Fidelix

FX-WMBUS-G2-TH

Wireless M-Bus
Temperature & Humidity room sensor

- Battery powered for wireless installation
- AES128 Encrypted Wireless M-Bus communication
- Continuous battery level monitoring
- Seemless design
- Configurable using the FX-CF-CABLE

Measure to manage

The Fidelix FX-WMBUS-G2-TH room temperature and humidity sensor is a plug-and-play room temperature and humidity transmitter. Great care has been used to design a sleek, good looking device with high security and performance. The design allows for discrete integration when mounted in a residential or professional environment.

The battery level is continuously monitored and a low level warning is issued when the battery is nearing depletion.

Technical features

Temperature range:	-40..85°C
Dimensions:	25.5 x 105 x 22 mm
Power supply:	3.6V - battery
Communication:	interval configurable from 60s to 1 hour - selectable encryption - OMS standard wireless M-Bus

Firmware:

MODE	Configurable T1, C1, or S1
INTERVAL	Configurable 60 seconds..1 hour
ENCRYPTIONS	AES128 encryption OMS mode 5, Profile A Configurable ON/OFF, and key
M-BUS DATA	Instant, average hour, average 24 hours
DEFAULT FACTORY SETTINGS	T1-Mode, 90 seconds (5 min if external proble is connected), Encryption ON

Sensors:

TEMPERATURE	RANGE: -40 to +85°C ACC: ±0,3 at 0 to +65°C
HUMIDITY	ACC: ±2 %RH at 10-90 %RH
EXT PROBE	RANGE: -40 to +125°C ACC: ±0,5

Warnings:

TAMPERING	Product opened or removed from the wall
BATTERY	Low battery

Power / Lifetime:

POWER SUPPLY	3.6V Li-SOCl2 AA battery
VOLTAGE	2.6 to 3.6 V
LIFESPAN	14 years typical, depending on configuration and operating temperature
RADIO	14 dBM output power to antenna

Conformity:

ENVIRONMENT	RoHS (2011/65/EU) / (EU) 2015/863 RADIO / EMC RED (2014/53/EU)

General information:

OP TEMPERATURE	-40° to +85°C
RELATIVE HUMIDITY	Non condensing
MATERIAL	White, ABS
SIZE (W x L x D)	25,5 x 105 x 22mm
STANDARD	EN13757-3/4 / OMS 4.0.2

Measurements:

Temperature and humidity is send at a configurable interval minutes and the data is sent using the OMS complient Wireless M-BUS protocol. 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.

External probe:

The device supports up to 4 external temperature probes connected to the device. If more than 1 temperature cable should be connected an external junction box must be used, so that only one cable is connected to the device. The probes are automatically detected and configured at startup.
FX-EXT-PROBE-OW Single probe for FX-WMBUS-G2-TH sensor.

Configuration:

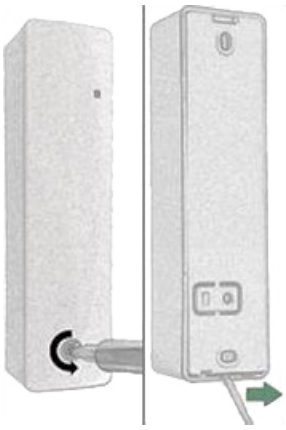
The MBUS mode, transmission interval and encryption can be configured using a USB configuration cable connected to a PC.
FX-CF-CABLE Configuration cable for G2 sensors.

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. For best horizontal range, place the device upright. For best vertical range, place the device horizontally. For maximum range, mount the device and receiver so that they have the same polarisation. Avoid placing directly against metallic objects to maximize range. Avoid heating/cooling sources (solar radiation, lamps, pipes, extensive airflow, etc.).

Commissioning:

STEP 1:

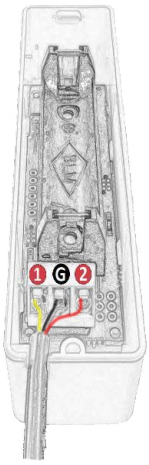


- Open the device using a torx screwdriver on the front screw.
- Separate the back piece by using, for example, a screwdriver at the bottom of the device as in the right picture.

STEP 2:

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

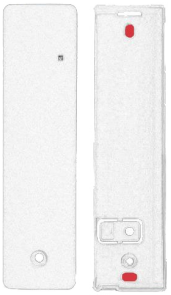
STEP 3:



- Remove battery before mounting/ unmounting cables!
- The device supports four temperature probes. Cut out the plastic at the bottom according to the picture before mounting the probes.
- Connect the YELLOW wire from the probe to the connector marked "1".
- Connect the BLACK wire from the probe to the connector marked "G".
- Connect the RED wire from the probe to the connector marked "2".

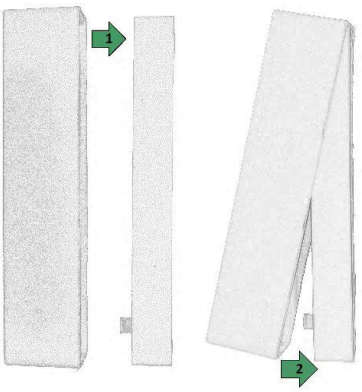
  NOTE: Do not let a cable cover the hole at the bottom.
- Once all cables are connected, insert the battery again. The LED at the front will be active for five seconds and then turn off to indicate a successful start-up.

STEP 4:



- Mount the back piece to a wall according to the recommended mounting instructions.
- If screws are used, fasten the screws in the holes marked by red in the picture.

STEP 5:



- See picture in STEP 4 on the orientation of the device, then insert the top part of the front piece onto the top part of the back piece (left).
- Insert bottom part of the front piece onto the bottom part of the back piece (right).

STEP 6:

- Put the torx screw (from Step 1) in the hole at the front and tighten the screw using a torx screwdriver!
- Make sure that device is securely mounted.
- Lay out the temperature cable(s) at the area where temperature measurements are needed.