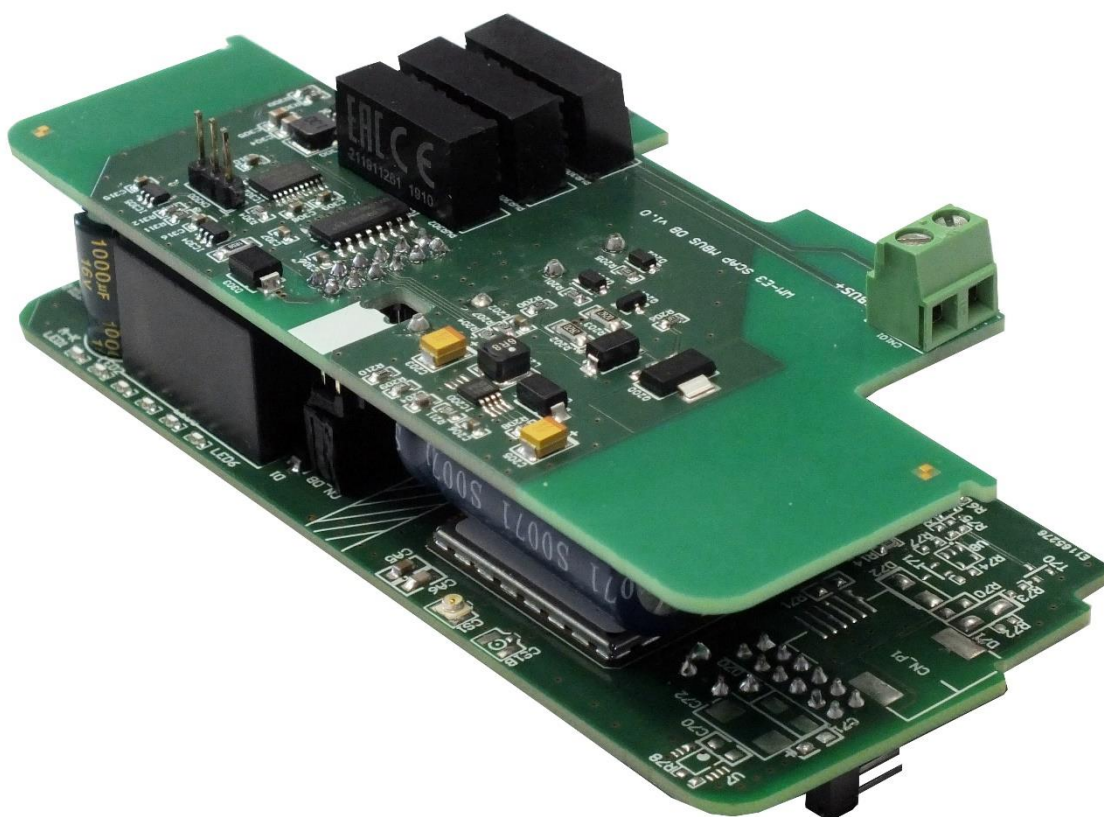


# WM-E3S MBUS<sup>®</sup> modem

## Installation Guide and Modem Configuration



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Rev: 1.7.2

2022-01-20

## Document specifications

|  |  |
|--|--|
| <b>Document Version:</b>                         | REV 1.7.2  |
| <b>Hardware Type/Version:</b>                    | WM-E3S MBUS® modem for Elster / Honeywell AS3000 / AS3500 electricity meters, M-Bus water meters |
| <b>Hardware Version (Mainboard):</b>             | V 3.27 / V4.40   |
| <b>Hardware Version (additional MBUS board):</b> | WM-E3 SCAP MBUS DB 1.0   |
| <b>Firmware Version:</b>                         | V 2.68   |
| <b>WM-E Term® config. software version:</b>      | V 1.3.78   |
| <b>Pages:</b>                                    | 30   |
| <b>Status:</b>                                   | Final  |
| <b>Created:</b>                                  | 15-11-2016   |
| <b>Last Modified:</b>                            | 20-01-2022   |

## Chapter 1. Introduction

Our company develops cellular modems that work smoothly and are fully compatible with the Honeywell / Elster electricity meters, which represent a future-proof migration solution to the LTE network.

This modem can be readout (the measured energy consumption of the connected electricity meters) remotely for the request of the HES center.

The modem can also read out the alarms of the meters, then push them to the HES center by DLMS protocol.

### Connection possibilities:

- 1 electricity meter to the modem
- 4 water meters (MBUS) to the modem

The water meters are readout by the modem, the consumption can be readout in „pull” mode via DLMS protocol.

The device was designed to fit under the terminal cover of the meter and it is compliant with the Honeywell / Elster standards.

Configuration and firmware updates can be done remotely by the WM-E Term<sup>®</sup> software, minimizing the need for costly site visits.

### **Wireless communication**

The modem supports the multi-operator SIM and the roaming feature, and it is compatible with SIM-Toolkit.

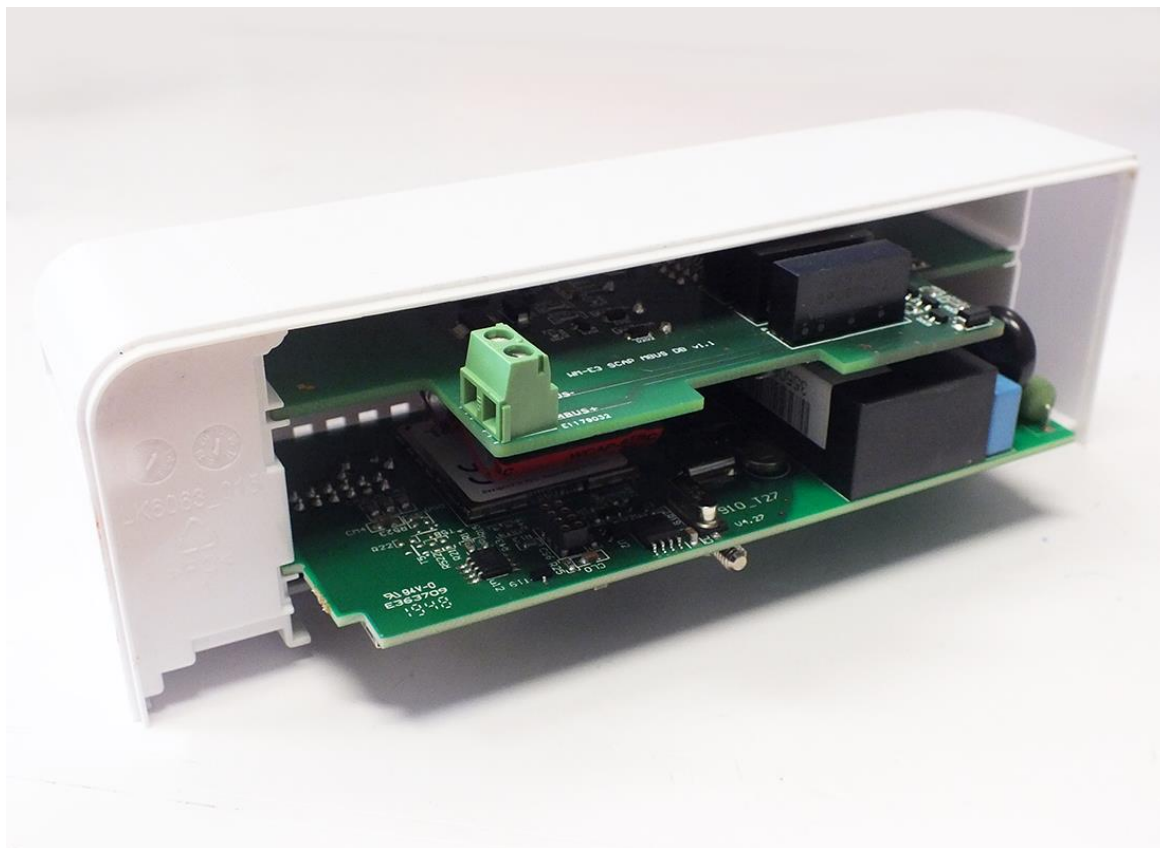
The communication module is a part of the Smart Metering concept.

The device provides a SIM-card independent- and mobile operator independent solution.

### **Design and compatibility**

The communication module is a part of the Smart Metering concept. The modem was especially developed for **Elster<sup>®</sup> / Honeywell<sup>®</sup> AS3000/AS3500** type electricity meters, but **can be connected to IEC meter or M-Bus capable water meters.**

The modem can be connected to the meter by sliding into the meter's communication module slot and there it can be sealed.



Thus, the modem presents a compact solution, the dimensions of the meter will not change if a modem is fitted or not. This solution offers the possibility of future upgrade of the electricity meter with a communication module and is ideal for installations where there is restricted assembling space.

### **Operation properties, features**

The modem is suitable for readout and send the meter's actual and stored consumption values, access the recorded event log, read the load profile data. Able to read or modify the parameter set of the meter device - remotely. It can be accessed remotely through the cellular network (by the Telit® module) and it is able to send data on the Internet by using an APN.

### **Power source and power outage**

The modem is powered by 230V AC power through the meter's integrated mains connector.

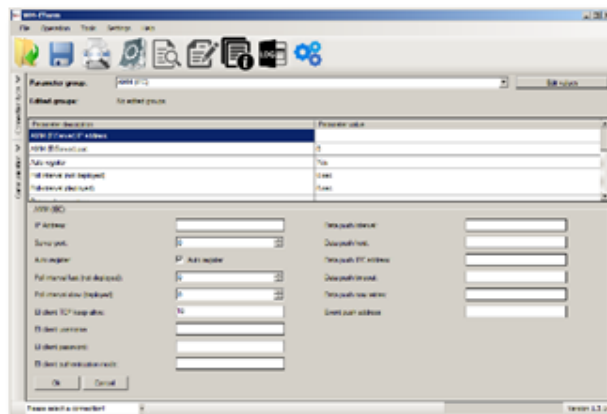
## Supercapacitor

The device is equipped with supercapacitors, which are preventing the intermittent power cuts and help decrease power peaks. It is enabling to keep the module in operation during small power outages (for max. 2 minutes).

## Configuration

The modem is configurable via TCP/UDP port remotely (or via local serial connection) and operating on the wireless network by configuring the APN, username and password (APN information is provided by your local mobile operator).

All settings can be configured with our administration tool - the WM-E Term® software - but also API available so our partner can easily adapt their current administration environment.



. The configuration is possible for singular or multiply devices. The WM-E Term® software is password protected and user management is also possible. The multilingual configuration tool requires Windows® platform to be executed.

## Firmware refresh

The WM-E Term® also provides safe firmware change for one or group of devices – by locally or remotely.

