

AKF10 Ø=7 mm LCD

Duct-/Immersion temperature sensor with display

thermokon
Sensortechnik GmbH

Datasheet

Subject to technical alteration
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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

AKF10.xxx.07 LCD TRV MultiRange AKF10, mounting length xxx**, Ø=7 mm, active, 0..10 V*
AKF10.xxx.07 LCD TRV MultiRange AKF10, mounting length xxx***, Ø=7 mm, active, 4..20 mA*

* Measuring ranges adjustable at the transducer
** mounting length: 62 | 135 | 192 | 240 | 320 | 392 | 465 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 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

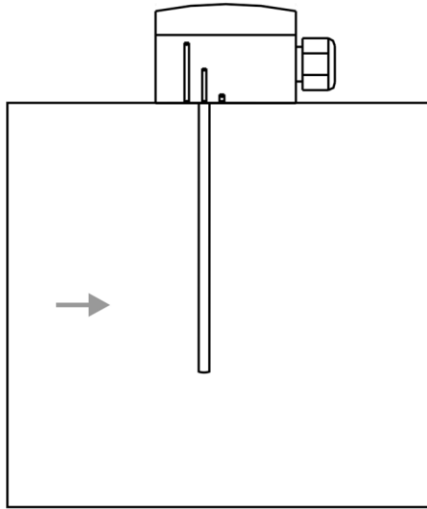
Measuring values	temperature
Output voltage	TRV: 0..10 V, min. load 5 k Ω
Output Amp	TRA: 4..20 mA, max. load 500 Ω (24 V =)
Power supply	TRV: 15..24 V = (\pm 10%) or 24 V ~ (\pm 10%) TRA: 15..24 V = (\pm 10%)
Power consumption	TRV: typ. 0,4 W (24 V =) 1,0 VA (24 V ~) TRA: max. 20 mA (24 V =)
Measuring range temperature	TRV/TRA: adjustable at the transducer TRV1/TRA1 -50.. +50 $^{\circ}$ C TRV2/TRA2 -10..+120 $^{\circ}$ C TRV3/TRA3 0.. +50 $^{\circ}$ C TRV4/TRA4 0..+160 $^{\circ}$ C TRV5/TRA5 0..+250 $^{\circ}$ C TRV8/TRA8 -15.. +35 $^{\circ}$ C
Working range temp.	sensor pocket: -50..+160 $^{\circ}$ C, type 260 $^{\circ}$ C: -80..+260 $^{\circ}$ C
Accuracy temperature	\pm 1% of measuring range (typ. at 21 $^{\circ}$ C)
Display	LCD 34x21 mm, black/white with backlight white
Enclosure	PA6, pure white, cover PC, transparent, with quick lock screws
Protection	IP65 according to EN 60529
Cable entry	M20 for wire max. \varnothing =8 mm
Connection electrical	terminal block max. 1,5 mm ² , 3-wire
Pocket	stainless steel 1.4571 mounting length: 62 135 192 240 320 392 465 mm
Ambient condition	enclosure TRV/TRA: -35..+70 $^{\circ}$ C, max. 85% rH non-condensing
Weight	150 g

Mounting Advices

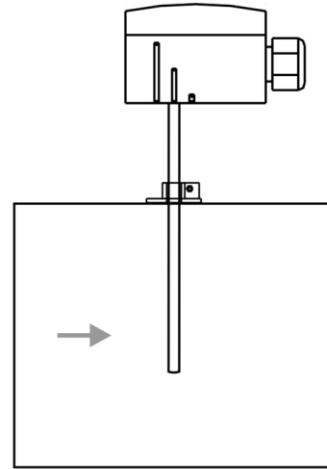
The sensor can be mounted on the ventilation duct either by means of a mounting flange or by screws.

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.

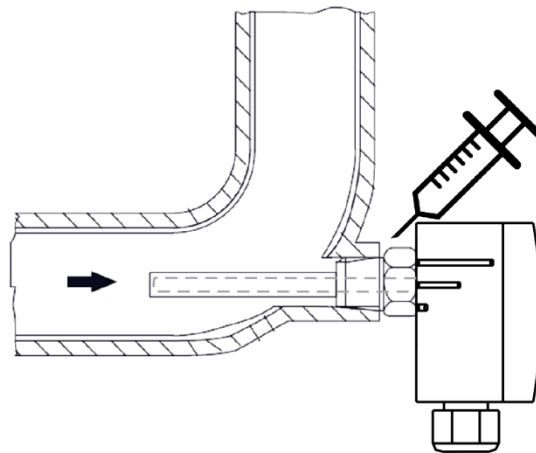
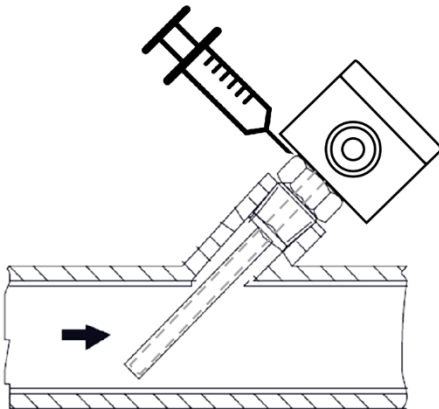
Mounting without mounting flange



