FTB+ RS485 BACnet

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. Alternatively the output can be set to absolute humidity, enthalpy or dew point (changeable via Thermokon USEapp). A mounting base for mounting on a level surface and fixing material are included in delivery.

» TYPES AVAILABLE

Room sensor temperature + humidity – BUS

FTB+ RS485 BACnet 34.06 L15m
FTB+ RS485 BACnet 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

» PRODUCT TESTING AND CERTIFICATION

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

» 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

For standard environmental conditions re-calibration is recommended once a year to maintain the specified accuracy. A re-calibration may be required sooner than specified, or the sensor element may have to be exchanged when exposed to the following environmental conditions:

- Mechanical stress
- Contamination (dust / fingerprints e.g.)
- Abrasive chemicals
- Environmental influences (e.g. condensation on measuring element)

Re-calibration and deterioration of the humidity sensor due to environmental conditions are not subject of the general warranty.

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

» TECHNICAL DATA

Measuring values	temperature, humidity (humidity output configurable)		
Output voltage	2x 0..10 V or 0..5 V, min. load 10 kΩ (live-zero configuration via Thermokon USEapp)		
Network technology	RS485 BACnet		
Power supply	15..35 V = or 19..29 V ~ SELV *With alternating voltage, the correct polarity must be ensured*		
Power consumption	max. 0,4 W (24 V =) | 0,8 VA (24 V ~)		
Measuring range temp.	-20..+80 °C (default setting), optionally configurable via Thermokon USEapp		
Measuring range humidity	0..100% rH non-condensing, optionally configurable via Thermokon USEapp (enthalpy, absolute humidity, dew point)		
Accuracy temperature	±0,3 K (typ. at 21 °C)		
Accuracy humidity	±2% between 10..90% rH (typ. at 21 °C)		
Enclosure	enclosure USE-M, PC, pure white, with removable cable entry		
Protection	IP65 according to EN 60529		
Cable entry	M25 for cable max. Ø=7 mm, seal insert for fourfold cable entry (additional 2x9mm insert in scope of delivery)		
Connection electrical	**Mainboard** removable plug-in terminal, max. 2,5 mm²	**Plug-in card** removable plug-in terminal, max. 1,5 mm²	**Sensor head** PVC cable 15m, soldered with mainboard, pluggable on sensor
Sensor head	**34.06** stainless steel V2A, wall sleeve Ø 13 x length 34,4 mm V2A,	**66.06** stainless steel V2A, wall sleeve Ø 13 x length 66,4 mm	
Ambient condition	**Enclosure:** -20..+70 °C, short term condensation **Sensor head:** -40..+120 °C, short term condensation		

When several BUS devices are supplied by one 24 V AC voltage supply, it is to be ensured that all "positive" operating voltage input terminals (+) of the field devices are connected and all "negative" operating voltage input terminals (-) (=reference potential) are connected (in-phase connection of field devices).In the case of reversed polarity at one field device, a supply voltage short-circuit would be caused by that device.
The consequential short-circuit current flowing through this field my cause damage to it. Therefore, pay attention to correct wiring.

» INSTALLATION

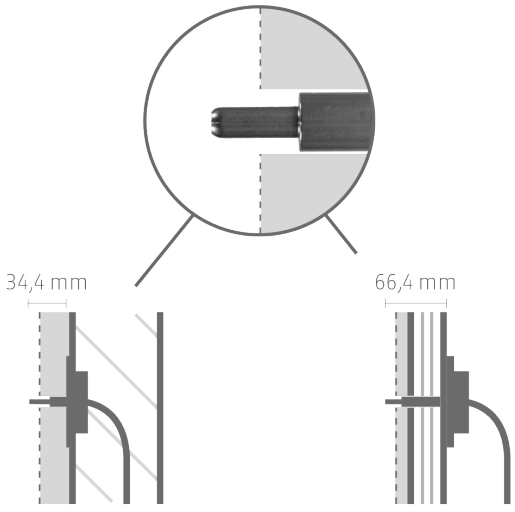
Before plastering, place the sensor sleeve on a trial basis and mark the orientation (top).

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.