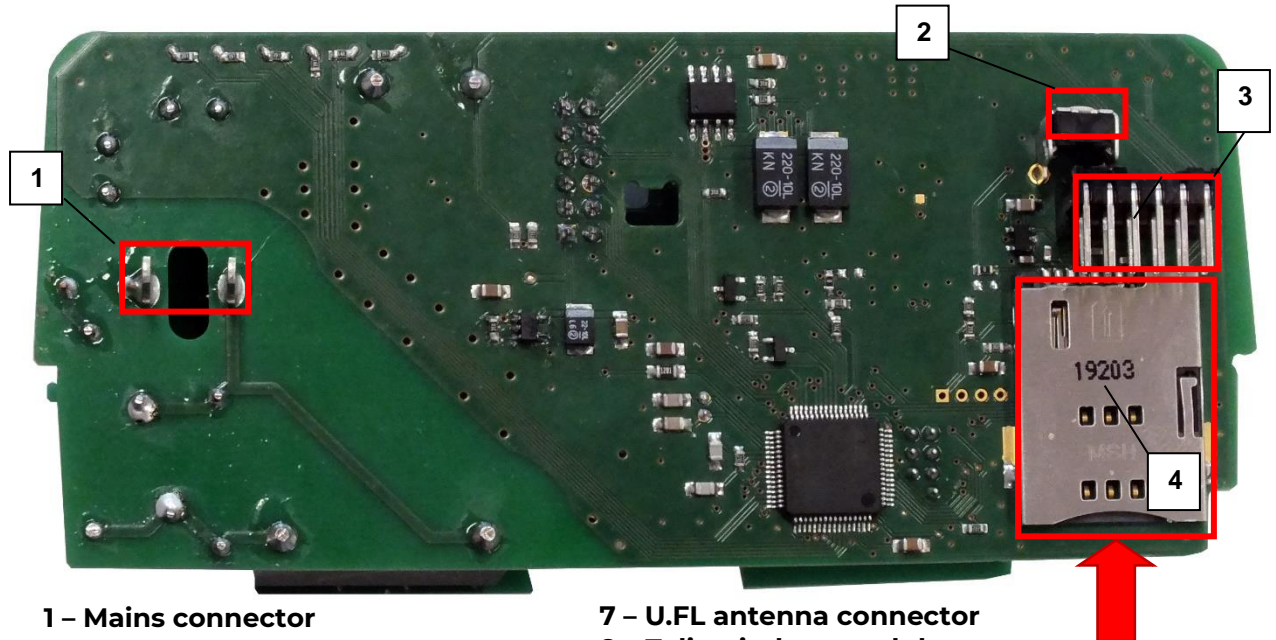
## Certification

The modem is accomplishing with CE standard (Radio Equipment Directive (2014/53/EU)) and safety directives (EN 60950-1) and RoHS declaration.



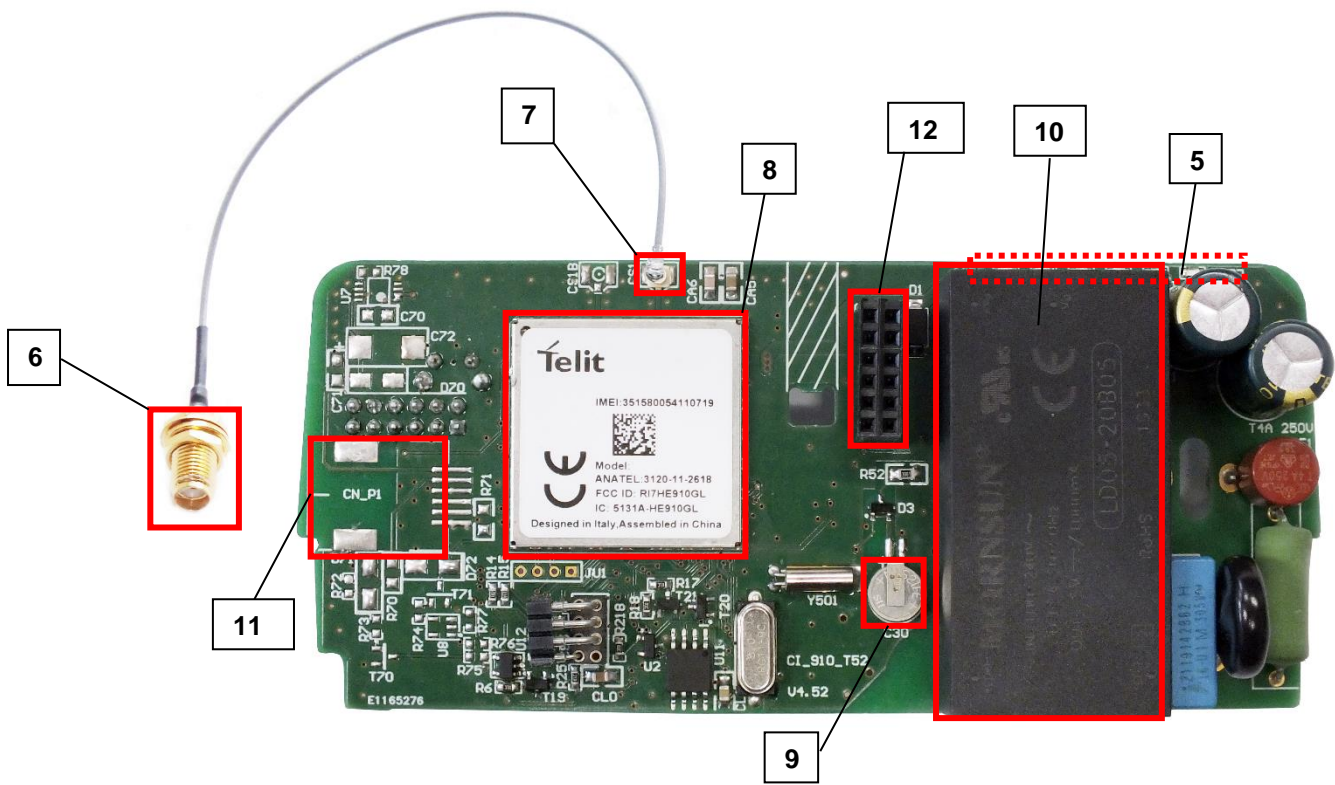
## Chapter 2. Connections

### 2.1 Interface connectors, internal connections (mainboard)

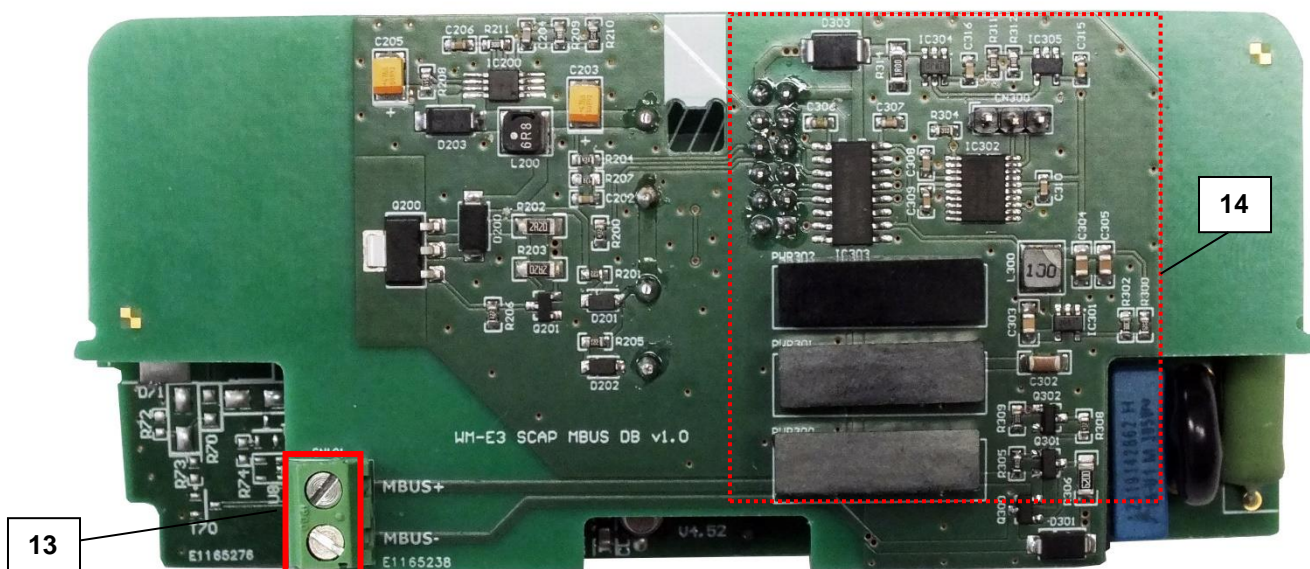


- 1 – Mains connector
- 2 – Push button
- 3 – ATP connector (to the meter)
- 4 – SIM card socket (push-insert, mini SIM card, type 2FF)
- 5 – 6pcs Status LEDs
- 6 – SMA antenna connector

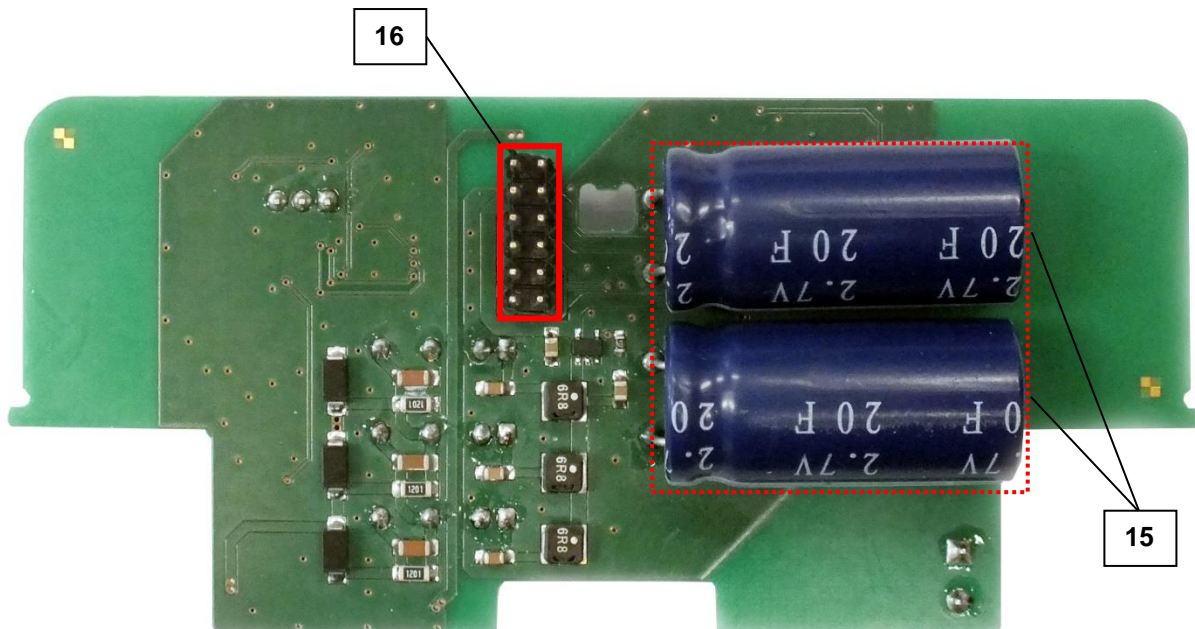
- 7 – U.FL antenna connector
- 8 – Telit wireless module
- 9 – Rechargeable battery (for RTC clock)
- 10 – Power adapter unit
- 11 – Optional RJ12 interface Customer Interface connector (6P6C) – by order request
- 12 – Data connector (for M-Bus expansion board)



