

# FTK+ BAT LRW

LoRaWAN® Duct sensor for humidity and temperature

**thermokon**<sup>®</sup>  
HOME OF SENSOR TECHNOLOGY

## Datasheet

Subject to technical alteration  
Issue date: 07.11.2025 • A144



### » APPLICATION

Duct air sensor for measuring temperature and humidity with LoRaWAN® interface.

### » TYPES AVAILABLE

#### Duct sensor – LRW

FTK+ <xxx> BAT LRW incl. MF20 (TPO)

<xxx>: 140/270/400 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

### » PRODUCT TESTING AND CERTIFICATION



#### Declaration of conformity

The declaration of conformity of the products can be found on our website  
<https://www.thermokon.de/direct/en-gb/categories/ftkplus>

### » NOTES ON DISPOSAL



The crossed-out wheellie 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](http://www.thermokon.com)

## » APPLICATION NOTICE FOR HUMIDITY SENSORS

At regular environmental condition, it is recommended to calibrate the sensor annually to check the compliance with the accuracy required in the application. The following conditions can damage the sensor element or lead in long term to loss of the specified accuracy:

- Mechanical stress
- Contamination (e.g. dust / fingerprints)
- Aggressive chemicals
- Ambient conditions (e.g. condensation on measuring element)



**Do not touch the sensor elements!**

**Re-calibration or exchange of the sensor element are not subject of the general warranty.**

## » TECHNICAL DATA

Measuring values	Temperature, humidity
Power supply	(1-) 2x AA 3.6V lithium batteries LS14500 or ER14505 Temporary operation/ commissioning possible with 2x 1.5V AA (LR06) batteries (reduced battery life)
Measuring range temp.	-20..+80 °C
Measuring range humidity	0..100% rH non-condensing
Accuracy temperature	±0,3 K (typ. at 21 °C)
Accuracy humidity	±5% between 30..70% rH (typ. at 21 °C)
Air Speed	min. 0,3 m/s, max. 12 m/s
Enclosure	enclosure USE-M / cover, PC, pure white
Protection	IP65 according to EN 60529
Pipe	PA6, black, Ø=19,5 mm, length 140   270   400 mm
Ambient condition	-20..+70 °C, max. 85% rH short term condensation
Configuration	Thermokon LRWapp, uConfig Software, LoRaWAN® Downlink
Battery life	+/- 5 years (depending on device configuration, network setup, battery-type and ambient conditions)

