



FX-AirRECEIVER

Wireless gateway



- Amazing radius for wireless M-Bus
- Connects easily to Fidelix FX-controllers or other Modbus TCP servers
- Communicate with up to 500 wireless M-Bus devices
- Support for AES128 encryption for 64 devices

Manage measurements

The Fidelix FX-AirRECEIVER is a housing unit for the collection of data from wireless M-Bus devices to convert it to the MODBUS TCP-server. The unit contains dual internal antennae for improved range indoors and transmitting information received via Ethernet to the Fidelix or others vendors supervisory system. The product is authorised for assembly indoors in residential and commercial properties and is powered by the 230V network

Technical features

Operation temperature:	-20..55°C
Dimensions:	240 x 180 x 33 mm
Power consumption:	<5W, 230 VAC
Communication:	868 MHz (WMBus)

Mechanical properties:

Size	240x180x33mm
Weight	520g
Colour	RAL9016
Protection degree	IP20 when inlet is facing upwards IP21 when inlet is facing downwards

Connections:

Supply voltage	Spring-loaded contact for 0.5-1.5mm ²
Voltage	230Vac, 50Hz
Power consumption	< 5W
Installation category	CAT2

Installation conditions:

Installation	Indoor non-industrial environment
Operation temperature	-20 to +55°C
Ambient temperature	-40 to 55°C
Humidity	10 to 90 % not condensing
Max installation height	max. 2000m
Pollution degree rating	Grade 2

Wireless receiver - Wireless MBus:

Wireless M-Bus position	T1, S1, C1
Radio frequency	868 MHz
Sensitivity	-108dBm (T1)
Approximate range indoors	50-100m
Supported encryption	AES128

Connection - GPRS:

Band	850/900/1800/1900 MHz
Class	Max. Class 12
Antenna	Internal

Connection - Ethernet:

Connection	RJ45
Cable	CAT5 or better UTP/FTP/SFTP
Speed	10/100Mbit, Half-/Full-duplex

Approvals:

Environment	RoHS (2011/65/EU) / (EU) 2015/863
Safety	RED (2014/53/EU) / IEC 62368-1
Radio / EMC	RED (2014/53/EU)
Wireless MBus	EN13757-4

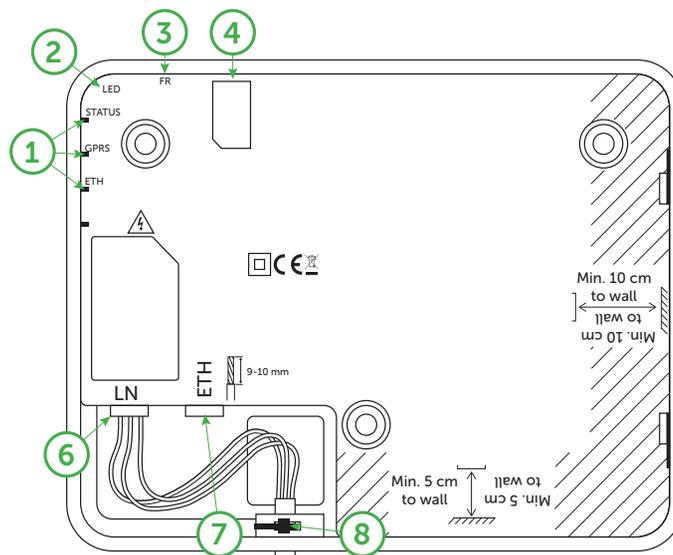
Placement:

The indoor range between the Fidelix FX-AirRECEIVER and a wireless M-Bus transmitter device is normally 50 to 100m.

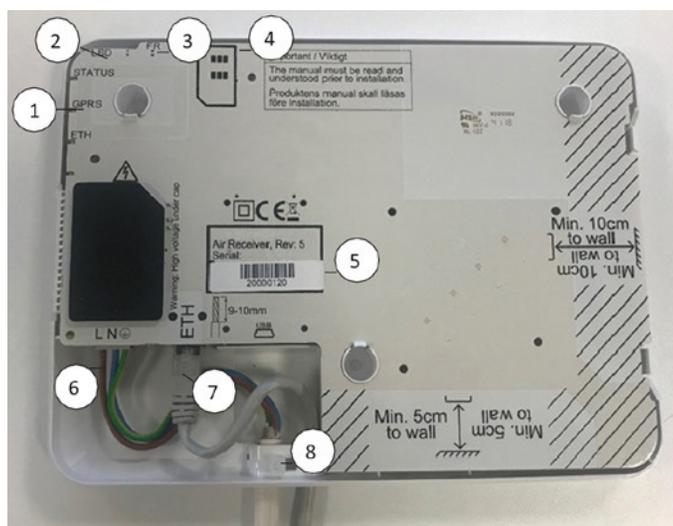
The range depends largely on the building type and construction method. In general, the following applies:

