

» FTB+

Room sensor for humidity and temperature, wall flush mounting

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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» APPLICATION

Wall-mounted recessed sensor for inconspicuous humidity and temperature measurement in living rooms, offices and large rooms. Designed for control and monitoring applications.

» TYPES AVAILABLE

Room sensor temperature + humidity – active 2x 0..10 V

FTB+ VV 34.06 L15m

FTB+ VV 66.06 L15m

Room sensor temperature + humidity – active 2x 4..20 mA

FTB+ AA 34.06 L15m

FTB+ AA 66.06 L15m

» 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



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

» APPLICATION NOTICE FOR HUMIDITY SENSORS

Refrain from touching the sensitive humidity sensor/element. Touching the sensitive surface will void warranty.

For standard environmental conditions re-calibration is recommended once a year to maintain the specified accuracy. When exposed to high ambient temperature and/or high levels of humidity or presence of aggressive gases (i.e. chlorine, ozone, ammonia) the sensor element may be affected and re-calibration may be required sooner than specified. Re-calibration and deterioration of the humidity sensor due to environmental conditions are not subject to the general warranty.

» TECHNICAL DATA

Measuring values	temperature, humidity (humidity output configurable)	
Output voltage	VV 2x 0..10 V or 0..5 V, configurable via Jumper, min. load 10 k Ω	
Output ampere	AA 2x 4..20 mA, max. load 500 Ω	
Power supply	VV 15..24 V = ($\pm 10\%$) or 24 V ~ ($\pm 10\%$) SELV	AA 15..24 V = ($\pm 10\%$) SELV
Power consumption	VV typ. 0,4 W (24 V =) 0,8 VA (24 V ~)	AA typ. 1 W (24 V =)
Measuring range temp.	VV AA adjustable at the transducer: -20..+80 0..+50 -40..+60 -15..+35 $^{\circ}\text{C}$ default setting: -20..+80 $^{\circ}\text{C}$	
Measuring range humidity	0..100% rH non-condensing	
Measuring range abs. hum.	adjustable at the transducer: 0..50 0..80 g/m 3 , default setting: 0..50 g/m 3	
Measuring range enthalpy	0..85 KJ/kg	
Measuring range dew point	adjustable at the transducer: 0..50 -20..+80 $^{\circ}\text{C}$, default: 0..50 $^{\circ}\text{C}$	
Accuracy temperature	$\pm 0,3$ K (typ. at 21 $^{\circ}\text{C}$ within default measuring range)	
Accuracy humidity	$\pm 2\%$ between 10..90% rH (typ. at 21 $^{\circ}\text{C}$)	
Enclosure	enclosure USE-M, PC, pure white	
Protection	enclosure IP65 according to EN 60529	
Cable entry	Flextherm M20, for wire $\varnothing=4,5..9$ mm, removable	
Connection electrical	removable plug-in terminal, max. 2,5 mm 2 , connection wire between sensor head module and enclosure: PVC 15m (49,2ft.)	
Sensor head	34.06 stainless steel V2A, wall sleeve \varnothing 13 x length 34,4 mm	66.06 stainless steel V2A, wall sleeve \varnothing 13 x length 66,4 mm
Ambient condition	enclosure -20..+70 $^{\circ}\text{C}$, max. 85% rH short term condensation	sensor head -40..+120 $^{\circ}\text{F}$, short term condensation

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>.

» **INSTALLATION**

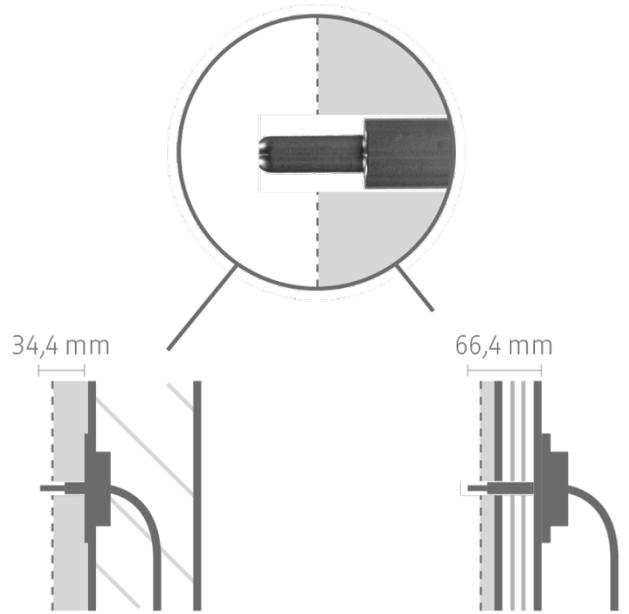
Before plastering, place the sensor sleeve on a trial basis and mark the orientation (top).