## 2.2 Interface connectors (M-Bus expansion board)

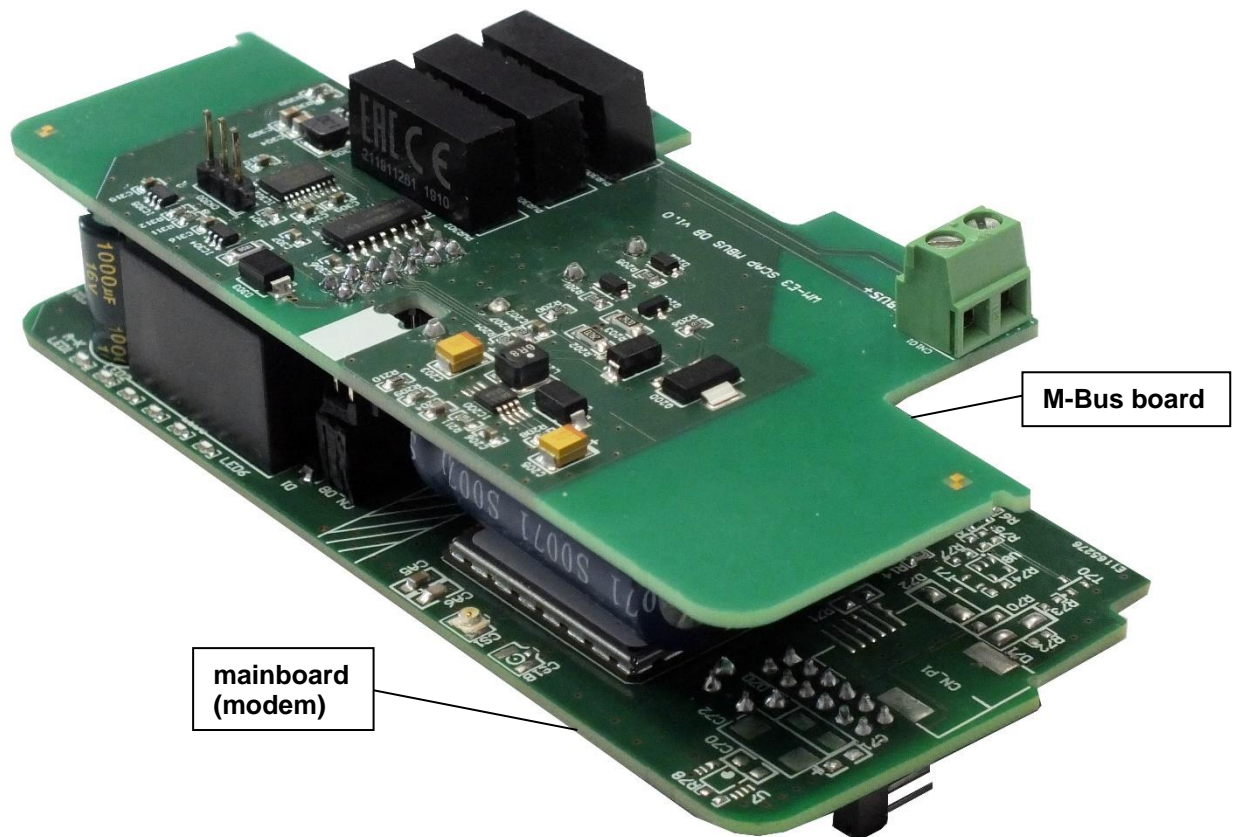


- 13 – MBUS input for meters
- 14 – Wired MBUS hardware support (electronic parts)
- 15 – Supercapacitors (against power outage)
- 16 – Data connector on MBUS board (for mainboard connectivity)





## 2.3 Assembled modem (mainboard + M-Bus expansion board)



*We deliver the modem as assembled product - as it is shown in the picture*

## 2.4 Inserting a SIM card

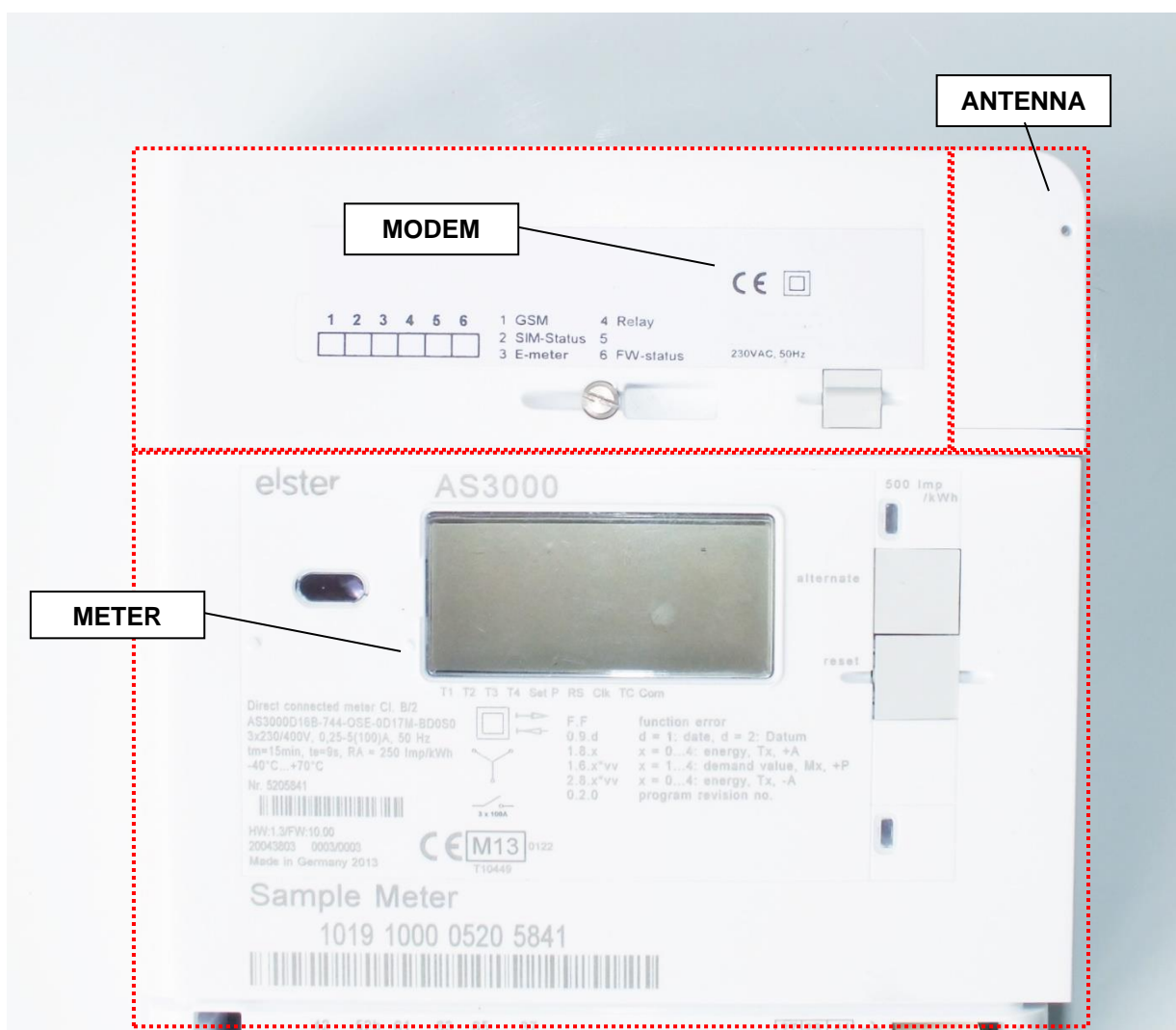
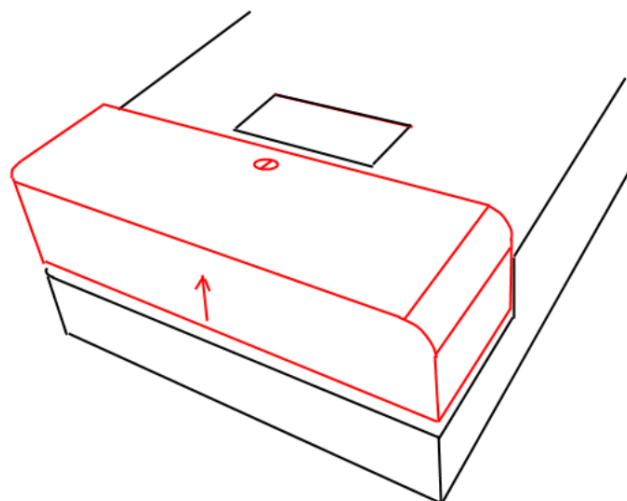
Insert an activated SIM card into the push-insert SIM card slot (4). The SIM card is replaceable by pushing the inserted SIM card – if it is necessary.

The SIM-card PIN code can be configured by the **WM-E Term®** application.

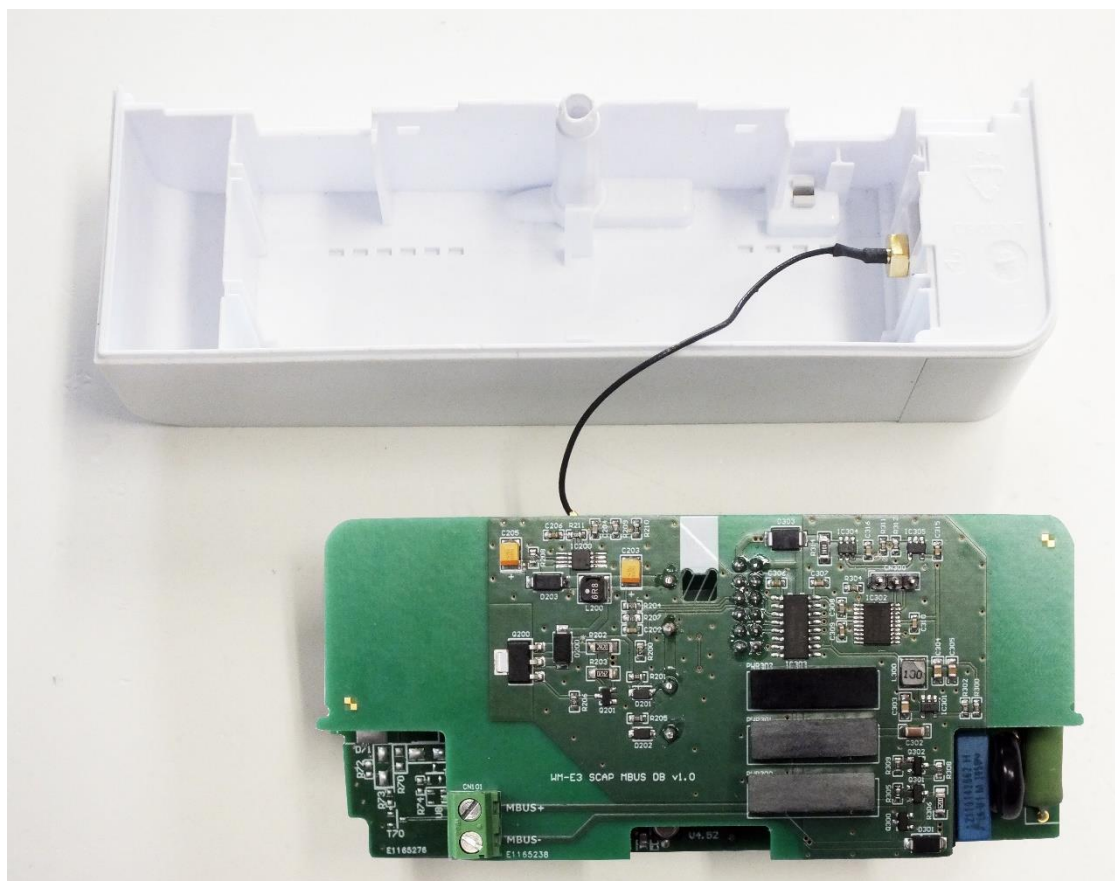


## 2.5 Connecting the modem the Elster® AS3000, AS3500 meter

Remove the Elster® AS3000/AS3500 meter's communication module plastic case by releasing the screw from the top middle part of the housing.

