

## 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%.

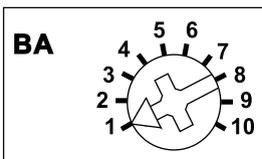
Wireless M-bus transmitter module with exchangeable antenna. With integrated power supply unit 36V DC, 60mA for up to 40 M-bus meters. Only 0.7 watt standby loss. If required, a wireless antenna FA250 or FA200 can be connected.

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:

1. On all M-Bus meters, connect the M-Bus terminals to the MB terminals on the FMBS12.
2. Switch on the power supply to FMBS12 and M-Bus meters. The green LED (factory setting 2400 Baud) lights up for a few seconds.
3. 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.
4. Then generate the device list.

#### Create device list:

1. 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.
2. Then turn the rotary switch to the required operating mode.

#### Send teach-in telegram:

1. Turn the rotary switch to Pos. 1.  
After approx. 5 seconds, all teach-in telegrams are sent in succession according to the device list.
2. 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:

1. 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
2. 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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