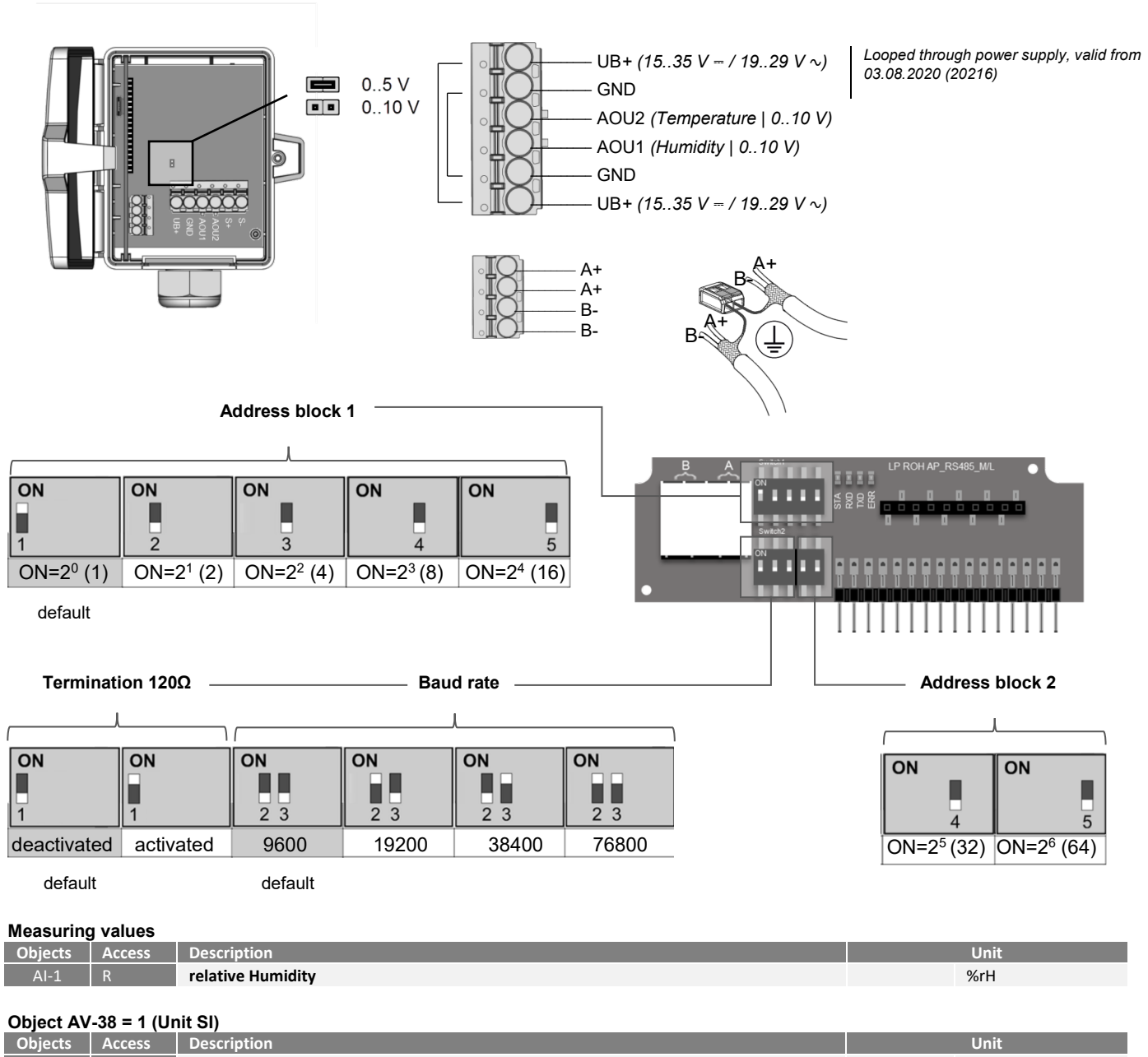
(the picture shows the situation after completion)



»CONNECTION PLAN

If the RS485 cable is looped through, connect both cable shields using the enclosed 2-pol. Connect terminal as shown.