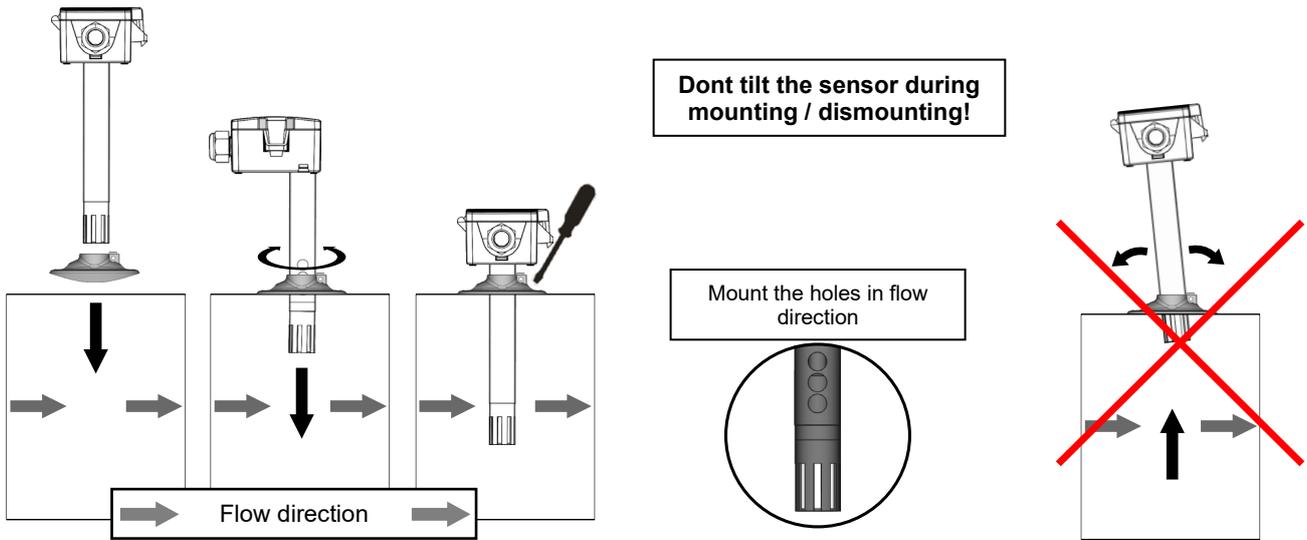
### » LoRaWAN®

Radio technology	LoRaWAN®
LoRaWAN version	1.0.4
Device class	Class A
Frequency	EU868 (863-870 MHz)
Max. transmission power	+14 dBm (25 mW)
Receiver sensitivity	-137 dBm
Antenna	Internal send- / receiver antenna, external antenna available on request
LoRaWAN Features	Over the Air Activation (OTAA), Adaptive Data Rate (ADR)
Data transmission	Heartbeat interval (Default: 1440 min), measurement interval (default: 1 min), hysteresis send behavior

» **MOUNTING ADVICE**

The sensor can be mounted on the ventilation duct by means of the mounting flange MF20 TPO (optional with mounting base). **Align the openings on the sensor tube according to the flow direction.** To prevent condensate permeation the pipe must be installed in an orientation that occurring condensate can run off.

Remove the lower section of the sensor carefully and pulling straight out.



» **BATTERY INSTALLATION**

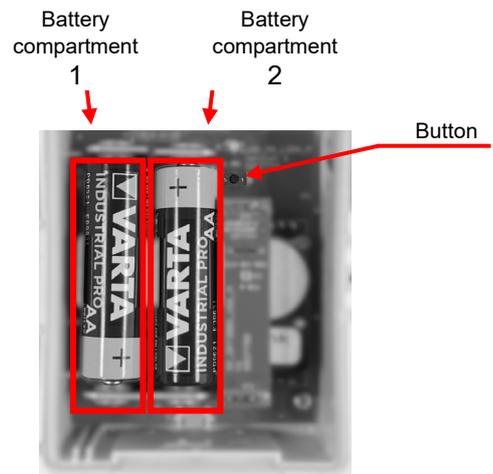
The FTK+ BAT LRW is designed to be powered by 2x 3.6V lithium batteries (LS14500 or ER14505).

If using only 1 single battery, insert it into battery compartment 1. (Caution: 1 battery = reduction in battery life by more than half)

Insert the batteries as shown. Observe polarity/orientation.

For commissioning and as a temporary measure if lithium batteries are not available, the sensor can also be operated for several months with 2 alkaline manganese batteries (LR06).

(Lithium batteries are subject to dangerous goods regulations for shipping and are therefore not included in the scope of delivery.)



» **ADVICE FOR COMMISSIONING:**



The LoRaWAN credentials required for commissioning can be read out via the uConfig software or the LRWapp. On request, the LoRaWAN credentials can also be provided in digital form. For this purpose, please contact your respective contact person.

» **INFORMATION ABOUT LORAWAN SPECIFICATION**



The Thermokon LoRaWAN specification can be downloaded from our website.

