

WUM-IML-WM Pulser

Advanced IIoT Module for
Accurate Reading and Remote Control



WUM-IML-WM Pulser is a wireless IIoT device with internal configurable logic, designed for remote monitoring and data acquisition from water meters (manufactured by Madalena& Servostal) by pulse reading with a Hall sensor and wireless data transmission via LoRaWAN network.



long-term
autonomy



LoRaWAN
connectivity



battery level
monitoring



remote control &
configuration



low power
consumption



protection against
environmental factors

FEATURES

PULSE READING

The module is designed to read pulses generated by water meters. The device can be connected to mechanical meters produced by Madalena&Servostal equipped with a pulse output.

LORAWAN COMMUNICATION TECHNOLOGY

The module uses LoRaWAN communication technology for long-range data transmission, ensuring extensive coverage and stable connection even in remote or hard-to-access locations.

LOW POWER CONSUMPTION

To ensure a long battery life, the module features low power consumption, characteristic for LPWAN (Low Power Wide Area Network) networks. This allows the device to operate autonomously for extended periods, which is crucial for monitoring remote objects.

LONG-TERM AUTONOMY

The batteries used provide long-term autonomy, minimizing the need for regular replacement or recharging. The maximum battery life is 10 years with a total of 10 000 data transmissions (2–3 times per day) or 7 years with data transmission 4 times per day.

BATTERY LEVEL MONITORING

The "Battery Level Monitoring" function provides prompt notifications about the battery charge level, warning of potential disruptions due to discharge.

ALTERNATIVE DATA READING

In the event of potential loss or unavailability of the LoRaWAN network due to network failure, data from the pulse module can alternatively be read using a dedicated wireless configurator, in close proximity to the module.

PROTECTION AGAINST ENVIRONMENTAL FACTORS

The module is engineered with robust protection against moisture, dust ingress, and external environmental factors, ensuring stable operation under a wide range of climatic conditions.

VIBRATION RESPONSE

The "Vibration Response" function ensures immediate detection of interventions, enhancing security and alerting against unauthorized tampering attempts.

RELOCATION RESPONSE

The "Relocation Response" function provides immediate notifications about changes in the device's location, enhancing security and preventing potential loss or unauthorized use.

DIMENSIONS

Enclosure with clamps	IP65
Dimensions	67 x 60 x 32 mm
Weight including enclosure	54 g

OPERATIONAL CHARACTERISTICS

Operating temperature	-20...+80 °C
Humidity	up to 92% without condensation

POWER SUPPLY

Battery	Lithium
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COMMUNICATION CHARACTERISTICS

Device class	A
Activation	OTAA
Rx Sensitivity	-140 dBm
Tx Transmission power	up to +20 dBm



The **WUM**-IML-WM Pulser module is powered by a long-life battery.

This module is a reliable and efficient solution for remote monitoring of water **consumption in apartments and offices**, making it an optimal choice for automated remote data acquisition systems.

They are compatible with the following mechanical meter models:
CD ONE TRP (Madalena)
DS SRP (Servostal)



EXTERNAL MAGNETIC FIELD RESPONSE

The "External Magnetic Field Response" function provides an additional level of protection, reacting to possible influences and alerting about potential attempts to disrupt the device.

TEMPERATURE MEASUREMENT

The "Temperature Measurement" function provides additional data on climatic conditions, improving the accuracy and reliability of collected information about water consumption in different environments, while enabling responses to various anomalies.

REMOTE CONTROL

The module can be remotely controlled, configured, and monitored via LoRaWAN. This allows system operators to efficiently manage data acquisition processes.

CONFIGURABLE REPORTING INTERVAL

The "Configurable Reporting Interval" feature enables flexibility in data transmission, allowing adjustment of reporting frequency, optimization of energy consumption, adapting to specific monitoring requirements and improving overall system efficiency.

MONTHLY ARCHIVE (HOURLY)

The "Monthly Archive (Hourly)" function provides a detailed data history, improving analysis and the ability to identify trends in water consumption, contributing to more efficient resource management.