Mounting with mounting flange



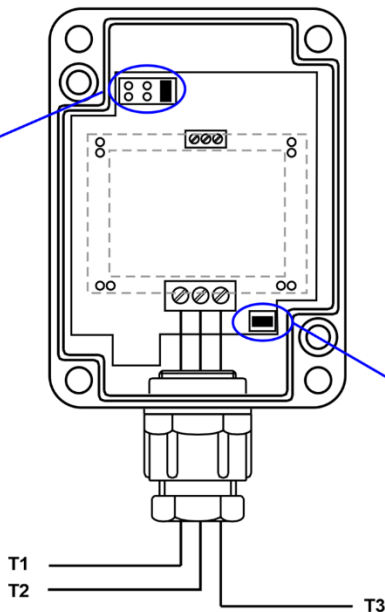
Mounting with immersion pocket for usage in liquid media. Use contact fluid for better heat transfer between sensor and measuring medium.



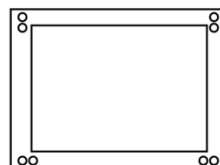
Terminal Connection Plan

Measuring range adjustment

- 50.. +50 °C
- 10..+120 °C
- 0.. +50 °C
- 0..+160 °C
- 0..+250 °C
- +15.. +35 °C



Display

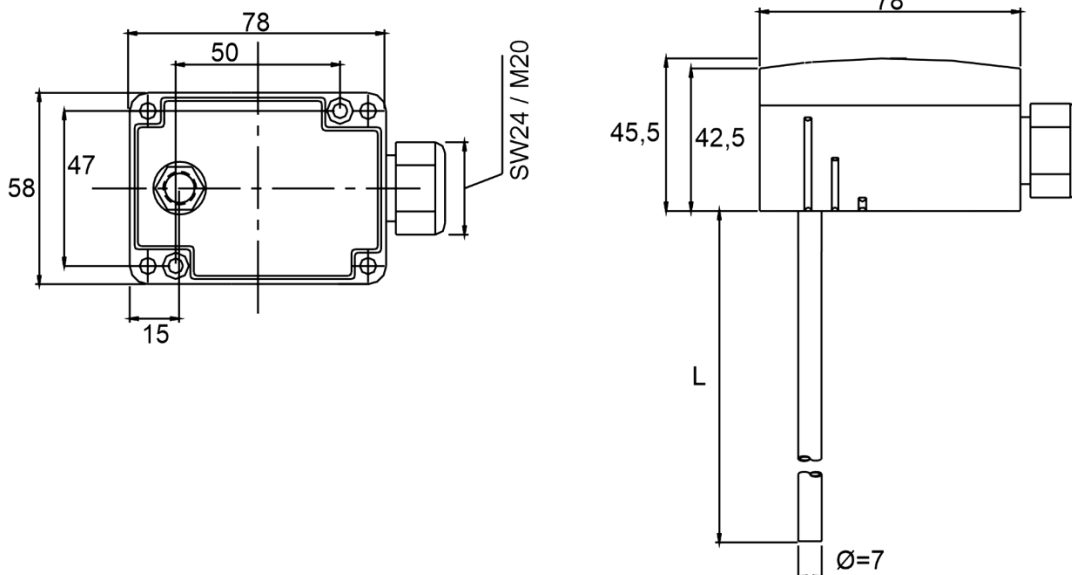


Display background illumination

Note: Remove display from the board before connecting wires.

connections	
T1	+ 15..24 V = 24 V ~
T2	GND
T3	output 0..10 V 4..20 mA

Dimensions (mm)



Accessories

Mounting flange MF7 flexible (incl. inserts for Ø=4 / 6 mm)
 Mounting flange MF7 (brass)

Item No. 399098
 Item No. 102360

Immersion probe stainless steel, suitable up to 40 bar THVAxxx
 Immersion probe Messing, suitable up to 16 bar THMSxxx

xxx=length immersion probe, depending on mounting length
 xxx= length immersion probe, depending on mounting length

Syringe thermal contact fluid

Item No. 102308