WB169-THE-V

USAGE

The thermometer with hygrometer is designed to measure air temperature, relative humidity and radio transmission of measured data.

UNIT DESCRIPTION

The thermometer is equipped with an external sensor for measuring temperature and humidity. The thermometer senses temperature and humidity in minute intervals and in adjustable
intervals, it transmits the current temperature and humidity, which is expressed as the average of the measured values, to the central data acquisition system via a communication gateway. Wireless data transmission is implemented in the 169 MHz radio band using wM-BUS transmission technology. The thermometer uses the possibility of two-way communication via the communication gateway for remote setting of basic parameters. The configuration parameters can be set using a configuration cable or via Bluetooth from a computer, tablet or mobile phone. The thermometer is powered by an internal 13 Ah battery. Thanks to this, the thermometer can operate for more than 5 years with a reporting period of 15 min. The thermometer is primarily designed for indoor environments, but it can also be used outdoors where the influence of splashing water is excluded.

TECHNICAL PARAMETERS

Wireless interface

- Frequency Band: 169,400 - 169,475 MHz
- Wireless Technology: Wireless M-Bus
- Protocols: wM-Bus
- Modulation: 2-GFSK, 4-GFSK
- Channel Width: 12.5 or 50 kHz

- Transmission Power: 500 mW
- Receiver Sensitivity: - 109 dBm
- Data Rate: 2,4 - 19,2 kBd
- Output Impedance: 50 Ω
- Antenna: external, SMA-female connector

Temperature measurement

- Measured temperature Range: -40 to 125 °C
- Temperature measure resolution: 0.1 °C
- Temperature measure accuracy: ±0.2 °C (-20 ÷ 85 °C)

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: 13 Ah
- Battery Life: 5 years

Physical Properties

- Length: 145 mm
- Width: 45 mm
- Height: 100 mm
- Weight: 300 g

Operating Conditions

- Operating Temperatures: (-20 to +50) ^{0}C
- Storage Temperatures: (0 to +40) ^{0}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)