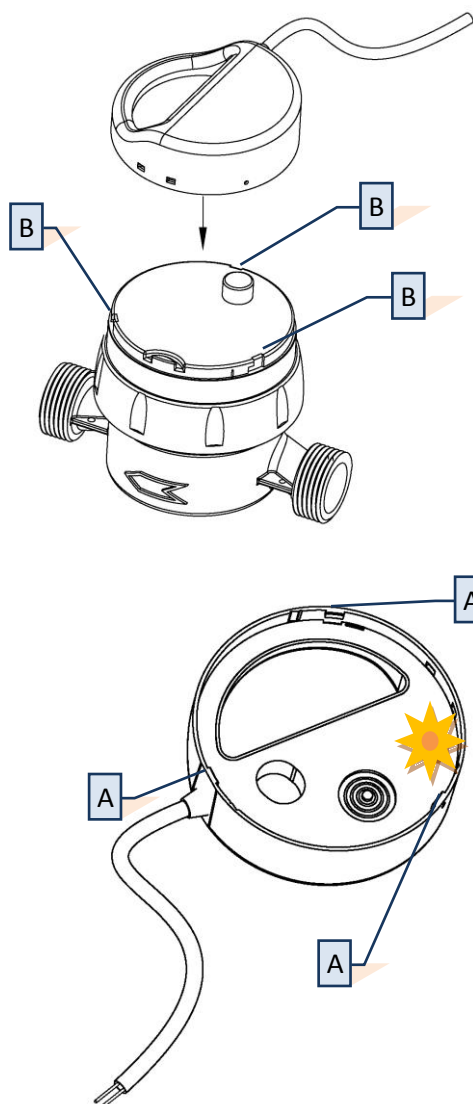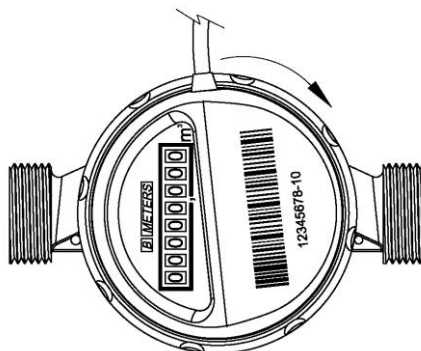# MBUS Module RFM-MB1

1-TECHNICAL DESCRIPTION

The RFM-MB1 MBUS module transmits the data measured by the water meter over which it has previously been installed. The module can be mounted over every size and version of our water meter GSD8-RFM of any size and version. The module has the secondary address set as default. The Primary address, the initial liter value, ecc.. can be set using the MICROMASTER USB and relative software tool MBCONFIG.

The instruction for performing these advanced operations and relative technical documentation about MBUS strings sent can be downloaded from our website www.bmeters.com in the download section.
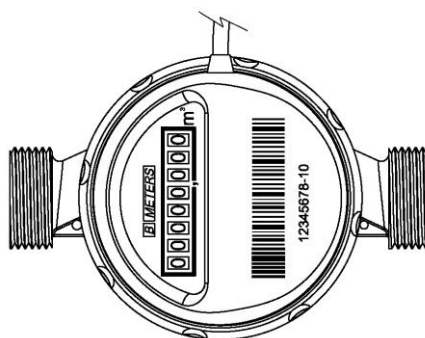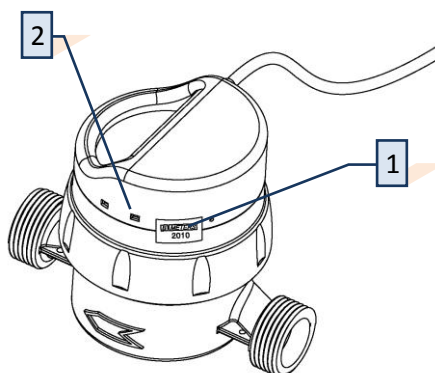
2- INSTALLATION

The 3 tongues indicated by the letter A must plug into the 3 slots indicated by the letter B, as per the picture above.

