

## WB169-TE-V



## USAGE

The thermometer is designed to measure air temperature and radio data transmission of the measured values.

## UNIT DESCRIPTION

The thermometer is equipped with an external sensor for temperature measurement. The thermometer reads the temperature in minute intervals and transmits at adjustable intervals the current temperature, which is expressed as an average of the measured values, to a 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. Setting of configuration parameters can be done 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 (-10 ÷ 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-SOCI2
- 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) °C
- Storage Temperatures: (0 to +40) °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)