To plastering the sensor, replace the sensor sleeve with the plastic dummy. If necessary, treat the plastic dummy with a suitable release agent to prevent it from sticking to the plaster.

After setting the plaster, remove the plastic dummy and attach the sensor sleeve according to the marked orientation.

Before final plastering, treat the sensor sleeve with the release agent to avoid sticking to the plaster.

(the picture shows the situation after completion)



» **CONNECTION PLAN AND CONFIGURATION**

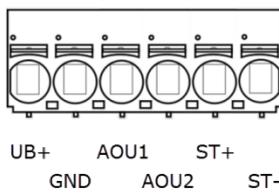
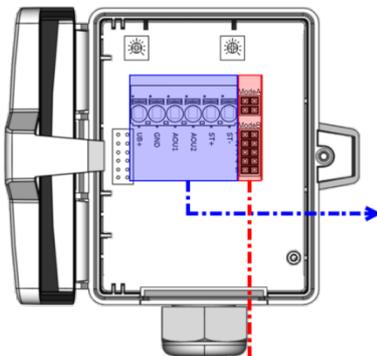
Note (type FTB+ AA)

When only using the temperature output, the humidity output must always be connected to mass/GND of the analog input module.
 fig. (Measuring range and offset adjustment, default settings: -20 °C..+80 °C | 0 K)

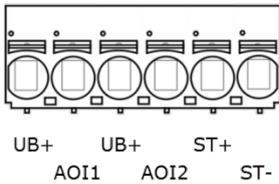
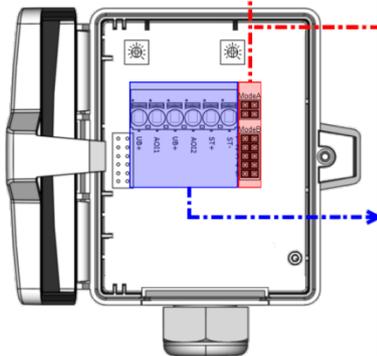
AOI1 | AOU1 → Feuchte