- Place the product as centrally as possible within the area to be covered. For large areas, multiple receivers or repeaters may be required.
- Avoid placing in cold areas.
- Avoid placement close to electric cables or other metal within a radius of 20cm around the unit. This also applies underneath the unit but obviously not the cables required to connect the unit.
- The product is constructed to be installed on concrete walls but a better range is achieved when installed on wooden or drywalls.
- New builds with prefabricated wall elements and low-energy windows have a strong influence on the wireless range and can require closer placement to the receiver.

Connections, buttons and indicators:



1. LED status (light visible through the casing)
2. Activation button/magnetic sensor for LEDs
3. Factory reset button
4. SIM card holder
5. Product labelling and serial number
6. Power connection (PE is optional)
7. Network connection
8. Strain relief with cable tie.



Operation:

Start the unit by connecting the power.

The unit's LEDs are activated for 1-3 minutes flashing a red/green sequence before changing to a fixed light for 10 minutes.

- Fixed green light = functioning
- Red light = malfunctioning

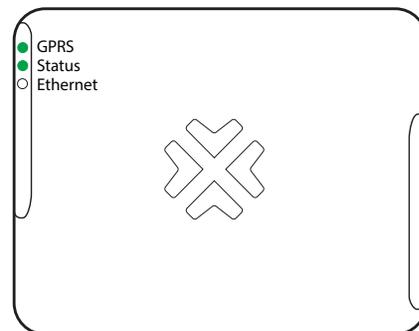
Description of the LEDs:

The LEDs verify that the installation is correct as well as confirming that the unit is functioning during its whole lifespan. The unit has three red and green LEDs. The LEDs are visible through the cover and thus can be seen without opening the unit. In normal operation these LEDs are unlit and can be activated by placing a magnet (such as a fridge magnet) on the upper corner of the unit or by pressing the LED button. After the unit is connected, the LEDs light up for 10 minutes before going out. The LEDs give information about the status of the unit.

In general, a green light indicates a functioning unit, a red light indicates a fault and a flashing green/red light indicates that the status is not yet available. An unlit light means that the function is inactive e.g. a unit configured for GPRS will have an unlit Ethernet light.

LED indicators:

LED	Explanation	Visual
Green light	Fully functional	
Red light	Fault	
Flashing green/red	Status unavailable - wait	



Inspection:

Fault	Cause	Action
The unit's lights are out.	The unit's lights go out automatically after 10 minutes. The unit has no supply voltage.	Place a fridge magnet or similar on the unit's upper left corner or activate the LEDs by pressing the LED button. Check electrical connection.
The unit's lights don't come on when activated with a magnet.	The magnet is too weak. The unit has no supply voltage.	Activate the LEDs with the push button. Check electrical connection.
The unit's lights don't come on when activated with the push button.	The unit has no supply voltage.	Check electrical connection.
The unit's lights don't go out after 10 minutes.	The unit is mounted on a non-continuous power supply eg lighting. The unit has recently updated its software.	Check that the unit is mounted on a continuous power supply.
Units installed with GPRS		
GPRS light changes to a red light.	SIM card missing. Poor/no GPRS coverage.	Check that the unit has a SIM card installed. Move the unit to a place with better coverage.
GPRS light is green, but status is red.	No contact with server.	Contact the service provider.
Units installed with Ethernet		
Ethernet light is red	Ethernet link missing.	Check the Ethernet cable.
Ethernet light is flashing red	No IP address received from DHCP. Unit configured incorrectly.	Check the connection to the DHCP server. Contact IT operator. Change the installation to a static IP.
Ethernet light is green but status is red.	No internet connection. Missing connection to server.	Contact IT operator. Contact the service provider.

Disposal of product and packaging:

The product's packaging can be disposed of as corrugated cardboard according to the relevant regulations.

After use, the product is classified as electrical waste and is disposed of according to the relevant regulations. The unit can also be returned to the manufacturer.