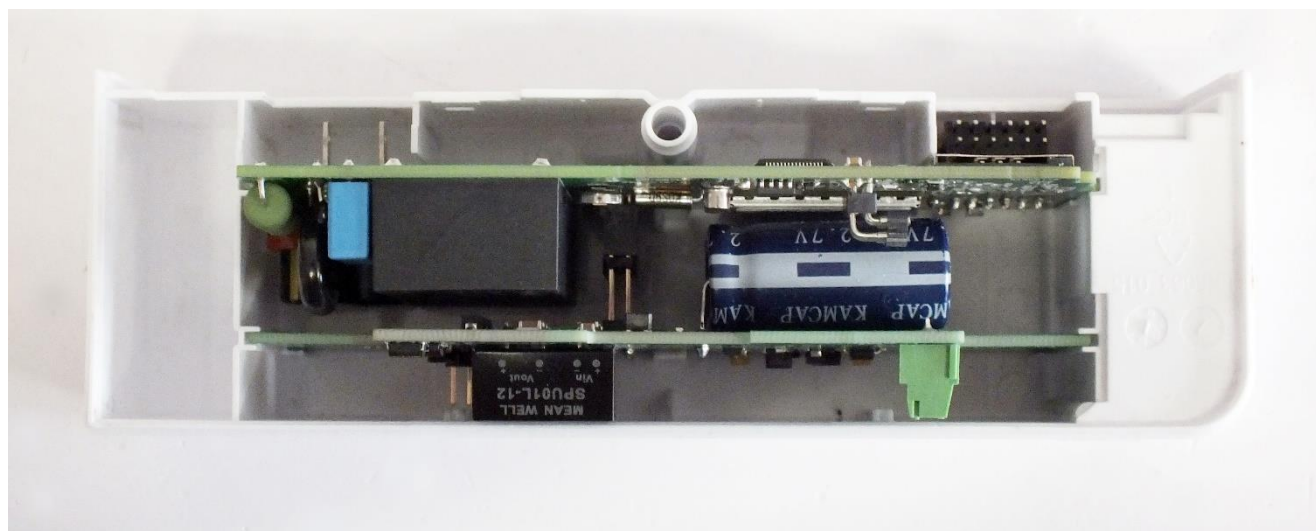


Inside the communication unit's case mount the SMA-M antenna interface connector (6) on the housing (fix it with the SMA connector's screw).



Snap the modem unit (mainboard + expansion board) into the communication module terminal's plastic enclosure by sliding into, through the guiding rails of the case. Insert the modem into the right orientation into the slot. Check the 12-pin data connector (3) position – according the next picture.

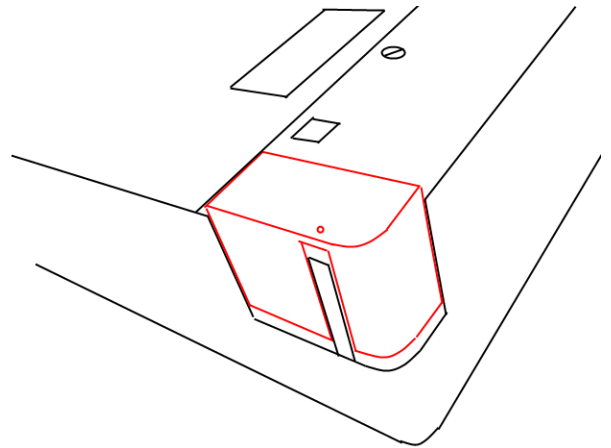
Push the modem into the terminal enclosure, until you'll hear a click sound.



The interface connector (3) is close to the SMA antenna connector (6) (right top side on the picture).



At the center of the modem, you will find two plastic hooks, which help you at the fixation into the enclosure. (If you want to remove the modem, push these hooks carefully, and it's free to remove the module from enclosure's case.)

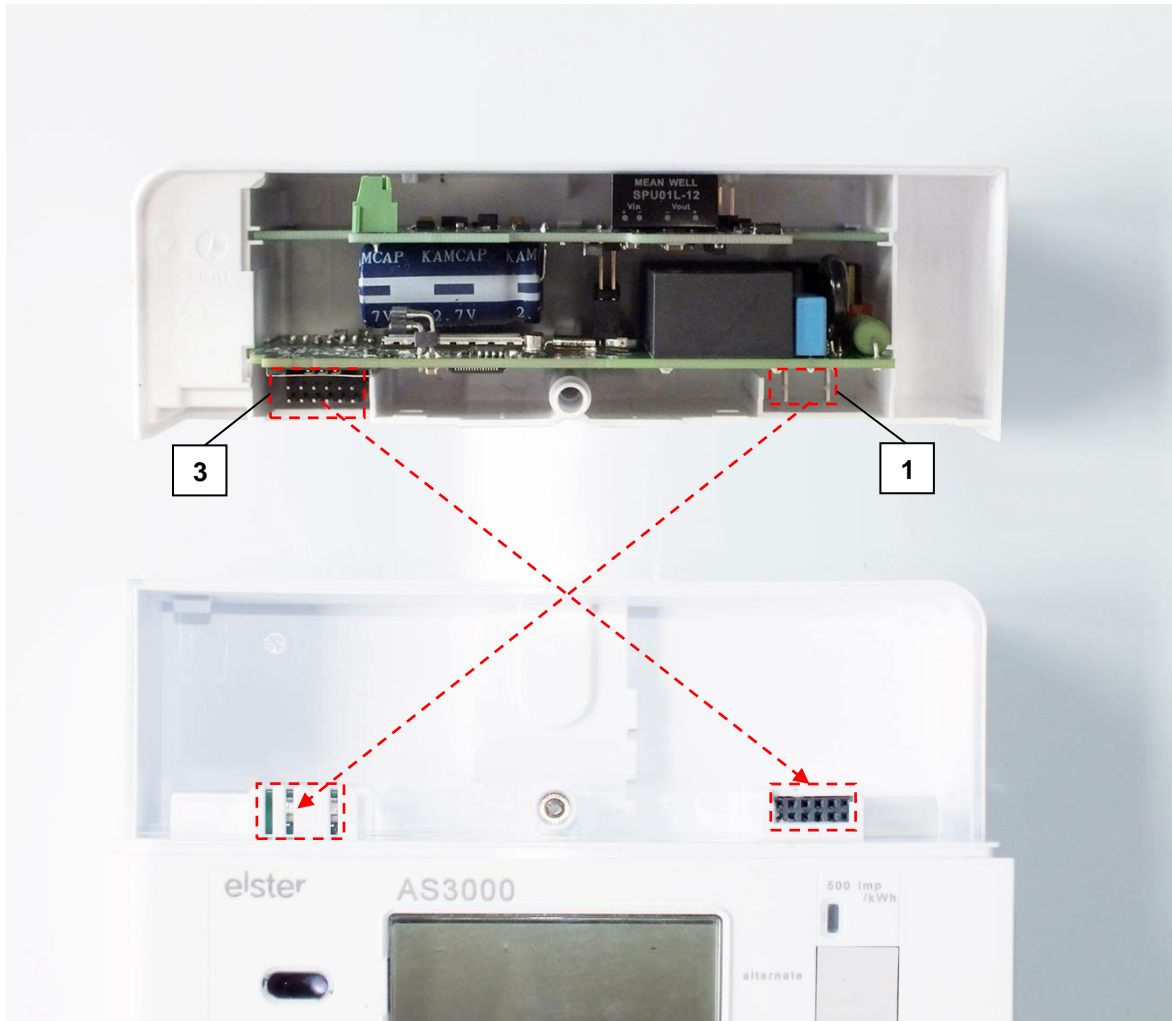


Remove the separate cover by a sharp tool, remove upwards and connect the antenna to the SMA interface. Slide the plastic part back

Connect the communication module to the meter by sliding the modem into the meter enclosure.

The communication interface (3) and the mains connectors (1) must be connected to the connector pairs from the meter housing.

