



# MacIQ WM Pulse

## IoT pulse module for flow meters/ water meters

MacIQ WM Pulse is a compact IoT module designed to work with flow meters or water meters equipped with pulse outputs. It forms an integral part of a stationary remote reading system, enabling precise measurement and monitoring of water consumption. The counted pulses are converted into digital data, then sent to a defined data aggregation system. A solution recommended for particularly difficult to access locations.

### key benefits

- compatible with any meter that has pulse outputs, has extensive functionality for detection of flow direction, configuration of pulse duration and length
- outputs replicating input pulses for connection to a local BMS or industrial automation system
- continuous monitoring and alarms allow immediate response to failures and leaks
- reliable data transmission in harsh field conditions through the use of modern NB-IoT wireless communication technologies
- safety is ensured by built-in encryption of data transmission
- easy installation and configuration thanks to NFC-enabled phone app or configuration via IT system

**Plum Sp. z o.o.**  
ul. Wspólna 19, Ignatki, 16-001 Kleosin, Poland  
National Waste Database no.: 000009381

**water.plum.pl**  
water@plum.pl

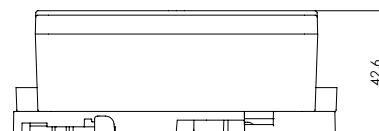
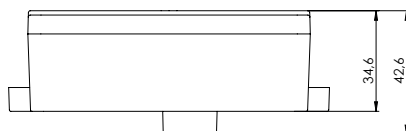
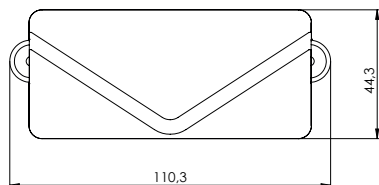
**edition**  
1.1b, 06.2025

# technical data

|                                 |  |
|---------------------------------|--|
| <b>dimensions</b>               | 109.2 x 40 x 44.7 mm   |
| <b>housing material</b>         | polycarbonate  |
| <b>protection level</b>         | IP68 in accordance with the requirements of EN 60529   |
| <b>operating temperature</b>    | storage from -25 °C to +50 °C; operation from -5 °C to +50 °C  |
| <b>user interface</b>           | <ul style="list-style-type: none"> <li>optical indication of transmission status</li> <li>unlicensed NFC band operating at 13.56 MHz in accordance with ISO/IEC 14443 standard</li> </ul>  |
| <b>inputs / outputs</b>         | up to 3 digital inputs designed for: <ul style="list-style-type: none"> <li>input pulses from water meter</li> <li>backward pulses detection</li> <li>water flow detection</li> <li>tamper switch / alarm line</li> </ul> up to 2 digital outputs designed for: <ul style="list-style-type: none"> <li>pulse / volume replication</li> <li>alarm output – normally opened or normally closed</li> </ul>  |
| <b>supply</b>                   | <ul style="list-style-type: none"> <li>service life: 10+ years depending on the frequency of data synchronization to the server and the network coverage in which it reports</li> <li>ePSM (extended Power Saving Mode) to ensure that the claimed uptime is maintained making it independent of power consumption in difficult locations</li> <li>CE2 (coverage enhancement mode 2) function that allows data transmission from difficult locations (up to a signal level of -164 dBm), where LoRa or LTE Cat.M1 solutions are no longer able to send data</li> </ul> |
| <b>data transmission</b>        | <ul style="list-style-type: none"> <li>built-in NB-IoT modem</li> <li>support for transmission protocols depending on the technology: TCP, UDP, LwM2M*</li> <li>integrated short antenna</li> <li>external antenna with 2.5 m hermetically sealed cable</li> <li>antenna cable 2.5 m long terminated with SMA female socket</li> </ul>   |
| <b>data registration period</b> | <ul style="list-style-type: none"> <li>data recorded at a 60-minute interval</li> <li>unique identifier for each record</li> <li>registered data is stored in internal memory (3030 records)</li> </ul>  |
| <b>configurable alarms</b>      | <ul style="list-style-type: none"> <li>minimum and maximum flow rate alarm thresholds</li> <li>minimum and maximum flow rate warning thresholds</li> <li>leakage threshold</li> <li>backflow</li> <li>presence of unwanted of magnetic and electromagnetic fields</li> <li>low battery</li> <li>binary state change</li> </ul>   |
| <b>reporting period</b>         | <ul style="list-style-type: none"> <li>configurable hour of the day, day of the week, day of the month</li> <li>last day of the month</li> </ul>   |
| <b>time synchronization</b>     | NTP time server or optional GSM network  |
| <b>accessories</b>              | eWebtel – measurement data acquisition system<br>Confit! MacIQ WM - telemetry module configuration application<br>Confit! Data loggers – data loggers configuration application<br>wall or mounting bracket  |

\* in the process of implementation

## dimensions



## antennas

### short antenna



- fully submersible, report sent only after the water level has dropped below the antenna
- dedicated IP68 sealed antenna

### external antenna



- designed for installation in water meter wells and locations with poor coverage
- fully submersible - reports until antenna is submerged
- dedicated IP68 sealed antenna
- version with SMA connector available on request

## diagram of the equipment

