

## RFM-TX1.1 / RFM-TX2.1

### 868 MHz Wireless MBUS module for B METERS water meters

#### Product description

The RFM-TX1.1 / RFM-TX2.1 module is a device that allows to transmit the reading data detected by the RFM-series water meters manufactured by B METERS. The device must be configured by using the B METERING configuration software. This allows to set the working time, all the other working options and it allows to create devices lists. Please refer to the configuration software manual for a detailed description of the configuration features and options available.

#### Package Content

- RFM-TX1.1 / RFM-TX2.1 module
- Anti-tampering seal
- Anti-tampering sticker
- Installation guide

#### Technical data

- Working temperature: From +1°C to +55 °C
- Power supply voltage: Lithium battery 3.0V\*
- Maximum battery duration: 10 years\*\*
- Radio interface: WMBUS EN14757-4 @868MHz [<10mW] – OMS Compatible
- Configuration: by using B METERING software and RFM-RX2 receiver
- Maximum reading error: 0,5%
- Protection level: IP65 (on request IP68\*\*\*\*)
- Transmission range: up to 300 meters\*\*\*\*
- Dimensions: Ø=67 mm x H=29 mm (IP65); Ø=67 mm x H=32 mm (IP68)
- Weight: 43g (IP65); 85g (IP68).

\* Batteries are not replaceable, DO NOT ATTEMPT TO REPLACE. Any attempt will void the warranty, moreover will irreversibly damage the device.

\*\* The battery life strongly depends on the working time window, set during the configuration process, and on the environmental conditions. Estimation of the battery life is given by the configuration software.

\*\*\*\*IP68: maximum 24 hours of continuous submersion at 1 m depth

\*\*\*\*Under optimal propagation conditions, the radio range depends on physical conditions (building constructions, climatic conditions, ...) where propagation of the radio signal can therefore vary.

#### Installation

The installation of the RFM-TX1.1 module is allowed on the GSD8-RFM meters only and the installation of the RFM-TX2.1 module is allowed on the GMDM-RFM / GMDX-RFM meters. It is recommended to install the RFM-TX1.1 / RFM-TX2.1 module away from metal objects or any potential radio shielding, in a place protected from tampering.

For its functioning, the device must be configured by using the B METERING software. The installer has the task of checking the propagation conditions of the radio signal during installation.

#### Commissioning

Configure the radio module by using the RFM-RX2 receiver and the B METERING Software. To complete the configuration process, press the red button located on the lower plate of the module. During the configuration process, the red LED will start to blink. The configuration can be considered as successfully completed when the red LED keeps blinking for 20 seconds or so. If the red LED blinks for a couple of seconds only, the configuration wasn't successful and it will be necessary to repeat the procedure. For the complete configuration instructions, please refer to the software manual.

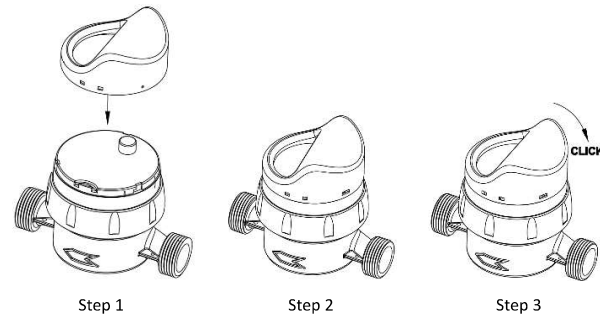
Once the configuration is completed, connect the module on the meter as shown in the picture. It is absolutely necessary to pair the optical index of the meter inside the hole placed on the plate of the module.

With one hand, keep the meter rotating dial steady, with the other hand press then carefully the module and turn it in a clockwise direction to lock it to the meter.

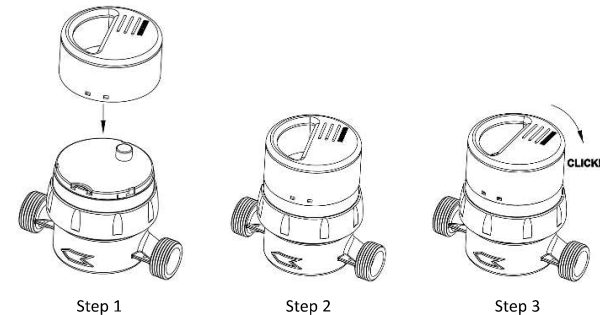
Check on the reading software the correct data collection and check that no alarm is active.

