

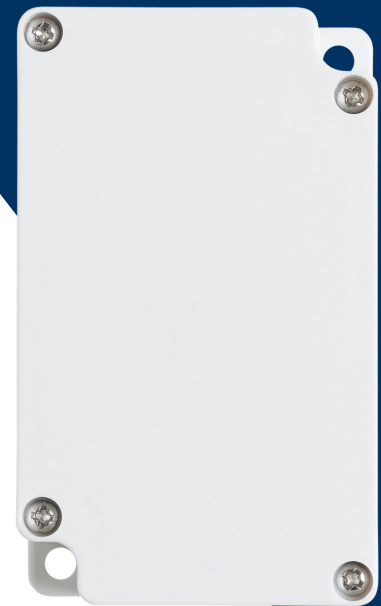


## FX-WMBUS-O-T

Wireless M-Bus

Temperature Outdoor sensor

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



## Measure to manage

The Fidelix FX-WMBUS-O-T outdoor temperature sensor is a plug-and-play outdoor temperature transmitter. The device is made from highly durable PC plastic.

The internal radio antenna is optimized for 866MHz and is tuned for mounting on concrete, wood or plaster. The device has two antennas; one in each direction to maximise the range between the sensor and the receiver.

The battery level is continuously monitored and a low level warning is issued when battery is nearing depletion. The sensor is not designed for operating in constant freezing temperature.

## Technical features

|                    |   |
|--------------------|---|
| Temperature range: | -30..+85°C<br>(recommended -20..+50°C)                              |
| Dimensions:        | 95 x 65 x 55 mm   |
| Power supply:      | 3.6V Li-SOIC2 A battery   |
| Communication:     | 90 sec interval<br>AES128 encryption<br>OMS standard wireless M-Bus |

**Firmware:**

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

**Sensors:**

TEMPERATURE Range: -30 to +85°C  
 Recommended: -20 TO +50°C  
 ACC: ±0,2 at 0 to +65°C  
 ACC: ±0,3 at -30 to +85°C

**Warnings:**

BATTERY Low battery

**Power / Lifetime:**

POWER SUPPLY 3.6V Li-SOCI2, A battery  
 VOLTAGE 2.4 to 3.6V  
 LIFESPAN 16 years typical, depending on operating temperature.  
 RADIO 16 dBm output power to 2 differential antennas  
 BATTERY Soldered

**Conformity:**

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

**General information:**

TEMPERATURE -30° to +85°C  
 Recommended: -20 TO +50°C  
 IP 66  
 MATERIAL Signal white PC UV stabilized plastic  
 SIZE (W x L x D) 95 x 65 x 55mm  
 STANDARD EN13757-3/4 / OMS 4.0.2

**Measurements:**

Temperature is sent at 90 second intervals 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 M-Bus data contains the current measurement, the average of the last hour, and the average of the last 24 hours.

The data from the device is protected using the AES128 encryption compliant with the OMS standard.

**Installation:**

The device is waterproof and resistant to raining water. The device should, if possible, still be mounted so that it is protected from rain and direct sunlight.

Place the sensor 160-180cm above the floor.

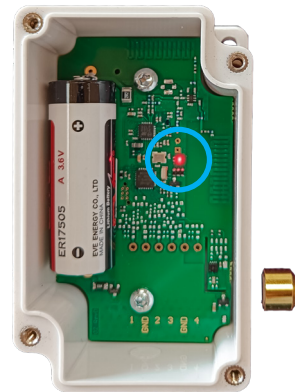
Mount the device on a solid wall using two screws.

Avoid heating/cooling sources (solar radiation, lamps, pipes, extensive airflow, etc.).

The device is started using a simple magnet so the enclosure does not need to be opened.

**Commissioning:****STEP 1:**

- Start the device (it cannot be turned off once started).
- Place a permanent magnet on the Fidelix label for 10 seconds. The location to hold the magnet is also shown on the photo on the right.
- A red LED on the inside starts to blink when activation is started (the lid must be opened to see it). The LED is circled in blue on the photo on the right.
- Keep holding the magnet.
- Remove the magnet after 10 seconds have passed.
- The LED will flash for 10 seconds to indicate successful startup.

**STEP 2:**

- Mount the device to a wall with two screws through the holes marked by green circles according to the recommended mounting instructions.

