

M-Bus reading device MBD-X250/ □□

M-Bus Series

Instruction Manual

MBD-X250 is reading device for tax meters, connected directly or through counters to an m-bus network. It can read and store data for up to 250 tax meters. MBD-X250 should be connected to the master converter of the network (MBRS) via RS-232 RJ45 to RJ-45 cable. It is mounted on the door of electric enclosure so that the display is visible.

1. Main Technical Parameters

- max. number of devices to read – 40/120/250
- power supply voltage – 55-250 Vac/ 80-350 Vdc
- max. Power consumption – < 2 W
- display – LCD, 4 x 20 symbols, backlight
- keyboard – 6 tactile switches
- interface – 2xRS232C
- storage temperature – -20÷+50 °C
- air humidity – 40÷90 %
- dimensions (H/W/D) – 72/144/65 mm
- mounting hole (H/W) – 67/137 mm, no roundings
- serial ports baud rate – 300/2.4k bps
- default serial ports settings – 2.4kbps, even parity, 8 bit data, 1 stop
- weight – 400 g
- battery – LiMnO₂ 60mAh

2. MBD-X250 Work

MBD-X250 must be set by qualified personnel, familiar with safety instructions and regarding this instruction. In normal working mode MBD-X250 displays sequentially the values of tax meters to be read. The display changes every 8-30s (this parameter can be set with our software). The display for every tax meter includes user number (0 to 9999), medium (cold/hot water, electricity, gas, etc.), the address of the device in the m-bus network, free text up to 20 symbols, value and type of measured value (like 465.8 m³ or 44556.3 kWh), current date/hour as shown here:

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      2 8 - C o l d   w a t e r / A 0 2 4
A p a r t m e n t 2 8
C o u n t :      1 3 6 . 5      m 3
2 8 - M a y - 2 0 1 0      1 2 : 2 3
  
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The data is shown with accuracy 0.1 of measured value.

Pressing «up arrow» or «down arrow» keys display data of the next or previous tax meter in the list.

MBD-X250 starts reading the whole m-bus network four times a day (at 0h, 6h, 12h и 18h) and the data is stored in non-volatile memory. Last measured data is displayed.

Pressing the «OK» key MBD-X250 displays the start (measured when the network and MBD-X is set up) and the current pulse count for the selected tax meter. After predefined time without key press MBD-X250 shows the basic data for the next meter in the list.

Pressing «left arrow» or «right arrow» MBD-X displays historic values of the selected tax meter, if available. These historic values are saved at the beginning of every month (day 1, 0:00h). Historic data saves data for the last 12 months after that the oldest data is overwritten. The historic data is shown with the reading date.

When power is interrupted, MBD-X continues to work in sleep mode (only clock enabled) until the internal battery is recharged (about 7 days). The display is not lit. When the power is restored, the display starts showing the data again and if the internal battery is discharged, the clock data is lost. Tax meter data is always kept and cannot be lost.

3. Mounting, electrical connection and setup

The mounting of MBD-X250 must be done by qualified personnel, familiar with safety instructions and setup instruction for MBD-X250.

All MBD-X250 connections are made at the back of the device and are as following:

No	Description
1	Power
2	RS-232C RJ45 – to the m-bus master converter
3	RS-232C DB9 null modem – for programming or readout
4*	RS-232C RJ45 – to data transceiver (phone/GPRS/Ethernet modem)

* - may not be present

4. 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 the 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.

Serial No:.....

Sale Date:.....

Signature:.....

5. The Package Contains

- MBD-X250 – 1 6p.
- Mounting clips – 16p.
- Instruction Manual – 1 6p.

6. Manufacturer

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