

NB-SI2-V



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 the sensed data via the NB-IoT mobile network.

UNIT DESCRIPTION

The sensor is equipped with two inputs for reading measurement pulses from connected power meters, or for monitoring the status of binary sensors. Continuous consumption states are periodically stored and in set regular intervals and sent to the central data acquisition system via a communication gateway. Changes in the status of the binary sensors are fed into the to the central system immediately. The wireless data transmission is realized by NB-IoT technology via mobile operator.

TECHNICAL PARAMETERS

Wireless interface

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|------------------------|--|
| • Frequency Band: | 832 to 862 MHz (Uplink), 791 to 821 MHz (Downlink) |
| • Wireless Technology: | NB-IoT NB1 |
| • Protocols: | UDP, NEP (proprietary) |
| • Modulation: | QPSK, BPSK, OFDMA, SC-FDMA |
| • LTE Bands: | B1, B3, B5, B8, B20, B28 |
| • Channel Width: | 180 kHz |
| • Transmission Power: | 200 mW |

- Receiver Sensitivity: -129 dBm
- Data Rate: 0.35 - 240 Mbps
- 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-SOCI2
- Battery Capacity: 17 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

Pulse input

- Open Switch Resistance: greater than 5 M Ω
- Closed Switch Resistance: less than 10 k Ω
- 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)

Certification

- ATEX: optional II 3G Ex ic IIA T4 Gc