

WM868-R4-B



USAGE

The converter is designed for remote reading of electronic consumption meters (electricity meter, gas meter, calorimeter) equipped with RS-485 interface.

UNIT DESCRIPTION

The transmitter reads meters with RS-485 bus interface and M-Bus, Modbus, or IEC62056 data format at adjustable intervals over the local RS-485 bus, converts the messages into a uniform wacoSystem format (NEP protocol), and sends them to the master remote reading system as radio messages.

The converter can be used to read up to six meters located on a single RS-485 bus. The transmitter reads individual meters with individually adjustable parameters (period, protocol, speed) and stores the received data in memory. With the set transmission period, the transmitter sends a summary message with all stored data over the radio network to the master server. Alternatively, the transmitter can also operate in "on-line" mode, where it sends data to the master server immediately after each meter reading. The transmitter can read up to four values from each meter, and can send up to 100 values at a time in a summary message.

The configuration parameters of the transmitter can be set using a configuration cable, or from a standard mobile phone via a Bluetooth wireless connection.

TECHNICAL PARAMETERS

Wireless interface

- Frequency Band: 868.0 - 868.6 MHz
- Wireless Technology: WACO, wM-BUS, LoRa
- Protocols: WACO, wM-BUS
- Modulation: WACO GFSK, wM-BUS FSK, LoRa spread spectrum

- Channel Width: WACO 100 kHz, 15 kHz, wM-BUS 200 kHz, LoRa 125 kHz
- Transmission Power: 10-25 mW
- Receiver Sensitivity: WACO -114 dBm, wM-BUS -105 dBm, LoRa -148 dBm
- Data Rate: WACO 2400, 3800 bps, wM-BUS 100 kbps, LoRa 250-11000 bps
- Output Impedance: 50 Ω
- Antenna: external, SMA-female connector

Data interface

- Physical interface: RS-485
- Transmission speed: 300 - 19200 Bd
- Data protocols: M-Bus, IEC 62056, Modbus
- Maximum number of devices: 4

Bluetooth Specifications

- Bluetooth Version: BLE 5.2
- Bluetooth Frequency: 2.4 GHz
- Bluetooth Data Rate: 1 Mbps
- Bluetooth Maximum Power: 8 dBm

Power

- Battery: Li-SOCI2
- Battery Capacity: 7 Ah
- Battery Life: 7 years

Physical Properties

- Length: 121 mm (box alone), 153 mm (including mounting flanges), 190 mm (including small antenna)
- Width: 57 mm
- Height: 51 mm
- Weight: 220 g

Operating Conditions

- Operating Temperatures: (-20 to +50) $^{\circ}\text{C}$
- Storage Temperatures: (0 to +40) $^{\circ}\text{C}$
- Relative Humidity: 90% (non-condensing)
- IP Rating: IP65

UART configuration

- UART Data Rate: 9.6 kbps
- Transmission method: Asynchronous
- UART parameters: 8 data bits, 1 stop bit, no parity
- Voltage Level: 3.6 V (CMOS)