AOI2 | AOU2 → Temperatur

VV, VVS
 2x 0..10 V | 0..5 V



AA, AAS
 2x 4..20 mA



0 %

-5 %rH +5 %rH

absolute humidity: ±3 g/m³
 enthalpy: ±3 kJ/kg
 dew point: ±3 K

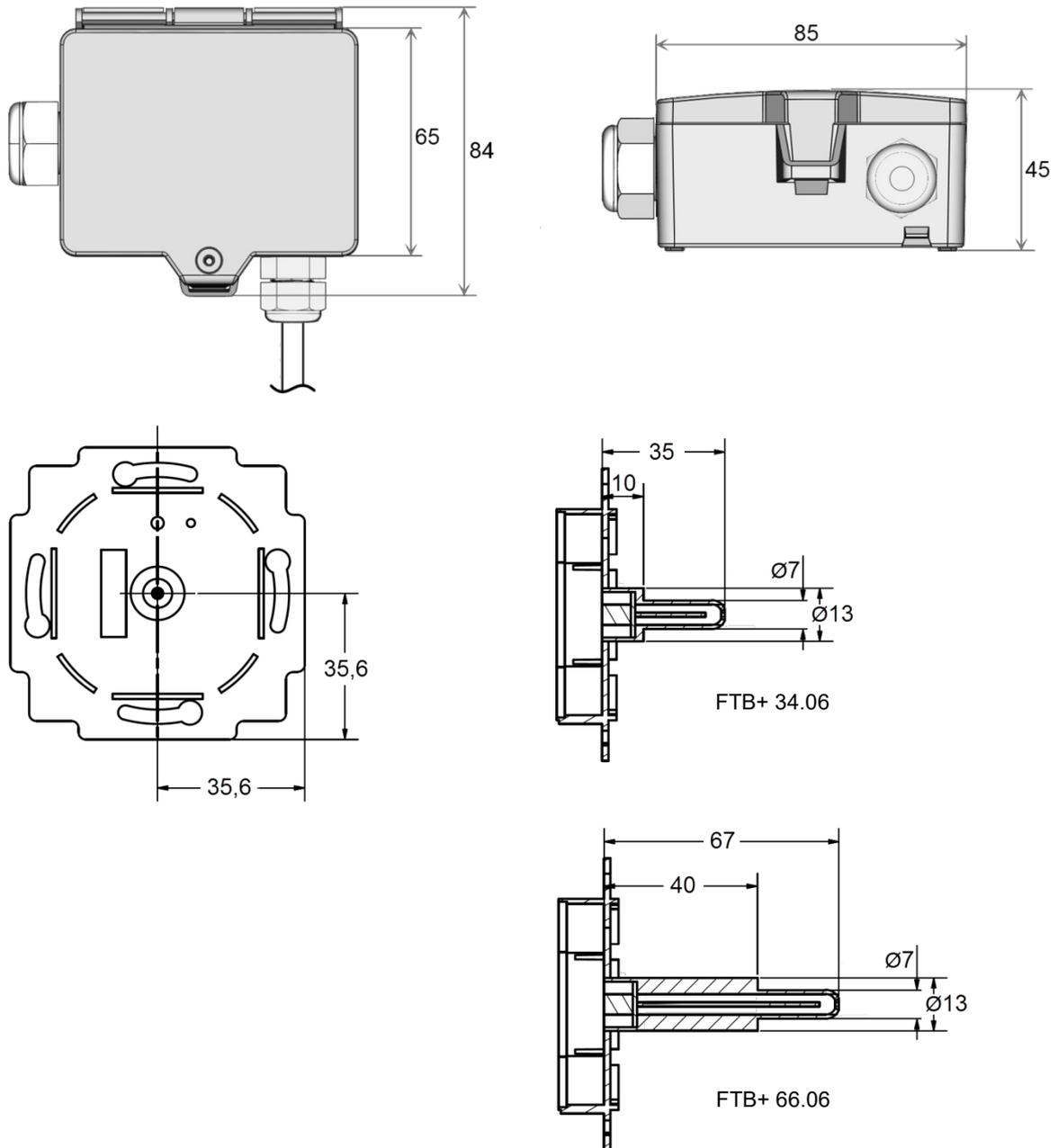
0 K

-3 K +3 K

temperature: (±6 °C)

Mode A	Mode A	Mode A	Mode A
relative humidity	enthalpy	absolute humidity	dew point
Mode B	Mode B	Mode B	Mode B
1 °C	1 °F	3 °C	3 °C
2 0..10 V	2 0..5 V	3 relative humidity: 0..100%	3 relative humidity: 0..100%
		absolute humidity: 0..50 g/m ³	absolute humidity: 0..80 g/m ³
		enthalpy: 0..85 KJ/kg	enthalpy: 0..85 KJ/kg
		dew point: 0..+50 °C	dew point: -20..+80 °C
		(+40..+140 °F)	(0..+200 °F)
4 °C	4 °C	4 °C	4 °C
5 °C	5 °C	5 °C	5 °C
-40..+60 °C	0..+50 °C	-20..+80 °C	-15..+35 °C
-40..+160 °F	+40..+140 °F	0..+200 °F	0..+100 °F

» DIMENSIONS (MM)



» ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base enclosure USE pure white

Mounting kit universal

• Cover screw + screw cover • 2 Rawplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

Item No. 631228

Item No. 698511

» ACCESSORIES (OPTIONAL)

Sealing insert M20 USE white, 2x $\varnothing=7$ mm (for 2 wire; PU 10 pieces)

Item No. 641333