CLOUD INTEGRATION

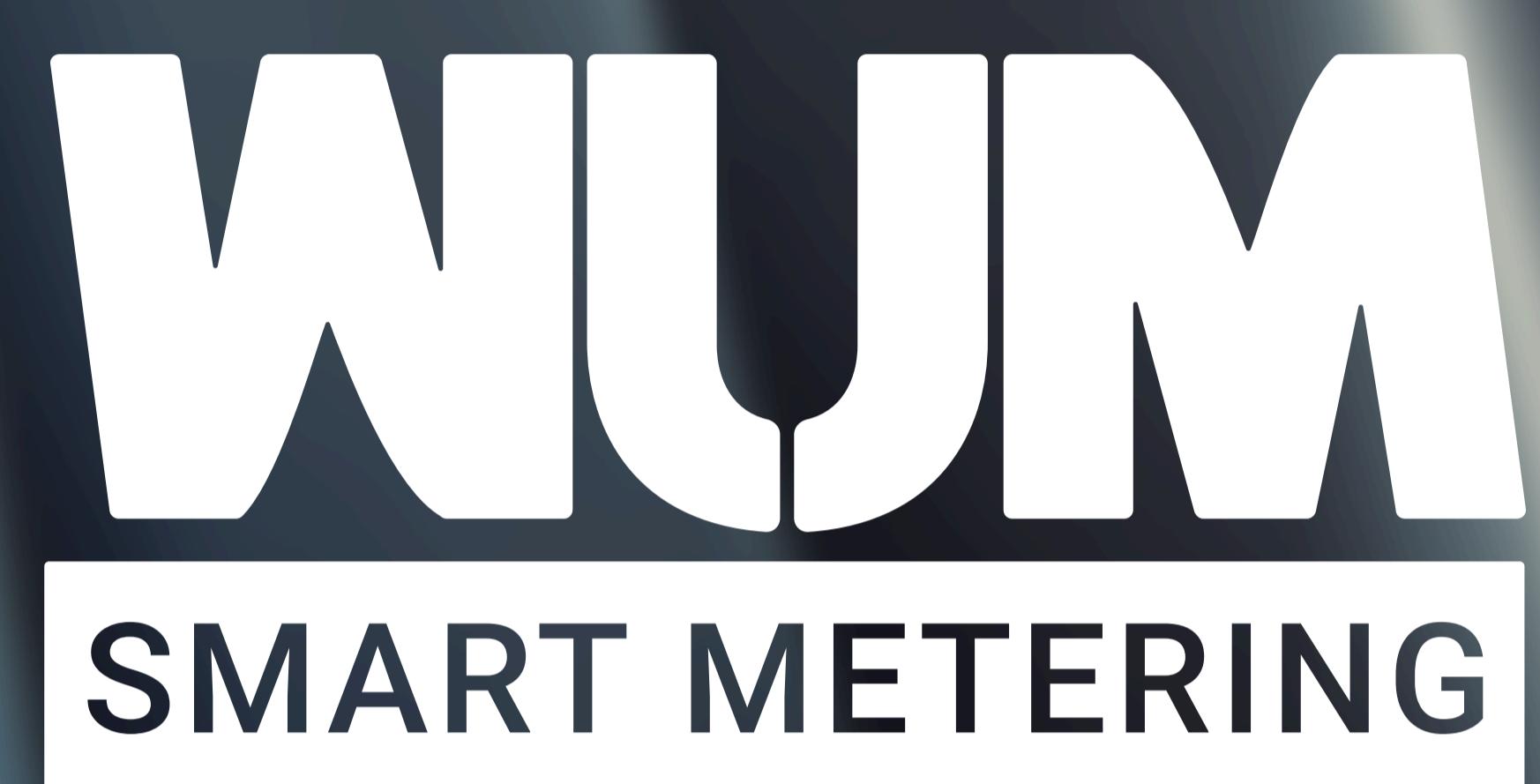
The module seamlessly integrates with cloud platforms for data acquisition, analysis, and visualization, facilitating efficient monitoring and centralized system management.

DATA SECURITY

LoRaWAN communication ensures a high level of security of transmitted information through encryption, preventing unauthorized access to consumption data.

EASY INSTALLATION AND CONFIGURATION

The module is easy to install and configure, enabling rapid deployment across diverse environments. A dedicated wireless configurator allows pulse modules to be configured remotely, without physical connection to a computer, significantly simplifying maintenance and setup.



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