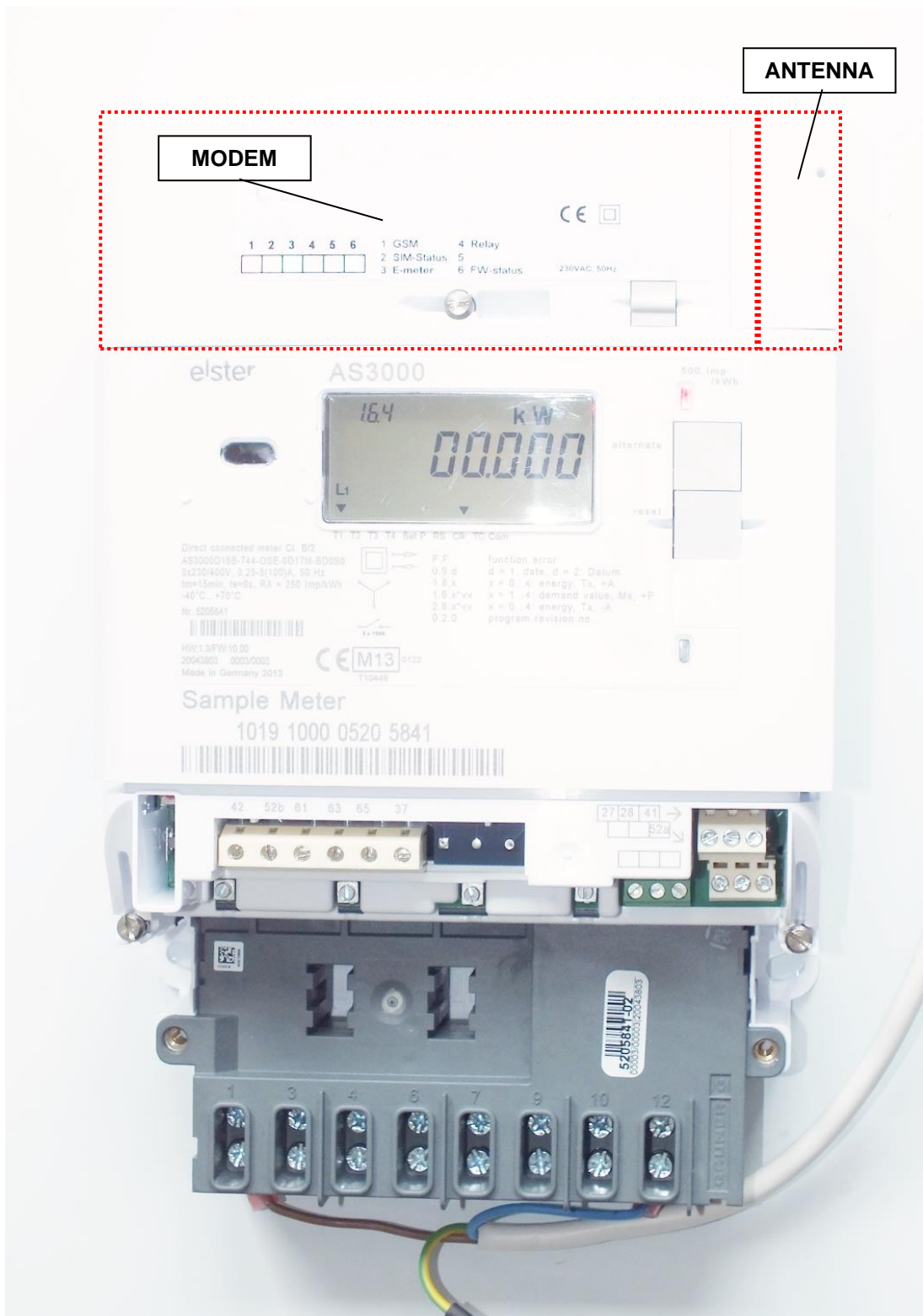
Check the 12-pins data connector and the power connector (2-pins) position in the picture. You will find the same connectors' opposite part at the bottom meter side, which you have to connect.

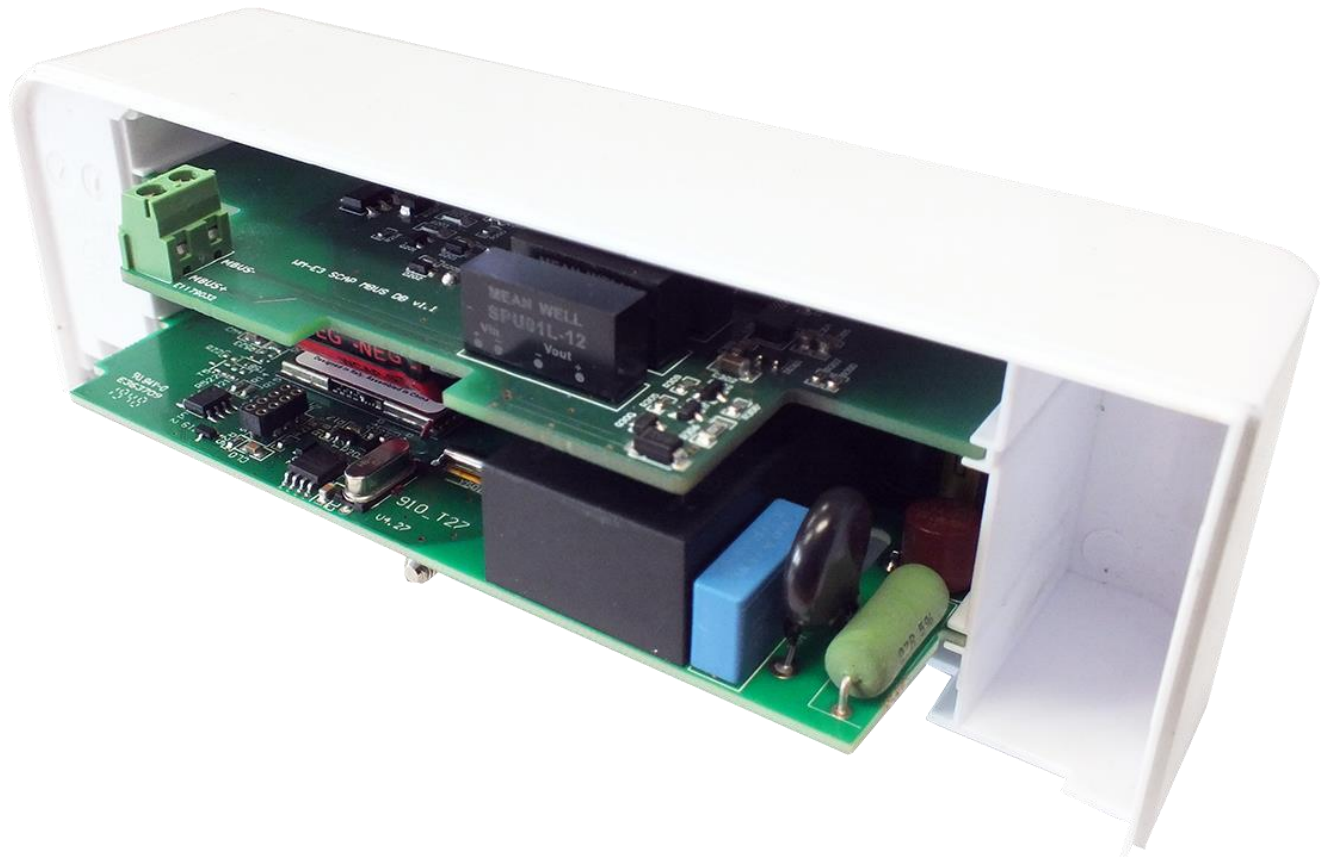


The meter's terminal module housing upper right edge is rounded as a sign of the perfect slide fit the adaptation to the meter.

After assembling, attaching the modem terminal unit and turning on the meter, the modem will be immediately powered on, and its operation is confirmed by the LED signals.







## 2.6 Antenna connection

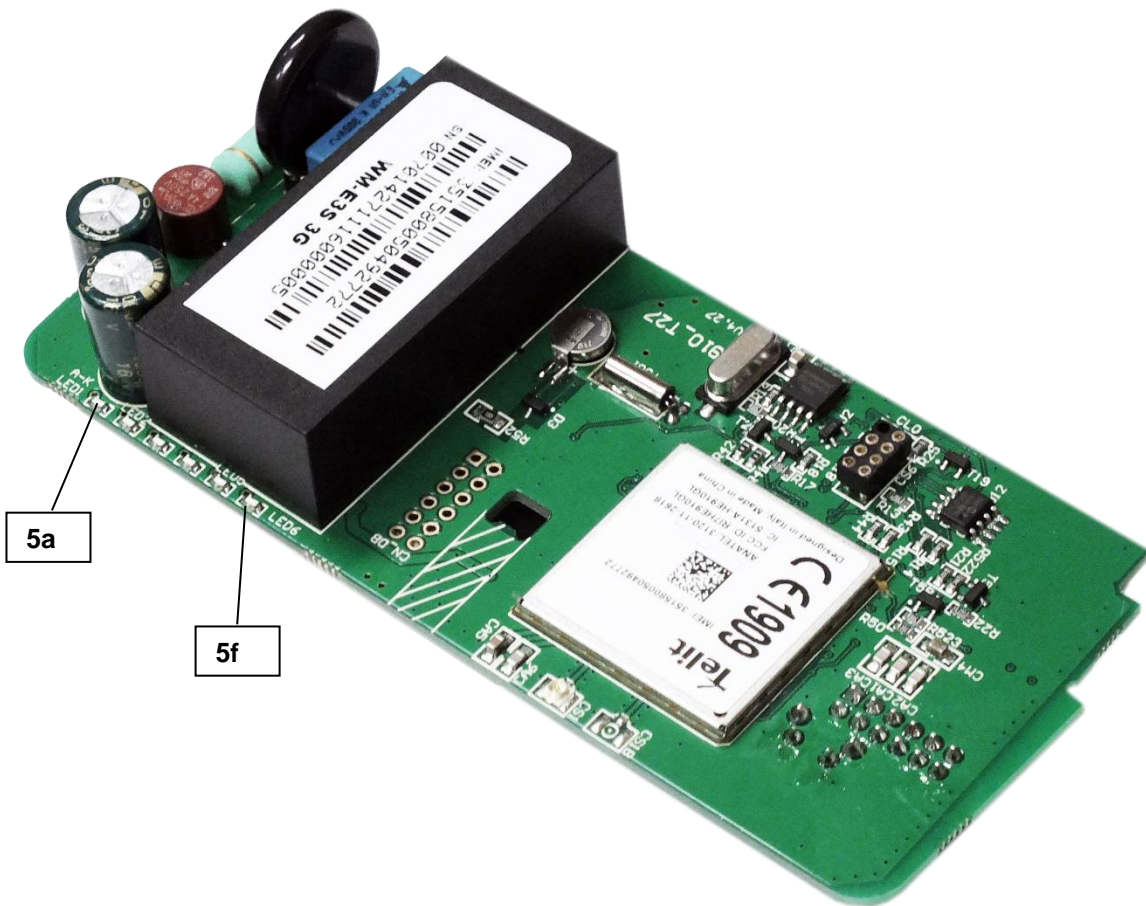
For proper operation of the communication module it is necessary to have appropriate cellular network signal strength.

At the locations, where the signal strength is strong it is possible to use internal antenna, for areas with poor reception mount an external antenna (50 Ohm SMA-M connected) to the antenna connector (6) of the device.

## 2.7 Status LED signals

The modem has 6 LED lights with factory default operation – which will be listed on the next page.

The LED identifiers can be found on the PCB – from left to right the sequence (according to the next photo) it is the following: LED title **LED1** (left – “5a” signed on the figure), **LED6** (right – signed by “5f” on the figure).



