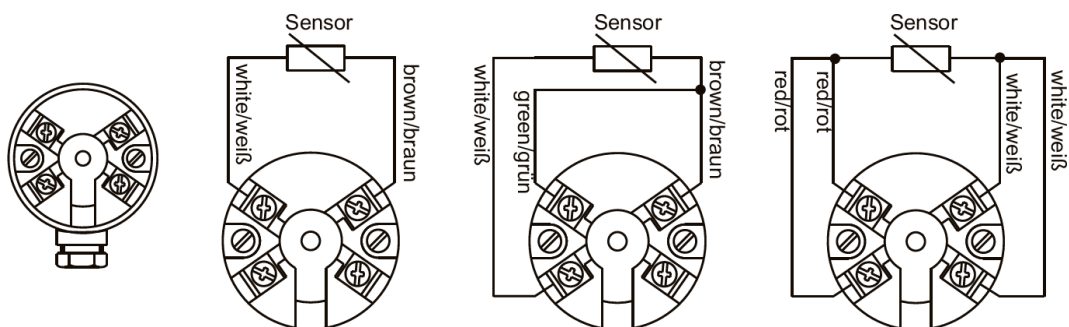
Measuring values	temperature	
Medium	gases, fluids	
Output passive (type-dependent)	PT100 PT100 1/3 DIN PT1000 PT1000 1/3 DIN Ni1000 Ni1000TK5000, NTC10k NTC 10k Precon NTC20k NTC1,8k, LM235Z	
Measuring range temp. (type-dependent)	PT / Ni: -50..+160 °C (T160), optional -80..+260 °C (T260), NTC: -50..+150 °C (T150), LM235Z: -50..+120 °C (T120)	
Operating temperature range * Max. permissible operating temperature	sensor pocket -50..+160 °C optional -80..+260 °C (T260)	enclosure -35..+90 °C
Accuracy temperature (type-dependent)	depending on used sensor, PT100 PT1000: $\pm 0,3$ K (typ. at 0 °C, Kl.B) , Ni1000: $\pm 0,4$ K (typ. at 0 °C), Ni1000TK5000: $\pm 0,4$ K (typ. at 0 °C), NTC10K: $\pm 0,22$ K (typ. at 25 °C)	
Sensor (type-dependent)	2-wire (standard), 3-wire or 4-wire	
Enclosure	shape J, aluminium	
Protection	IP65 according to EN 60529, SI-Protection	
Cable entry	M16, for wire $\varnothing=8$ mm	
Connection electrical	terminal block, max. 1,5 mm ²	
Neck pipe (optional)	stainless steel V2A, $\varnothing=12$ mm, L=70 mm	
Pocket	stainless steel V4A, $\varnothing=8$ mm, mounting length: 50 100 150 200 250 450 mm, thread G 1/2" max. operating pressure 40 bar (580,15 psi)	
Ambient condition	max. 85% rH, short term condensation	

» MOUNTING ADVICES

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. Mounting with immersion pocket for usage in liquid media. Use contact fluid for better heat transfer between sensor and measuring medium.

» CONNECTION PLAN

Attention: With digital sensors such as **AD592**, **SMT160**, **LM235**, **DS1820** the following applies: brown= plus (+), white= minus (-) ,green=out



» DIMENSIONS (MM)