## » CONFIGURATION

The configuration is performed in powered state. The following options are available for configuring the device:

Device connection	Micro-USB cable	Bluetooth radio	LoRaWAN® downlink
			
Configurations- software	PC/Notebook with uConfig software	Smartphone/Tablet with LRWApp	LoRaWAN Infrastructure

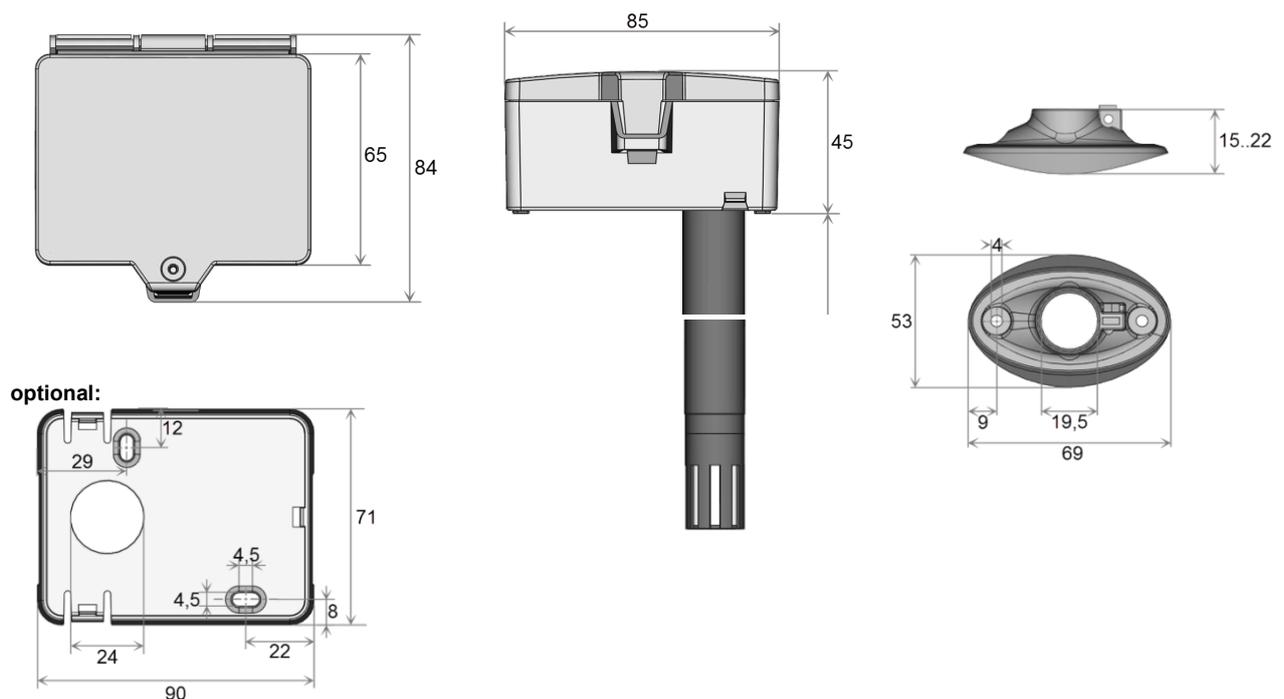
The configuration app with the corresponding instructions can be downloaded from the Google Play Store or the Apple App Store.

## » ADVICE FOR BLUETOOTH CONFIGURATION



Press the button to start Bluetooth communication. After pressing the button, a connection can be established via the app within approx. 20 seconds. This is indicated by a flashing LED.

## » DIMENSIONS (MM)



## » ACCESSORIES (INCLUDED IN DELIVERY)

Mounting flange MF20 TPO  
 Mounting kit universal  
 • Cover screw + screw cover • 2 Rawplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

Item No. 612562  
 Item No. 698511

## » ACCESSORIES (OPTIONAL)

Mounting base USE-M pure white  
 Filter stainless steel, wire mesh (spare part)  
 Weather protection for FTK, FTK+, WSA (replacement)  
 Battery ER14505 (Lithium Thionyl chloride 3,6V AA)

Item No. 631228  
 Item No. 231169  
 Item No. 625241  
 Item No. 759182