### Factory default LED signals:

| LED identifier   | Events  |
|--|---|
| <b>LED 1</b><br><b>GSM / GPRS status</b>               | <ul style="list-style-type: none"> <li>During network registration: led is <i>active</i></li> <li>During network search: <i>blinking once per second</i></li> <li>When connected to the network and the IP connection is fine: <i>flashing twice per second</i></li> <li>When the mobile network access technology was changed: <i>quick flashing will be relied</i>: <ul style="list-style-type: none"> <li>2G → 2 flashing per second</li> <li>3G → 3 flashing per second</li> <li>4G → 4 flashing per second</li> </ul> </li> <li>If no network is detected: the led will be blank</li> <li>The LED is lighting continuously during CSD call the IP data transmission</li> </ul> |
| <b>LED 2</b><br><b>SIM status / SIM or PIN failure</b> | <ul style="list-style-type: none"> <li>When the SIM PIN is okay: led is <i>active</i></li> <li>If there is no SIM detected or SIM PIN is wrong: <i>blinking once per second</i></li> <li>RSSI signal strength: led <i>flashing according the RSSI value</i> (1 sec RSSI value blinking, then 1 sec delay) <ul style="list-style-type: none"> <li>RSSI ≤ -98 → 1 flashing</li> <li>RSSI &gt; -98 and ≤ -83 → 2 flashing</li> <li>RSSI &gt; -83 and ≤ -68 → 3 flashing</li> <li>RSSI &gt; -68 → 4 flashing</li> </ul> </li> </ul>   |

|  |  |
|--|--|
| <b>LED 3</b><br><b>E-meter communication</b> | <ul style="list-style-type: none"> <li>During the transparent meter communication: <i>flashing twice per second</i>.</li> <li>At finish of the transparent communication: led is <i>blank</i>.</li> <li>According the IEC meter status: the LED will be <i>active</i>.</li> <li>In case of configuring the Multi Utility mode: led will be <i>active</i> or <i>blank</i>.</li> </ul> |
| <b>LED 4</b><br><b>M-Bus status</b>          | <ul style="list-style-type: none"> <li>When MBUS communication is active: <i>flashing</i></li> <li>In case of no MBUS communication: <i>inactive</i></li> </ul>  |
| <b>LED 5</b><br><b>-</b>                     | <ul style="list-style-type: none"> <li>not available</li> </ul>  |
| <b>LED 6</b><br><b>Firmware status</b>       | <ul style="list-style-type: none"> <li>When the modem has been initialized: <i>led is active</i></li> <li>Firmware refresh: <i>no led change</i></li> <li>When the modem has been started: <i>flashing in every 2 seconds</i></li> </ul>   |

Over the factory default settings, the operation of the LED signals and its sequence can be changed by the WM-E Term® configuration tool, at the **Standard Meter Interface** parameter group, where you can define one of the following functions of the leds (LED1..LED6) according the next list:

**Further configurable LED status signals:**

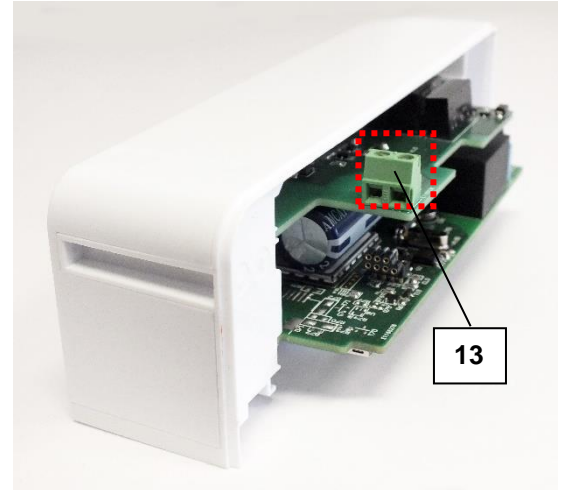
| LED status                                  | Event   |
|---|---|
| <b>Network status and access technology</b> | <ul style="list-style-type: none"> <li>Network registration: the LED is active</li> <li>During the network searching: flashing once per second</li> <li>When connected to the network and the IP connection is fine: flashing twice per second</li> <li>If the cellular network access technology was changed: signed by quick flashing <i>according the technology by the following</i>: <ul style="list-style-type: none"> <li>2G → 2 flashing / second</li> <li>3G → 3 flashing / second</li> <li>4G → 4 flashing / second</li> </ul> </li> <li>If there is no available network: the LED is inactive</li> </ul> |
| <b>Meter status with IEC polling</b>        | <ul style="list-style-type: none"> <li>When the modem ↔ meter starts the communication, the LED is flashing once per second.</li> <li>When the meter answers to the modem during the communication, the LED will be turned on.</li> <li>When the modem cannot communicate with the meter permanently, the LED will be turned off.</li> </ul>  |
| <b>AMM (IEC) client state</b>               | <ul style="list-style-type: none"> <li>By default, or in case of finishing the communication of the modem ↔ EI client the LED is turned off</li> <li>During the modem ↔ EI client ** connection build-up the LED flashing shortly once in every second</li> <li>The EI client** at login request – flashing once per second</li> <li>The EI client** ↔ modem communication was built– the LED is active</li> </ul>  |

**\*\*The EI client is the transparent TCP channel from the modem to the EI server**



## 2.8 MBUS connection

There are two modes of connecting MBUS meters to the modem (currently max. 2 MBUS capable water meters). You cannot use the two type of MBUS connection in the same time, therefore choose one wiring mode of the following options, please.

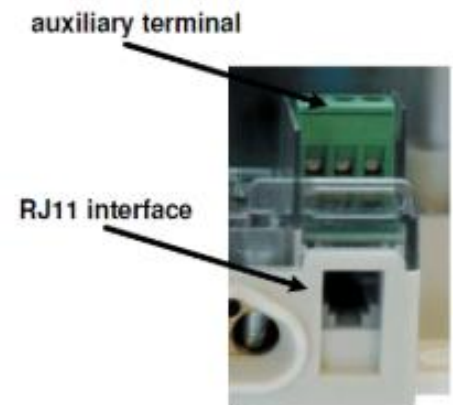


### Option a)

There is an MBUS input connector (13) on the modem's MBUS expansion part. By using this interface – according to the PCB printed wiring polarity – connect the external meter to this interface

### Option b)

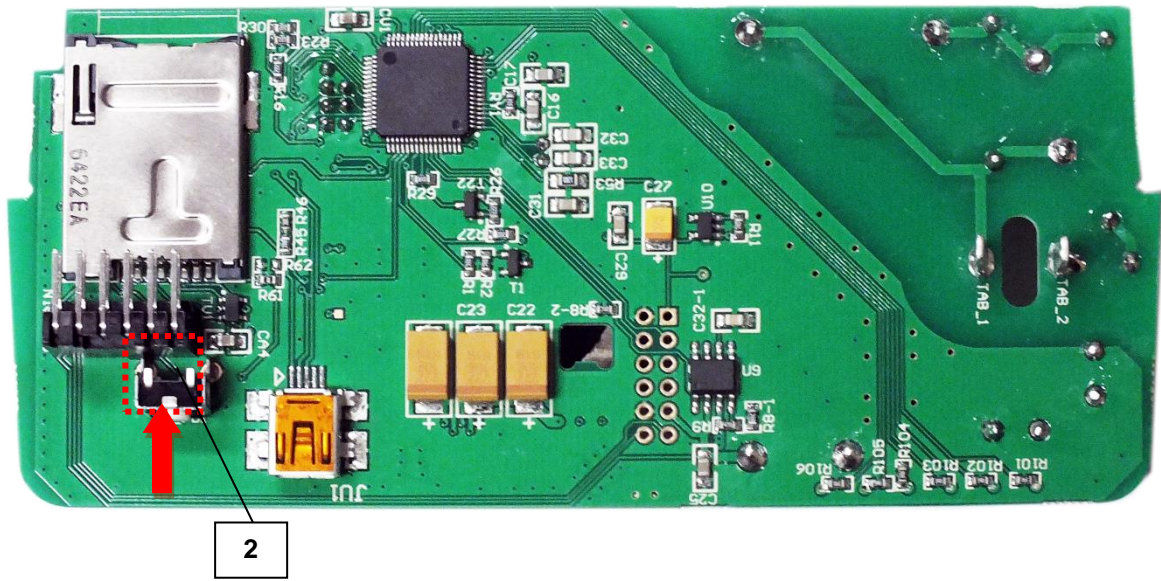
You can use the MBUS capable electricity meter's auxiliary terminal block for connecting MBUS meters. This is connected through the modem's internal data connection (12). Check the proper wiring polarity in the meter's user manual.



## 2.9 Push button

The modem has a push button (2). After assembling the modem into the meter's enclosure, you can use the external button to adjust. When using the button:

- by short pushing: the wireless network signal strength will be signed on the LEDs 1-4 (more LED signals meaning better signal)
- by longer pushing (for 3-5 seconds) – until all the 6 LEDs will be blinking once: the used network technology will be signed by the following:
  - o LED2 will be active: when 2G network is used
  - o LED3 will be active: when 3G network is used
  - o LED4 will be active: when 4G network is used
  - o etc.



---

## 2.10 Power outage management

The LastGasp notification (SMS feature) is currently inactive – not implemented yet.

The supercapacitors are active and will provide temporary power source for the modem, during the power outage – for max. 2 minutes.

The power outage is not signed by the LED signals.

After the recovery of the AC power source the supercapacitors will be automatically charged – ca. 2-5 minutes is required for the full charge.

*When the notification will be available, the LastGASP message settings can be enabled by the WM-E Term<sup>®</sup> application – in the AMM (IEC) parameter group part.*

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## Chapter 3. Modem Installation Guide

The communication modems can be configured by the **WM-E Term®** software or the **DM Set® / AlphaSet®** software which is also suitable for setup the electricity meter through a serial connection.

The **WM-E Term®** tool is suitable over the communication settings to readout the data and registers and the **MBus data** of connected meters.

Over the parameter settings of meter, modem and communication, you can also test the modem communication by the configuration program.

### **Important!**

*During the configuration the modem is not connected to the meter, therefore it cannot readout the parameter values through the meter-modem interface.*

We offer to **use the WM-E Term® configuration software** to perform the settings according its user manual – check the manual for settings.

For the proper communication of the modem, you have to configure at least the APN settings of the SIM – as PIN code, APN, username and password. These all can be configured by using the WM-E Term® software.

For the successful operation of the communication module it is necessary to have appropriate signal strength.

### **3.1 Configuring the modem by WM-E Term®**

The Microsoft .NET framework runtime environment is required on your computer. For modem configuration and testing you will need an APN/data package enabled, active SIM-card with.

Sure, the configuration is possible without a SIM card, but in this case the modem is performing restart periodically, and some modem features will be not available until the SIM card is inserted (e.g. remote access).

If the modem was not supplied by power for a long time, it needs to be charged before usage.



It takes about ~2 minutes to charge if the supercapacitor was exhausted / discharged. See: *LED signals part*

Download the WM-E Term® software by this link from your browser:

[https://www.m2mserver.com/m2m-downloads/WM\\_ETerm\\_v1\\_3\\_80.zip](https://www.m2mserver.com/m2m-downloads/WM_ETerm_v1_3_80.zip)

Unzip the .zip file and start the software by the *WM-ETerm.exe* file.

Login into the configuration software by the default password. You can change the password for the configuration anytime you want. Check the WM-E Term® *User Manual* for more!

WM-E Term User Manual:

[https://m2mserver.com/m2m-downloads/WM-E-TERM\\_User\\_Manual\\_V1\\_94.pdf](https://m2mserver.com/m2m-downloads/WM-E-TERM_User_Manual_V1_94.pdf)


WM-E 3S MBUS Firmware (v2.6.8):

***Ask our sales!***

WM-E 3S MBUS Default configuration file:

[https://m2mserver.com/m2m-downloads/WME3S\\_MBUS\\_20210113\\_125757.zip](https://m2mserver.com/m2m-downloads/WME3S_MBUS_20210113_125757.zip)

### 3.3 Signal strength

Check the WM-E Term® program's *Device information* menu item – or simply use the  icon.

