KFK03

Duct-/Immersion temperature sensor

Thermokon
Sensortechnik GmbH

Data Sheet

Application

Duct sensor for measurement of air temperature and other gaseous mediums for HVAC applications (e.g. supply and exhaust ducts).

Types available

KFK03.xxx.08 Sensor	KFK03, mounting length xxx**, Ø=8 mm, passive*
KFK03.xxx.08 TRA	KFK03, mounting length xxx**, Ø=8 mm, active, 4..20 mA
KFK03.xxx.08 TRV	KFK03, mounting length xxx**, Ø=8 mm, active, 0..10 V

*   e.g.: PT100, PT1000, NI1000, NI1000TK5000, LM235Z, NTC..., PTC... for other sensors please request.
**   mounting length: 100 mm, 150 mm, 200 mm, 250 mm

Security Advice – Caution

The installation and assembly of electrical equipment should only be performed by authorised 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

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 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.
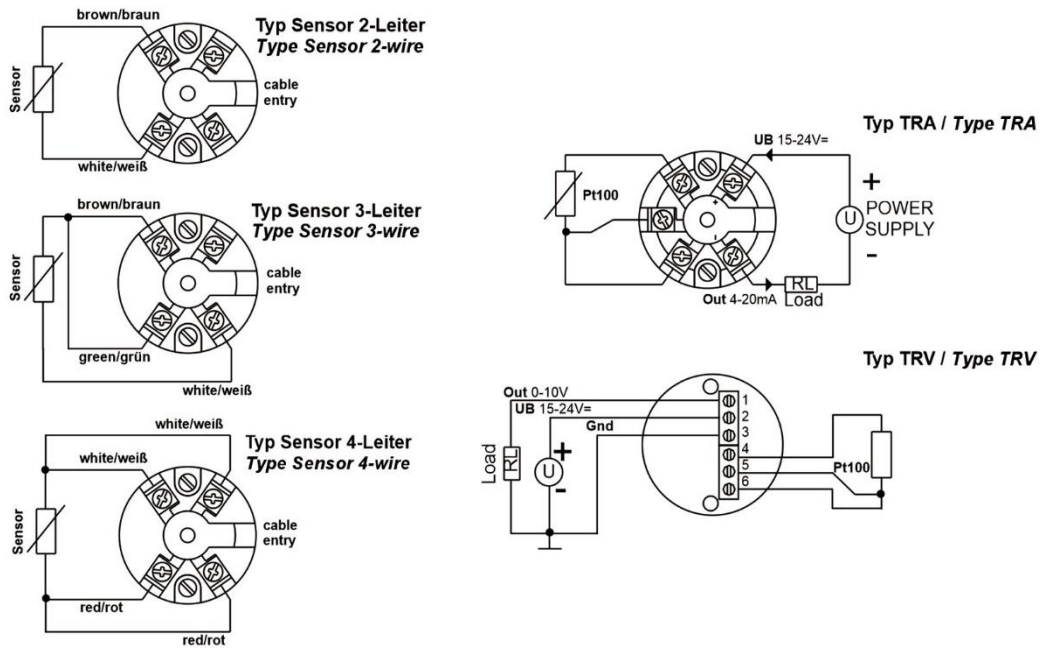
Technical Data

Measuring value		temperature
Output voltage	TRV	1x 0..10 V , min. load 3 kΩ
Output amp	TRA	1x 4..20 mA , max. load 500 Ω
Power supply		15..24 V = (±10%)
Power consumption	TRV	max. 1 W / 24 V =
	TRA	max. 0,5 W / 24 V =
Measuring range temp	passive	depending on used sensor
	TRA1 | TRV1	-50..+50 °C
	TRA2 | TRV2	-10..+120 °C
	TRA3 | TRV3	0..+50 °C
	TRA4 | TRV4	0..+160 °C
	TRA5 | TRV5	0..+250 °C
Working range temp		-50..+160 °C, -80..+260 °C (optional)
Accuracy		±0,2 °C/±0,1% of measured value (typ. at 21 °C)
Sensor	passive	2-wire (standard), 3-wire or 4-wire (optional)
Enclosure		aluminium
Protection		IP66 according to EN 60529
Cable entry		M20 for cable with max. Ø=7 mm
Connection electrical		terminal block, max. 1,5 mm²
Pocket		stainless steel V4A, Ø=8 mm, mounting lengths: 100 mm, 150 mm, 200 mm, 250 mm
Ambient condition	passive	-25..+90 °C, max. 85% rH short term condensation
	TRA | TRV	-25..+70 °C, max. 85% rH short term condensation
Weight	passive	240g
	TRA | TRV	270g

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

Typ Sensor 2-Leiter
Type Sensor 2-wire
brown/braun
white/weiß
Sensor
cable entry

Typ Sensor 3-Leiter
Type Sensor 3-wire
brown/braun
green/grün
white/weiß
Sensor
cable entry

Typ Sensor 4-Leiter
Type Sensor 4-wire
white/weiß
white/weiß
red/rot
red/rot
Sensor
cable entry

Typ TRA / Type TRA
UB 15-24V=
Pt100
POWER SUPPLY
+
−
Out 4-20mA
RL Load

Typ TRV / Type TRV
Out 0-10V
UB 15-24V=
Gnd
Load
RL
U
+
−
Pt100
1
2
3
4
5
6

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

Dimensions (mm)

78
86
SW22/M20
SW24
L
D=8
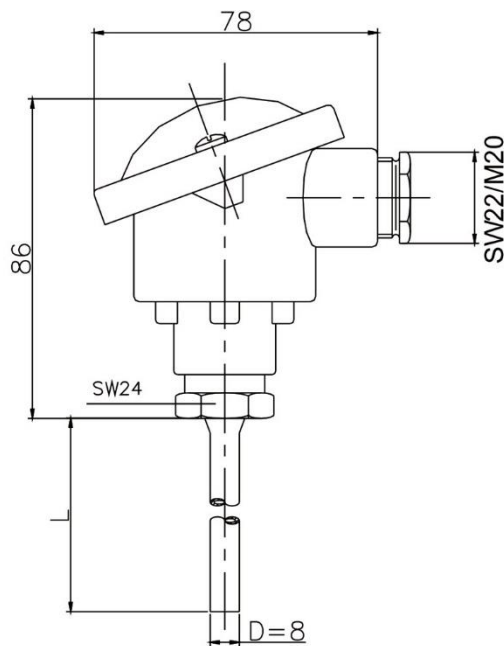
Accessories (optional)

Immersion pocket, stainless steel, safe up to 40 bar   THVA