To avoid possible frauds on the module, it is possible to insert the orange seal in the two small holes placed on the left side of the module and apply an adhesive seal.

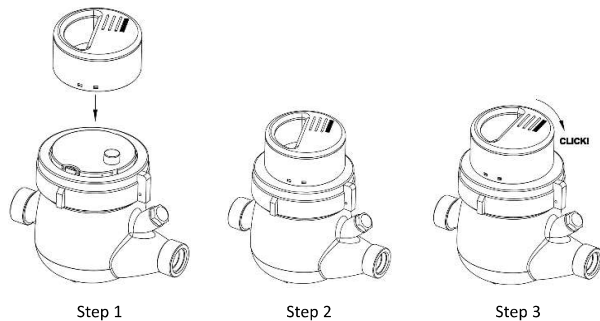
#### RFM-TX1.1 IP65 installation:



#### RFM-TX1.1 IP68 installation:



#### RFM-TX2.1 IP68 installation:



#### Safety

- During the installation process, handle the device with care, don't crush, don't bent, don't exposure to electrostatic discharges which could damage permanently the device, do not install close to heat sources (radiators, conditioners, convectors etc.).
- The RFM-TX1.1/RFM-TX2.1 module doesn't contain hazardous materials in accordance with European directives 91/157/EEC, 2006/66/EEC, 2013/56/EU and 2011/65/EU (RoHS). The device requires specific disposal on the end of its lifetime. Recycling is mandatory or recommended following the Directive RAEE 2012/19/EU inside European Union region, or anyway dispose in accordance with local laws and regulations. Do not burn, or undergo to high temperatures.
- The RFM-TX1.1/RFM-TX2.1 works reliably in the environmental conditions specified in this manual. Any unauthorized intervention and/or modification may cause malfunctions or total damaging of the product.

#### Warranty

The warranty period is set at 24 (twenty-four) months from the date of the shipping of the material. Warranty is against defects in materials or workmanship when the product is properly used and maintained in normal efficiency. This Warranty is valid and enforceable in the country where the product was purchased. In the event that the product has been purchased in a country of the European Union, the warranty is still valid in all countries of the Community.

To obtain warranty service, it is requested to comply with the following clauses:

- Products must be delivered for repair at the expense of the customer.
- The product warranty will be subject to the exhibition of a tax document (receipt, receipt or bill of sale), which attests to the date of purchase of the product.
- The repair will not affect the original date of expiration of the warranty and will not involve the renewal or extension thereof.
- If at the time of the repair, the product has not any defect, it will be charged the costs of the technical analysis.
- The warranty is void if the failure was due to: impacts, falls, misuse or abuse of the product, use of non-original batteries, accidents, product alteration, replacement/detachment of seals and/or product tampering. The same also does not cover damage caused during transport if packages used are unsuitable.
- The warranty is not covering the battery of the product.
- The warranty does not cover the inability to use the product, other costs incidental or consequential damages or other expenses incurred by the purchaser.
- The warranty doesn't cover damage to the product caused by usage in any other way than described in this manual.

#### Support on the products

If the product needs to be sent to the technical assistance, contact your dealer or contact the BMETERS After sales service at [ticket@bmeters.com](mailto:ticket@bmeters.com).

#### Declaration of Conformity

Hereby, B METERS, declares that this RFM-TX1.1 / RFM-TX2.1 is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

The complete declaration can be downloaded from the official website <https://www.bmeters.com/prodotti/rfm-tx1/>.

#### Contact Info

B METERS Srl

Via Friuli 3  
Gonars (UD) – 33050  
Italy

Tel: +39 0432931415

Fax: +39 0432992661

E-Mail (sales/informations): [info@bmeters.com](mailto:info@bmeters.com)

E-mail (technical support): [ticket@bmeters.com](mailto:ticket@bmeters.com)

Web: [www.bmeters.com](http://www.bmeters.com)