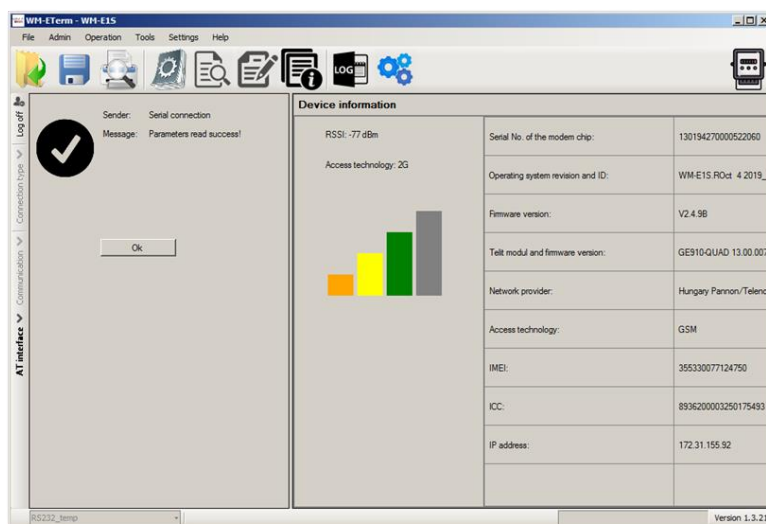
Check the RSSI value that the available signal strength is enough (yellow means average signal quality and the green – which means the reception is good).

When you get poor signal quality, change the antenna position or direction until you will receive better dBm value (the status must be read again before re-check).


### 3.4 Parameter configuration

The general operation requires to make the cellular communication settings and SIM settings of the modem (APN, APN username, password and PIN code, network usage method).

The meter communication requires to define the communication port, the RS232 settings (transparent mode, baudrate, data format, transmitting speed), LEDs settings and to save the settings by the WM-E Term® software then upload/send to the modem by the *User Manual* of the software.



#### Main settings:

1. Choose the **Parameter read**  icon to connect to readout the current settings of the modem.
2. Choose the **APN** parameter group, and push to the Edit settings button. Add the *APN server name* value, if necessary give the *APN username* and *APN password* values and push to the OK button.
3. Then choose the **M2M** parameter group, and push to the Edit settings button. At the *Transparent (IEC) meter readout port*, give the *PORT number*, which you are attempted to readout the meter. Add this *PORT number* to the *Configuration and firmware download*, which you want to use for remote parametrization of the modem / for the further firmware exchange.
4. If you have to use *SIM PIN* then choose the **Mobile network** parameter group, and add the *SIM PIN* to the field. Here you can change a *Frequency band* 4G only, LTE to 2G (for fallback feature), etc). You also can select here a dedicated mobile network provider (auto or manual). Then push to the OK button.

5. The RS232 serial data port transparent settings can be made at the **Trans. / NTA** parameter group.

The default settings: Multi utility mode: *transparent mode*, Meter port baud rate: 9600, *Fix 8N1 data format at meter* – enable the checkbox). Then push to the **OK** button.

Note that the modem can be **configured** at **9 600** to **115 200 baud** on serial port, with **8N1** data type. You also can use remote **TCP/IP** connection for configuration.

### **Important Notes for M-Bus**

- The **MBUS data transfer** speed is operating on **2 400 baud** rate by default, but you can use higher data speed if you want.
- At the same time, currently max. **two MBus** capable **meters** can be connected to the modem simultaneously.
- **The modem uses the following ports during its operation:**
  - **port nr. 9000 for transparent communication** to tge electricity meter.
  - **port nr. 9001 is used for the configuration** of the modem (for WM-E Term).
  - **port nr. 9002 is the DLMS port, which used for the lastly read out MBUS meter readout by DLMS protocol**
- M-Bus meter is identified by its address (with the primary or secondary address).
- The measured data are identified by the ordinal “place” in the list of M-Bus fields. The numbering starts from zero.
- Only one value can be read from one device. You can leave the ‘Required field number’ field blank. In that case when the device tries to figure out the consumption data.

6. The **MBus** settings can be configured in the **MBus** parameter group.

## 7. Reading M-Bus meters with HHU on Optical interface

After the Elster meter is operating in transparent mode, a second address needs to be opened for the connection on the M-Bus channel.

**Important!** This and further M-Bus communication are working with **9600 8N1** frame.

**Do not use the usual M-Bus 8E1 !**

```
HHU put the Elster Meter to "Transparent mode"

!! switch to 9600 8N1
HHU → Meter      /?99999992!<CR><LF>

Meter → HHU      /EL85\3 V2.6.4g<CR><LF>

===== channel opens after 300 ms =====

      M-BUS messages ↔

===== channel closes after inactivity timeout =====
!! switch to Elster Meter comm. settings

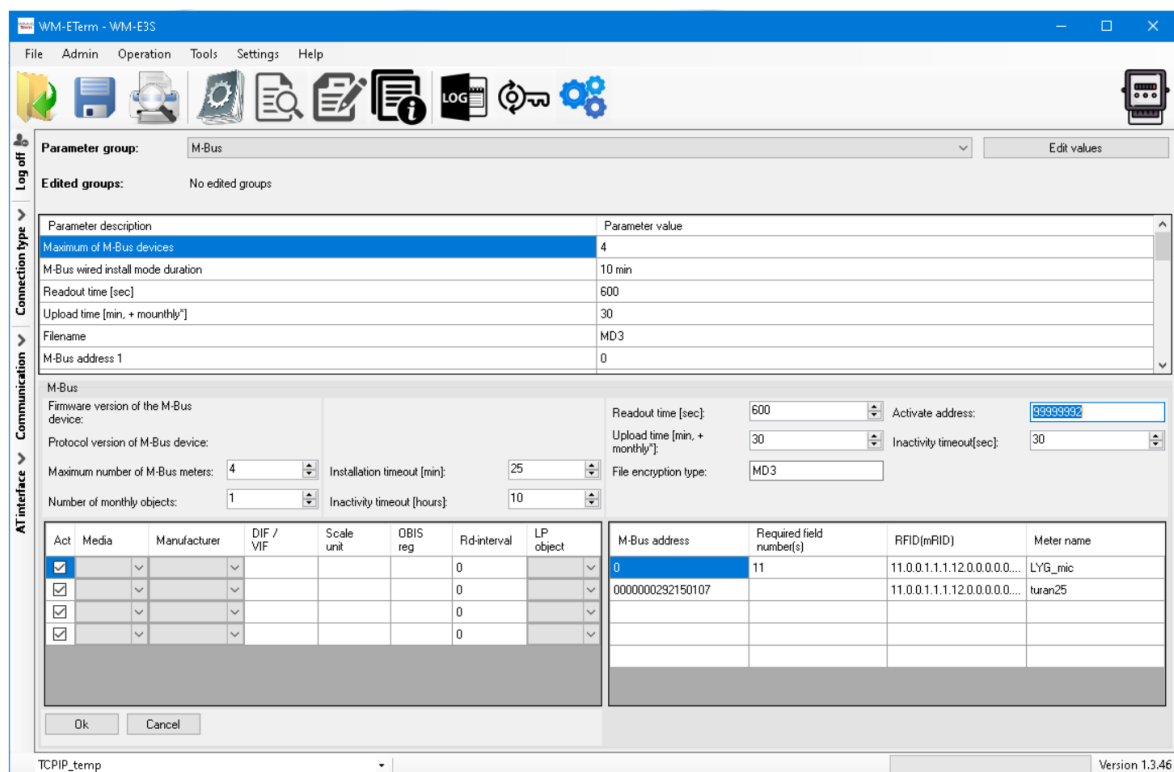
HHU closing the Elster Meter "Transparent mode"
```

*The communication between Optical HHU and M-Bus meters*

You need to set:

- Inactivity time in seconds. The M-Bus connection closes after the timeout will be spent.
- The MBUS opening address-like ID can be set. the default is: 99999992.
- Using values from 99999999-99999995 are prohibited





WM-ETerm - WM-E3S

File Admin Operation Tools Settings Help

Parameter group: M-Bus Edit values

Edited groups: No edited groups

| Parameter description             | Parameter value |
|-----------------------------------|-----------------|
| Maximum of M-Bus devices          | 4               |
| M-Bus wired install mode duration | 10 min          |
| Readout time [sec]                | 600             |
| Upload time [min, + monthly]      | 30              |
| Filename                          | MD3             |
| M-Bus address 1                   | 0               |

M-Bus

Firmware version of the M-Bus device:

Protocol version of M-Bus device:

Maximum number of M-Bus meters: 4 Installation timeout [min]: 25

Number of monthly objects: 1 Inactivity timeout [hours]: 10

Readout time [sec]: 600 Activate address: 88888888

Upload time [min, + monthly]: 30 Inactivity timeout[sec]: 30

File encryption type: MD3

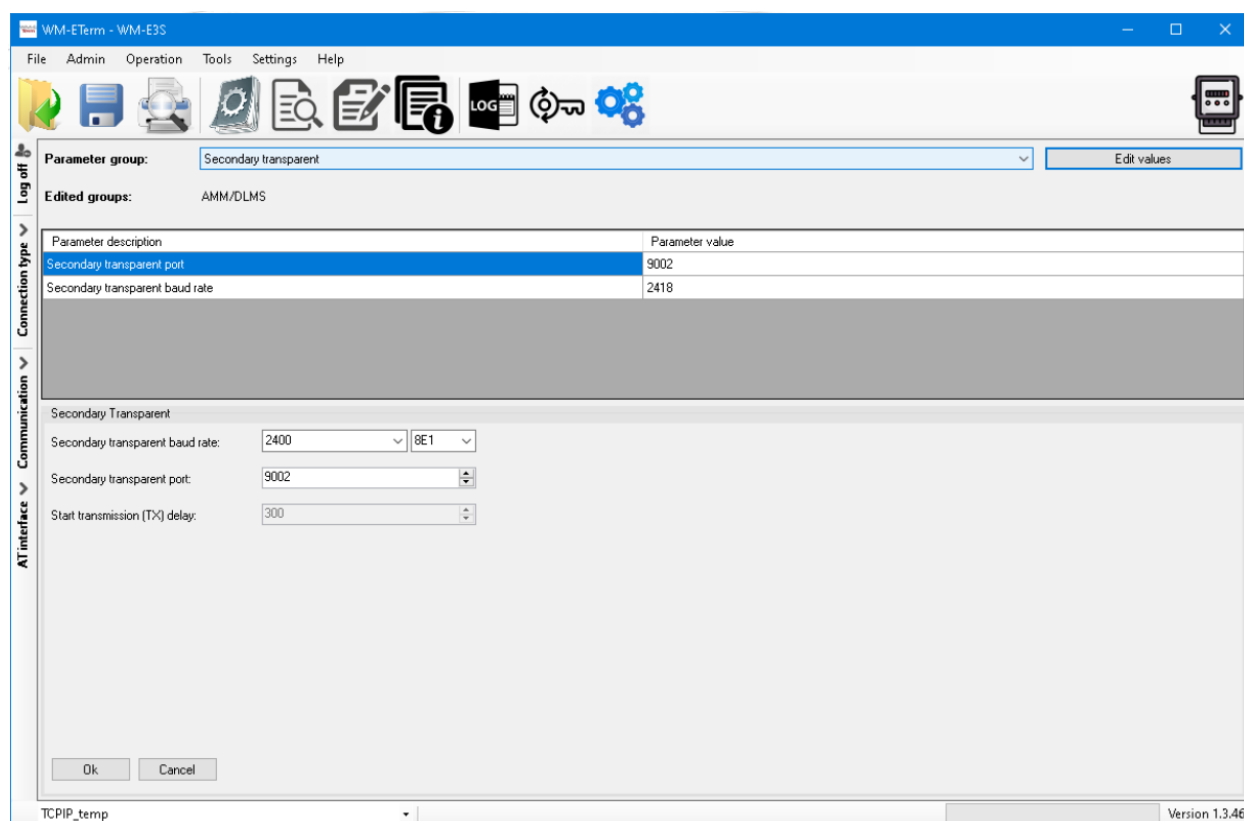
| Act                                 | Media | Manufacturer | DIF / VIF | Scale unit | OBIS reg | Rd-interval | LP object | M-Bus address    | Required field number(s) | RFID(mRID)                   | Meter name |
|-------------------------------------|-------|--------------|-----------|------------|----------|-------------|-----------|------------------|--------------------------|------------------------------|------------|
| <input checked="" type="checkbox"/> |       |              |           |            |          | 0           |           | 0                | 11                       | 11.0.0.1.1.1.12.0.0.0.0.0... | LYG_mic    |
| <input checked="" type="checkbox"/> |       |              |           |            |          | 0           |           | 0000000232150107 |                          | 11.0.0.1.1.1.12.0.0.0.0.0... | turan25    |
| <input checked="" type="checkbox"/> |       |              |           |            |          | 0           |           |                  |                          |                              |            |
| <input checked="" type="checkbox"/> |       |              |           |            |          | 0           |           |                  |                          |                              |            |

