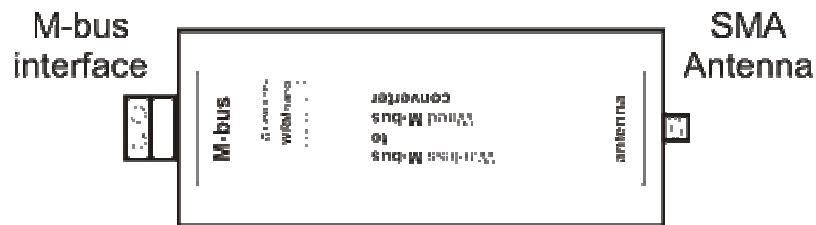


All these settings can be made only through m-bus interface of WRMnano and free software from Gineers. Of course, we provide description of all manufacturer specific commands that can be sent to WRMnano, if the user wants to embed WRMnano in his own system.

Meters activated in WRMnano memory, first are set with Primary address of 0. This can be changed with standard m-bus telegrams. WRMnano responds on requests for meter data with RSP_UD2 telegram, reading can be both by Primary or Secondary ID.

3. Connection



Connections are:

- 1) M-bus interface - 2-pin terminal block, no polarity
- 2) SMA antenna - SMA connector for external antenna (in the package)

5. Warranty

The warranty of the device is limited to 3 years from the date of sale. If the device shows any defect or malfunctions during that period, the manufacturer is obligated to repair the device in its own service for manufacturer's expense, or, if the repair is impossible, to replace the device with new one. The transportation costs to the manufacturer's service are due to the client. The warranty voids if this manual's instructions are not met, warranty seals are removed or the device was opened by unauthorized by the manufacturer personnel.

Date of sale:.....

Signature:.....

6. The package contains

- WRMnano - 1 pc.
- 868MHz RF antenna
- Instruction manual - 1 pc.

7. Manufacturer

Gineers Ltd.
7 "Iskarsko shausse" blvd, TCE, building 7
1528 Sofia, Bulgaria
tel./fax (+359-2) 9758105
URL: <http://www.gineers.com>
e-mail: office@gineers.com

Wireless m-bus concentrator **WRMnano**

WM-BUS Series

Instruction manual

WRMnano is a wireless m-bus receiver, intended to collect data from various devices, working in modes T, S and C according to wireless m-bus standard (EN13757-4). WRMnano is powered from its wired m-bus port, which makes this device ideal for mixed type networks, WRMnano has the following main features and characteristics:

- radio interface in 868MHz range, modes T or S
- quarter-wave antenna with centre frequency 868MHz
- m-bus slave interface, device is powered from it (6 m-bus loads)

1. General technical data

- | | |
|-------------------------------------|------------------------------------|
| ▪ RF band | - 868 - 870 MHz, 12 channels |
| ▪ Wireless m-bus modes | - T, S and C (Frame A) |
| ▪ power supply | - m-bus interface, 6 loads (9.5mA) |
| ▪ maximum meters to save | - 64 |
| ▪ m-bus serial parameters | - 2400bps, Even |
| ▪ max. power consumption | - < 0.5W |
| ▪ ambient temperature, operating | - -20÷+50 °C |
| ▪ ambient temperature, storage | - -50÷+85 °C |
| ▪ air humidity, operating & storage | - 40÷90 % |
| ▪ dimensions (L/W/H) | - 90/36/20 mm (without antenna) |
| ▪ protection class | - IP20 |
| ▪ weight | - 45 g |

2. WRMnano operation

WRMnano starts work immediately after power supply is plugged in (m-bus wired interface). By default device is in automatic mode, which means it accepts and saves up to first 64 different telegrams. Telegrams should be valid and according to OMS standard. After that new devices are not saved/activated in memory. Active serial numbers are kept in non-volatile memory.

The other option is to work in manual mode, where all needed serial numbers are saved in WRMnano through m-bus wired interface.

If the user wants to work in automatic mode, but to have more flexibility - he can use global filters of WRMnano. There are three global filters:

- filter by Mediums can be set - water, heat, electricity, etc
- filter by Manufacturer can be set - 3-letter m-bus code for every manufacturer
- filter by ID can be set - IDs with wildcards can be used

The above means that WRMnano can work in automatic mode, but will read and save ONLY meters, which serial numbers apply to filter settings. Each filter can be turned On or Off and for each one up to 8 values can be saved. For instance one can tell WRMnano to read only telegrams, coming from meter, manufactured by GIN or BMT.

Filter by ID uses wildcards. Only IDs in the air that match to one of the up to 8 filter values will be transmitted. For example, setting filter to "12FFFFFF" will apply for all devices, which serial number starts with "12".