WM868-SI4-B

USAGE

The pulse sensor is designed to read data from power meters
with pulse outputs (water meters, electricity meters, gas meters) or binary
sensors (door contacts, flood sensors) and radio transmission of data about
measured values.

UNIT DESCRIPTION

The sensor is equipped with four inputs for reading measurement pulses from connected power meters or for monitoring the status of binary
The sensor stores data from the connected meters and sends it to the central data acquisition system at set regular intervals
via a communication gateway. Changes in the status of the binary sensors are transmitted to the central system immediately. Wireless data transmission is implemented in the 868 MHz radio band with a choice of one of three transmission technologies: wACO, wM-BUS or LoRa. The transmitter uses the possibility of two-way communication via a communication gateway for remote setting of basic parameters. Configuration parameters can be set using a configuration cable or via Bluetooth from a computer, tablet or mobile phone. The converter is powered by an internal 3.6 Ah battery. As a result, the transmitter can operate for more than 10 years with a message sending period of 12 hours. The transmitter is available in an outdoor version (IP65) or a wet version (IP68).

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

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-SOCl2
- Battery Capacity: 3.6 Ah
- Battery Life: 10 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) ^{o}C
- Storage Temperatures: (0 to +40) ^{o}C
- Relative Humidity: <95% (non-condensing)
- IP Rating: IP65 or IP68

Pulse input

- Open Switch Resistance: greater than 5 MΩ
- Closed Switch Resistance: less than 10 kΩ
- Max Voltage in Closed State: 0,25 V
- Max Input Pulse Frequency: 300 Hz
- Min Pulse Length: 1 ms

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)