Ok Cancel

TCPIP\_temp Version 1.3.46

## 8. DLMS settings

Reading out the M-Bus measurements: The communication device is reachable via TCP, on port number 9002 called “secondary transparent port”. Set it under the **Secondary transparent** parameter group.



WM-ETerm - WM-E3S

File Admin Operation Tools Settings Help

Parameter group: Secondary transparent Edit values

Edited groups: AMM/DLMS

| Parameter description           | Parameter value |
|---------------------------------|-----------------|
| Secondary transparent port      | 9002            |
| Secondary transparent baud rate | 2418            |

Secondary Transparent

Secondary transparent baud rate: 2400 8E1

Secondary transparent port: 9002

Start transmission (TX) delay: 300

Ok Cancel

TCPIP\_temp Version 1.3.46

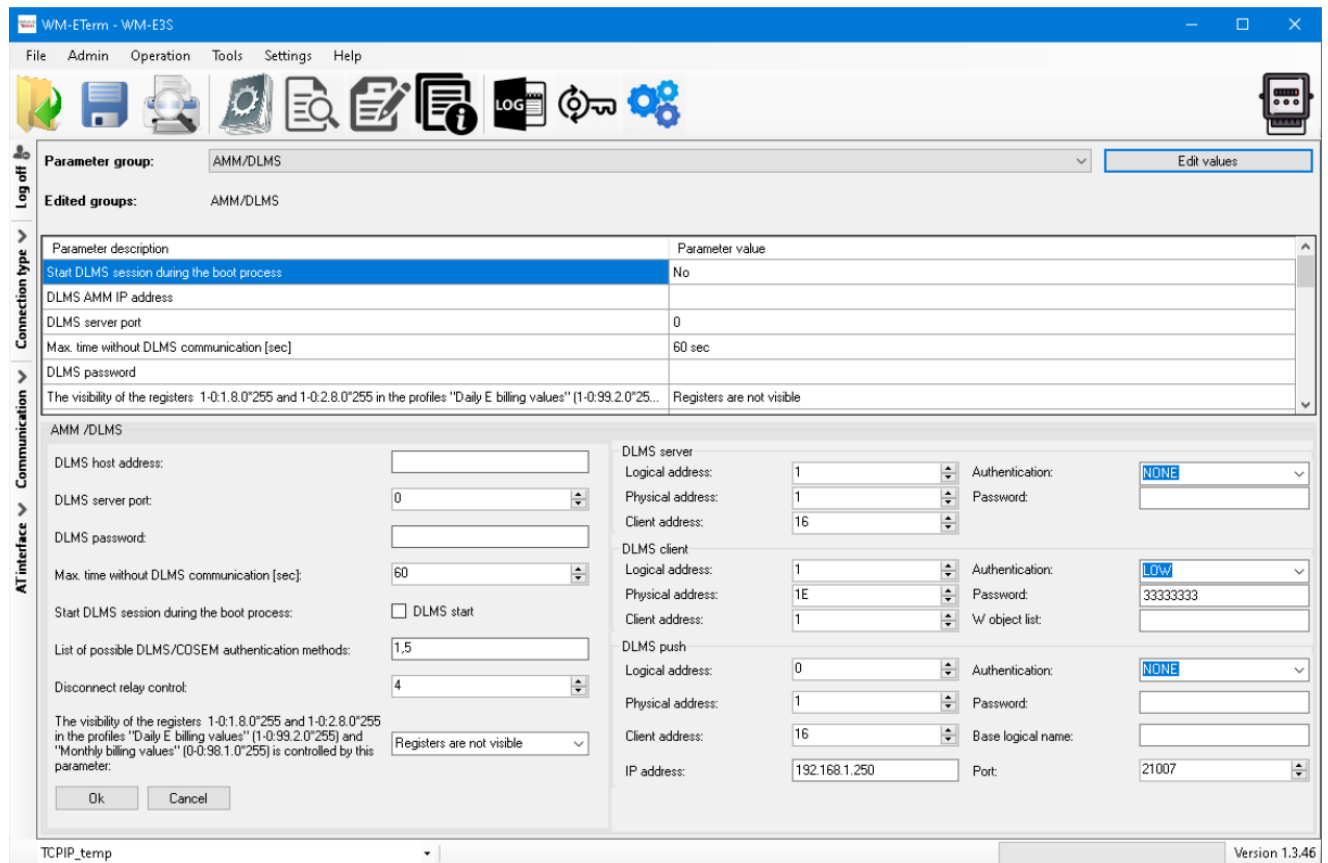
Other DLMS parameters are:

- Addresses: (client, logical, physical)
- Authentication: (mode, password)

Set in **AMM/DLMS** group at the “DLMS server” section.

Obis Codes for the

- 1.1.21.25.0.255
- 1.1.22.25.0.255



WM-ETerm - WM-E3S

File Admin Operation Tools Settings Help

Parameter group: AMM/DLMS Edit values

Edited groups: AMM/DLMS

| Parameter description  | Parameter value           |
|--|---------------------------|
| Start DLMS session during the boot process   | No                        |
| DLMS AMM IP address  |                           |
| DLMS server port   | 0                         |
| Max. time without DLMS communication [sec]   | 60 sec                    |
| DLMS password  |                           |
| The visibility of the registers 1-0:1.8.0*255 and 1-0:2.8.0*255 in the profiles "Daily E billing values" (1-0:99.2.0*25... | Registers are not visible |

AMM / DLMS

DLMS host address:

DLMS server port:

DLMS password:

Max. time without DLMS communication [sec]:

Start DLMS session during the boot process: ☐ DLMS start

List of possible DLMS/COSEM authentication methods:

Disconnect relay control:

The visibility of the registers 1-0:1.8.0\*255 and 1-0:2.8.0\*255 in the profiles "Daily E billing values" (1-0:99.2.0\*255) and "Monthly billing values" (0-0:98.1.0\*255) is controlled by this parameter:

DLMS server

Logical address:

Physical address:

Client address:

Authentication:

Password:

DLMS client

Logical address:

Physical address:

Client address:

Authentication:

Password:

W object list:

DLMS push

Logical address:

Physical address:

Client address:

Authentication:

Password:

Base logical name:

IP address:

Port:

Ok Cancel

TCPIP\_temp

Version 1.3.46

## 9. Push sending

The device polls the Elster meter on DLMS reading objects:

- 1.1.97.97.1.255:2,
- 1.1.97.97.2.255:2,

- 1.1.97.97.3.255:2

*Note that 3-5 minutes polling was added in the last firmware (v2.68).*

If those values make change, it will send a push message (push object (read only), IP address, the values if the three objects above).

#### Elster Electricity Meter reading DLMS parameters, registers:

- Addresses: (client, logical, physical)
- Authentication: (mode, password)
- object list


If the “object list” remains empty the polled object are the listed values. If other object codes needed, use the notation above (dots, semicolon attribute separated by commas).

Set in **AMM/DLMS** parameter group, at “DLMS client” section.

#### The DLMS Push Parameters:

- Addresses: (client, logical, physical)
- Authentication: (mode, password)
- target IP address (IPv4 Only) and TCP port.

Set in **AMM/DLMS** parameter group, at “DLMS push” section.

10. When you have finished the configuration, choose the **Parameter write**  icon to send the changed settings to the modem. The status of the configuration process can be seen at the bottom of the screen. At the end of the upload, the modem will be restarted and operating according to the new settings.

## 11. Modem status information (register values)

DLMS Status register: 1.1.96.6.0.255

Bit field:

| Bit position (1 - LSB) | Value 1   | Value 0   |
|------------------------|---|---|
| 1                      | the first DLMS poll end                           | DLMS poll never occurred since modem fw. start          |
| 2                      | Any data read from RS485 inner bus                | No data read from RS485 inner bus since modem fw. start |
| 3                      | DLMS answer problem                               | no DLMS answer problem since fw start                   |
| 4                      | 1. register read out successful (1.1.97.97.1.255) | 1. register not read out since...                       |
| 5                      | 2. register read out successful                   | 2. register not read out since...                       |
| 6                      | 3. register read out successful                   | 3. register not read out since...                       |
| 7                      | DLMS push started                                 | DLMS push not started since...                          |
| 17                     | M-Bus read out end                                | M-Bus readout not end since few start                   |
| 18                     | 1. M-Bus meter read out successful                | No 1. M-Bus meter read out successful                   |
| 19                     | 2. M-Bus meter read out successful                | No 2. M-Bus meter read out successful                   |

Example #1:

196613 = 0x00030005 = 110000000000000101

DLMS polling: problem with DLMS answer

M-Bus read out was OK on meter 1

Example #2:

196671 = 0x0003003F = 11 0000 0000 0011 1111

DLMS polling: successful, but not All request was OK

M-Bus read out was OK on meter 1

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## Chapter 4. Support

If you have a technical question regarding the usage You can find us on the following contact possibilities:

Email: [support@m2mserver.com](mailto:support@m2mserver.com)

Phone: +36 20 333-1111

### 4.1 Support

The product has a identification void which has important product related information for the support line.

*Warning! Damaging or removing the void sticker means the loss of product guarantee.*

Online product support available here: <https://www.m2mserver.com/en/support/>

### 4.2 Product Support

The documents and information related on the product are available here.  
<https://www.m2mserver.com/en/product/wm-e3s-mbus/>



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### **Warning**

Any fault or upcoming error during the software upload/refresh can lead to the device breakdown. When this situation happens call our specialists.