FTP+ RS485



Measuring values

Objects	Access	Description	Unit	
AI-1	R	**relative Humidity**		%rH

Object AV-38 = 1 (Unit SI)

Objects	Access	Description	Unit	
AI-0	R	**temperature**	SI	°C
AI-2	R	**absolute humidity**	SI	g/m³
AI-3	R	**enthalpy**	SI	KJ/kg
Ai-4	R	**dew point**	SI	°C

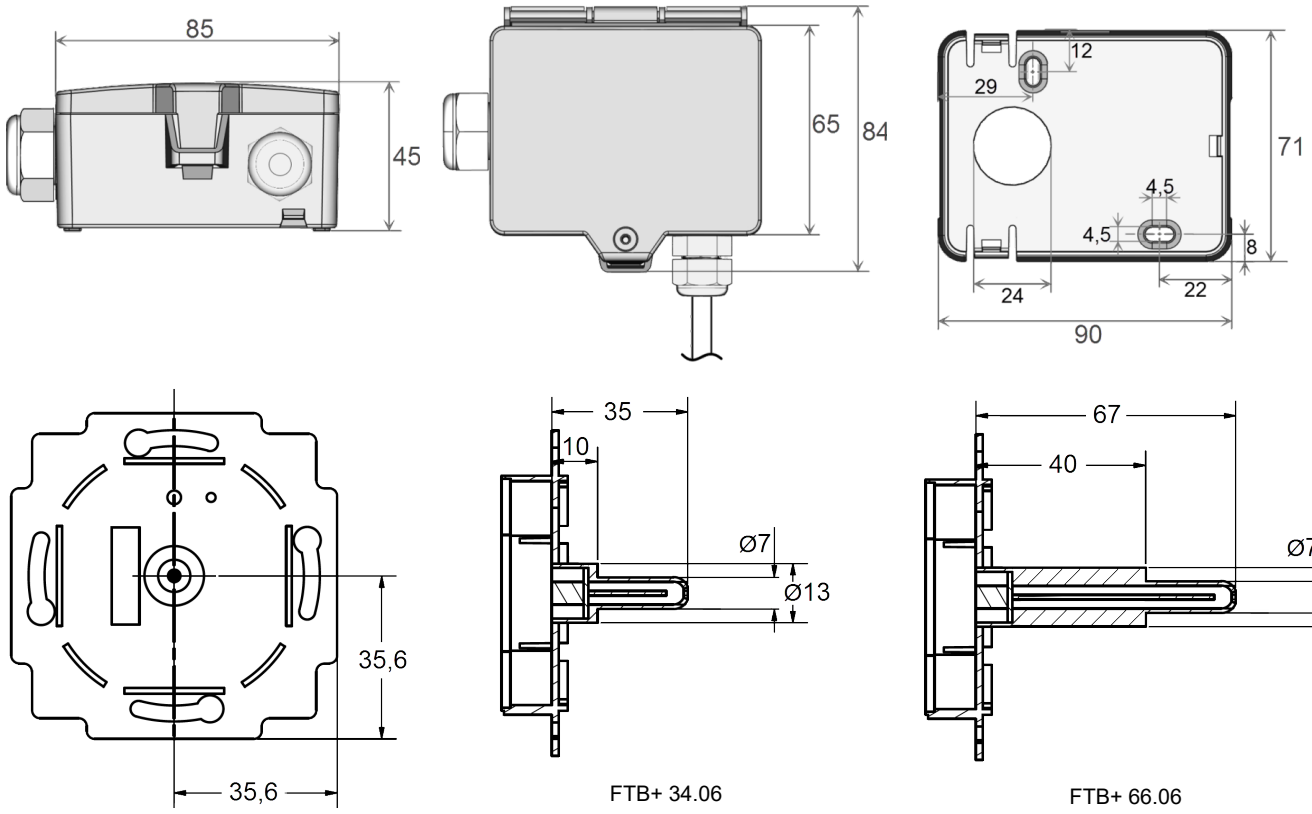
Object AV-38 = 2 (Unit Imperial)

Objects	Access	Description	Unit	
AI-0	R	**temperature**	Imperial	°F
AI-2	R	**absolute humidity**	Imperial	gr/ft³
AI-3	R	**enthalpy**	Imperial	BTU/lb
Ai-4	R	**dew point**	Imperial	°F

The BACnet address of the device is set binary coded in the range of 1 ... 127 via 7 dip-switches. (the address 0 is reserved and cannot be selected).

BACnet Objects:
USE-RS485 BACnet interface
A detailed description of the BAcnet interface can be found at the following link: → **Download**

»DIMENSIONS (MM)



FTB+ 34.06

FTB+ 66.06

»ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base	Item No. 631228
Mounting kit universal	Item No. 698511
• Cover screw + screw cover• 2 Rawlplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)	
Cable entry M25 USE white, 2x Ø=9mm	Item No. 786225