

Wireless M-bus transmitter module

FMBS12-230V

Only skilled electricians may install this electrical equipment otherwise there is the risk of fire or electric shock!

Temperature at mounting location:
-20°C up to +50°C.
Storage temperature: -25°C up to +70°C.
Relative humidity:
annual average value <75%.

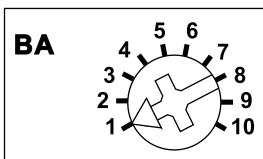
Wireless M-bus transmitter module with exchangeable antenna. With integrated power supply unit 36V DC, 60mA for up to 40 M-bus meters. Only 0.7 watt standby loss. If required, a wireless antenna FA250 or FA200 can be connected.

Modular device for DIN-EN 60715 TH35 rail mounting. 2 module = 36mm wide, 58mm deep.

Supply voltage 230V.

Data from the M-Bus Meter for power, water or gas connected to terminals MB+ and MB- are only transmitted via the Mini USB interface or in addition as wireless telegrams, depending on the operating mode.

Mode switch



Set the operating mode using the rotary switch:

Pos. 2: Continuous bus scan based on device list and data output as ESP2 report via USB.

Pos. 3: Continuous bus scan based on device list and data output as ESP3 report via USB.

Pos. 4: Cyclical bus scan (factory setting 10 minutes) based on device list

and data output as ESP3 report via USB.

Pos. 5: Same as Pos. 3 but with additional wireless output.

Pos. 6: Same as Pos. 4 but with additional wireless output.

Pos. 7: M-Bus 2400 Baud level converter. Access via the USB interface is possible using various M-Bus tools (e.g. M-Bus Sheet from Relay).

Pos. 8: Same as Pos. 7 but at 300 Baud.

Pos. 9: PCT14 communication.

Depending on the operating mode, data telegrams are either sent continuously or cyclically, not automatically when there is a change in meter reading or power.

A data telegram from each meter consists of the serial number (0xAA00008F and 0xCCB018F), meter reading Tariff 1 (0xZZZZZ09), meter reading Tariff 2 (0xZZZZZ19) and power (0xLLLLLLOC).

Start-up:

- On all M-Bus meters, connect the M-Bus terminals to the MB terminals on the FMBS12.
- Switch on the power supply to FMBS12 and M-Bus meters. The green LED (factory setting 2400 Baud) lights up for a few seconds.
- Set a different M-Bus device address (1-40) for each M-Bus meter.
On M-Bus three-phase power meters DSZ12DM and DSZ12WDM, set the M-Bus primary address using the SELECT and MODE buttons.
- Then generate the device list.

Create device list:

- Turn the rotary switch 3 times to Pos. 10 and then leave it there.
While the device list is being generated, the LED flashes red on request and green on reply.
After approx. 2 minutes, generation ends and the red LED lights up continuously.
- Then turn the rotary switch to the required operating mode.

Send teach-in telegram:

- Turn the rotary switch to Pos. 1.
After approx. 5 seconds, all teach-in telegrams are sent in succession according to the device list.
- Then turn the rotary switch to the required operating mode.
Power meter teach-in telegram (EEP: A5-12-01): 0x48080D80
Gas meter teach-in telegram (EEP: A5-12-02): 0x48100D80
Water meter teach-in telegram (EEP: A5-12-03): 0x48180D80

Toggle Baud rate between 2400 Baud <-> 300 Baud:

- Turn the rotary switch 3 times to Pos. 1.
The LED lights up green for 2 seconds = 2400 Baud.
The LED lights up red for 2 seconds = 300 Baud
- Then turn the rotary switch to the required operating mode.

The **red LED** indicates Request mode by flashing briefly.

The **green LED** indicates Reply mode and data output by briefly flickering.

Error message:

The red LED flickers rapidly when a short circuit or overload occurs on the M-Bus.

Configure FMBS12:

The following points can be configured using the PC PCT14 tool:

- Change base ID
- Change Baud rate
- Limit or raise number of device addresses
- Change cycle time for bus scan
- Edit device list
- Select meter type (medium)



The maximal allowed USB cable length is 4.5m.

For a safe communication at longer distance, an USB hub must be used.

ELTAKO GmbH hereby declares that the products that relates to this operating manual, are in compliance with the essential requirements and other relevant provisions of directive 1999/5/EC.


A copy of the EU declaration of conformity can be requested at the address below.

Must be kept for later use!


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