



FX-WMBUS-C-TH

Wireless M-Bus

Temperature & Humidity room sensor

- Battery powered for wireless installation
- AES128 Encrypted Wireless M-Bus communication
- Continuous battery level monitoring
- Seamless design

Measure to manage

The Fidelix FX-WMBUS-C-TH room temperature and humidity sensor is a plug-and-play room temperature and humidity transmitter. Much care have been taken to design a sleek, good looking device with high security and performance. The design allows for discrete integration when mounted in home environment.

The device has a robust design with an tamper detection if opened from the wall. A bit in the status message is set if sabotage is detected or restored. The battery level is continuously monitored and a low level warning is issued when battery is nearing depletion. For maximum performance the device has 2 internal antennas.



Technical features

Temperature range:	-40..85°C
Dimensions:	32 x 89 x 26 mm
Power supply:	3.6V - AA battery
Communication:	90 sec interval AES128 encryption OMS standard wireless M-Bus

Firmware:

MODE T1
INTERVAL 90s
ENCRYPTION AES128 encryption, OMS mode 5, Profile A.

Sensors:

TEMPERATURE RANGE: -40 to +85°C
ACC: ±0,2 at 0 to +65°C
HUMIDITY ACC: ±2 %RH at 20-80 %RH.

Warnings:

TAMPERING Product opened or removed from the wall
BATTERY Low battery

Power / Lifetime:

POWER SUPPLY 3.6V Li-SOCI2, AA battery
VOLTAGE 2.4 to 3.6V
LIFESPAN 14 years typical, depending on configuration and operating temperature.
RADIO 14 dBm output power to 2 differential antennas
BATTERY Soldered or optional battery holder.

Approvals:

ENVIRONMENT RoHS (2011/65/EU) / (EU) 2015/863
RADIO / EMC RED (2014/53/EU)
WIRELESS MBUS EN13757-3/4 / OMS 4.0.2

General information:

TEMPERATURE -40° to +85°C
RELATIVE HUMIDITY None condensing
MATERIAL White, ABS
SIZE (W x L x D) 32 x 88,5 x 25,5mm

Measurements:

Temperature and humidity is send at a configurable interval minutes and the data is sent using the Wireless MBUS protocol OMS compliant. This makes the sensor ideal for integration in data collecting systems or drive by solutions. The data from the device could also be protected using the AES128 encryption compliant with OMS standard.

Configuration:

The MBUS mode, transmission interval and encryption can be configured using a USB configuration cable connected to a PC. The device can also in volume be ordered fully preconfigured.

Installation:

The device is either mounted with adhesive tape or with screws. Always mount on an interior wall, e.g. hallway. Place the sensor 160-180cm above the floor. Mount the device so the hole at the front is down. Avoid heating/cooling sources (solar radiation, lamps, pipes, extensive airflow, etc.). If screws are used, make sure following requirements are fulfilled:
- Screw head angle must be at 90°
- Screw head diameter approximately 5mm
- Screw head thickness approximately 1.4mm

Commissioning:

STEP 1:

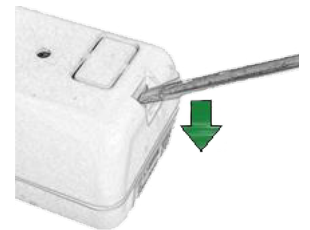
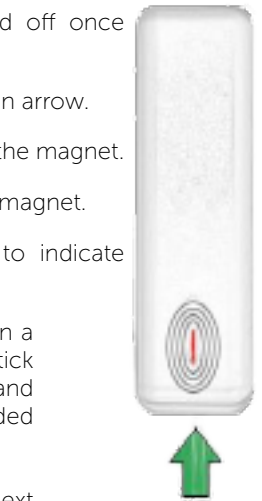
- Start the device (it cannot be turned off once started).
- Place a permanent magnet at the green arrow.
- A red LED will turn on - Keep holding the magnet.
- When the LED turns off - Remove the magnet.
- The LED will flash for 10 seconds to indicate successful startup.

If the device is going to be mounted on a wall with double-sided tape, simply stick the tape to the back of the device and mount it to a wall using the recommended instructions.

If screws are required, continue to the next step:

STEP 2:

- Unhook one of the plastic hooks (top or bottom) by pressing down with a small object, for example a screwdriver.



- Separate the back piece from the front.



STEP 3:

Mount the back piece to a wall with the plastic pin at the bottom using the recommended instructions. Two screws are needed and should be placed in the two holes marked in red.

Attach the front piece to the mounted back piece - make sure the hole on the front piece aligns with the plastic pin on the back piece.

