



## FX-WMBUS-CX-T

Wireless M-Bus

Temperature 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-CX-T room temperature sensor is a plug-and-play room temperature transmitter. Much 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 home or office environment.

The device has a robust design with an tamper detection when it is opened; a bit in the status message is set when the opening is detected and set back when the device is closed again. The battery level is continuously monitored and a low level warning is issued when the battery is nearing depletion. For maximum performance the device has a tuned internal antenna.

### Technical features

Temperature range:	0..55°C
Dimensions:	32 x 89 x 26 mm
Power supply:	3.6V - AA battery
Communication:	120 sec interval AES128 encryption OMS standard wireless M-Bus

**Firmware:**  
 MODE C1  
 INTERVAL 120 seconds  
 ENCRYPTION AES128 encryption, OMS mode 5, Profile A

**Sensors:**  
 TEMPERATURE RANGE: 0 to +55°C  
 ACC: ±0,2 at 0 to +55°C

**Warnings:**  
 TAMPERING Device opened  
 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 the operating temperature  
 RADIO 14 dBm output power to antenna  
 BATTERY Soldered

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

**General information:**  
 TEMPERATURE +0° to +55°C  
 RELATIVE HUMIDITY No condensation  
 MATERIAL White, ABS  
 SIZE (W x L x D) 32 x 88,5 x 25,5mm  
 STANDARD EN13757-3/4 / OMS 4.0.2

**Measurements:**  
 The temperature measurement values are sent using the Wireless M-BUS protocol OMS compliant. This makes the sensor ideal for integration in data collecting systems or drive by solutions. The data from the device is also protected using the AES128 encryption compliant with OMS standard.

**Installation:**  
 The device can be 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:**  
 • Place a permanent magnet at the green arrow (a small bump in the housing indicates the best location).  
 • After 5 seconds, a red LED will start blinking.  
 • Within 5 seconds after the LED started blinking, remove the magnet. The LED will stop blinking.  
 • The LED will now flash every 3 seconds for the next few minutes 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.