Turn clockwise the RFM-MB1 module until the module is blocked.

The module is now correctly mounted and blocked.

Two options are available to prevent the fraudulent module removal:

1. to stick a self destroying security label included in the package, between the meter capsule side edge and the module side edge.
2. to fit a metallic or plastic wire into the hole indicated by number 2 and then to seal it (seals and wire are not included).

After the sealing, please make sure the module is properly locked.

ATTENTION

The module is switched off at the time of purchase. Once the module has been initiated (setting primary address or reading it by secondary), it starts to transmit and it can no longer be turned off, but reconfigured only.

3- TECHNICAL DATA

Optimal working temperatures:
From 0°C up to +40°C
Limit temperatures:
from -10°C up to +55°C
Power supply:
Supplied from MBUS network
3V CR2032 Battery in case of network supply fault
Max lifetime:
1 year without network power supply
Anti-fraud shield:
Magnetical /optical
Minimum reading:
1 liter
Sensor reading:
optical
Supported Baud-rate
300,2400 (default),9600 bps
Type of wire
2x0.25mmq straight wire, 2 m lenght
Dimensions:
Ø 67mm H = 30 mm.

4- STANDARDS

· Directive CE
· EN13575:3 MBUS

Quality and safety of B.METERS products are granted by the quality certificates ISO-9001:2008 and by the logo:

CE

5- BROADCASTED DATA

· Primary address
· Secondary address
· Manufacturer ID
· Type of device (water meter)
· firmware revision number
· Message number
· Allarms
· Unit of measurement (m^3)
· Istant reading (m^3)

list of alarms and information:

· Module removal
· magnetic fraud attempted
· optical fraud attempt or optical receiver error
· reverse flow
· critical battery level (lifetime<1 mount)
· Q_{max} exceeding for a pre-set time (10 min)

6- BATTERY

The lithium battery is classified as dangerous product. Please observe the provisions related to appropriate transportation.
Battery test certificates are available on request.
Usage of the lithium battery
- Battery is not re-chargeable
- Replaced battery only by authorized personnel Bmeters
- Keep it in a dry place
- Do not heat over 100°C, neither throw it into the fire
- Keep away from children

7- DISPOSAL

INSTRUCTIONS TO THE END USERS FOR THE APPROPRIATE DISPOSAL OF ELECTRICAL AND ELECTRONIC DEVICES WASTE (RAEE).

Under the Directive "RAEE" 2002/96/CE and following amendment 2003/108/CE this appliance is marked with the following mark of crossed out litter container:

For the future disposal of this item, we inform our estimated Customer of the following:
1. it is mandatory not to dispose RAEE as urban litter and to dispose it separately.
2. For disposal, public or private litter collection must be used, as per local laws. Moreover, at the end of its life, the appliance can be returned to the dealer, when purchasing a new one.
3. This appliance can contain dangerous substances: an inappropriate use or disposal could be harmful to human health and to the environment.
4. The mark (crossed out litter container) printed on the product or on the packaging and the instruction sheet means the appliance has been marketed after August 13 2005 and that must be disposed of separately.
5. In case of illegal disposal of electric and electronic waste, penalties are specified by local regulations regarding disposal.

8- INSTALLATION WARNING

This product must be installed according to this manual instructions.
The module can be mounted on the water meter GSD8-RFM only, manufactured by us.
The water meters GSD8-RFM is available for cold water (50°C) and for hot water (90°C). In case of mounting on the hot water version, please beware of scalding during installation.

9- WARRANTY

According to the Italian law N° 24 dtd. February 2, 2002, all products are covered by 24 months warranty. The warrantee is null in case of improper use, negligence, voluntary damage, opening of the capsule housing the electronic chip, or for every problem arising due to improper installation.
In case of modification, up-dating or replacement of the radio modules firmware, even if officially released by the manufacturer, we will not accept returns for replacement or repair.
For more details see the terms of sale Bmeters.
www.bmeters.com/terms.asp

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