



Water



MacR6

Data logger



CE 1471

-25°C ≤ Ta ≤ 55°C
IP68





* pressure sensor

IEC 62056-21

 OPTICAL INTERFACE
 OPTICAL - INTERFACE

RoHS
 lead free
 Lead free

GPRS

 Readout via GPRS

TCP/UDP
 IP PROTOCOL
 Standard protocol support

IP 68

 IP 68 sealing class

MacR6 flow recorder is an innovative telemetry device, automatically transmitting data to water distribution network administrators through GSM infrastructure.

MacR6 is used to support the processes of settlement, profiling water consumption among consumers, active control of the water supply network parameters (flow and pressure) and detection of emergency situations. It can be a key element of a stationary system for remote reading of measuring devices.

MacR6 is a universal solution that works with all measuring devices (water meters, flow meters), by registering flow through factory impulse modules.

Two versions: **MacR6 P** (flow) and **MacR6 PC** (flow + pressure)

Applications

- Water treatment plants
- Pumping stations and hydrophore plants
- Industrial and public utility facilities
- Custom water collecting facilities
- Multiple family buildings - main water meters
- Measurement of the water supplied to separate municipalities - transmission water meters
- Zones and subzones – calibration of the water supply network model
- Management of the water supply network
- Key element of a stationary system for remote reading of measuring devices

MacR6 features

- Installation and device configuration process simplified to a minimum
- Replaceable battery in the device mounting location
- Use of secure TCP/HTTPS Internet protocols, ability to function in GSM 2G and 3G
- Open TCP formula and transmission standard enables interaction with IT solutions of different manufacturers
- Device geolocation function
- Very high resistance to mechanical damage (EN 62262 norm)
- Local readout option





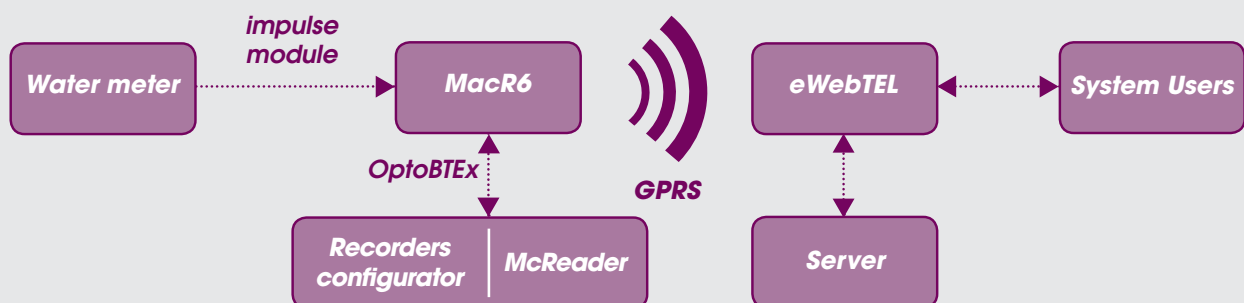
Technical specification

- Powered by replaceable lithium battery
- Operating time: 10 years when reporting once a week, 5 years when reporting once a day
- IP 68 Ingress Protection Rating
- Working temperature range of -25°C to +55°C
- Equipped with optical interface compliant with the IEC 62056-21 standard
- Internal clock synchronized with the NTP time server
- Implemented internal ceramic antenna (option of external installation)
- Storage and transmission of the installation's location GPS coordinates
- LCD display of: alarms, battery status, GPRS network status, data transmission status, water consumption in the current month, current meter, current peak hourly water consumption, water consumption in the previous month, counter status at the end of the previous month
- Ability to read data via applications for local PC: MacODCZYT and tablets/smartphones: MacReader and MacReader+
- Pressure sensor measuring range 0-10 bar, measurement accuracy: standard 1% (relative to the range), increased +/- 0.1% (optional version) for **MacR6 PC** version

Advantages

- Develops an active leak control system
- Enables proper selection of water meter size
- Speeds up the settlement process
- Allows to detect fraudulent recipients
- Allows to optimize the costs of water supply system operation
- Provides precise information on the parameters of the water supply network - network calibration

Example of MacR6 system operation



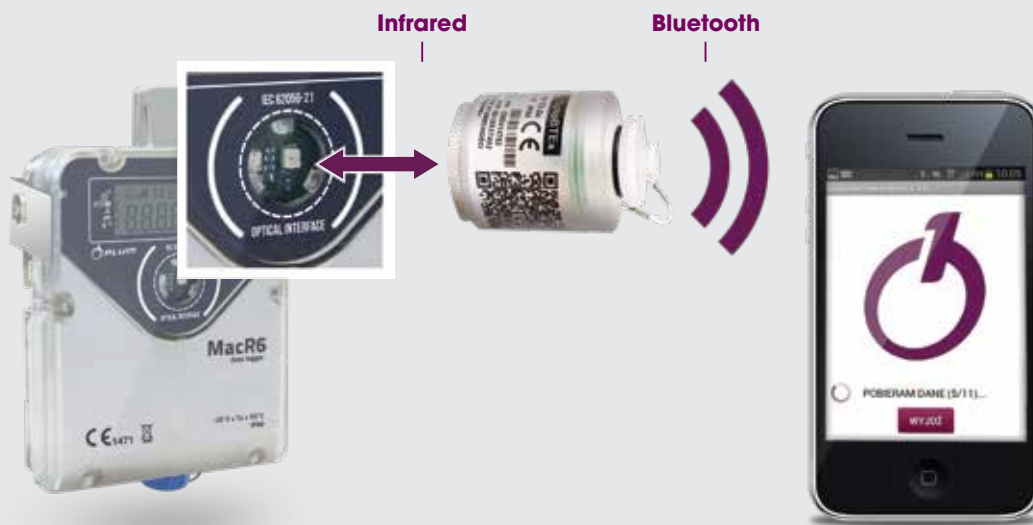


Data transmission

- Data transmission via GPRS, asynchronous/synchronous mode, GSM 2G and 3G operation
- TCP and HTTPS Internet protocol, NTP time server
- Data recording period from 1 to 60 minutes
- Transmission period from everyday to once a month (in case of emergency, every 30 minutes)
- Possibility of scheduling data transmission on certain days of the week

Alarms

- Exceeding maximum flow alarm
- Reverse flow alarm
- Interference alarm
- Possible leak alarm, based on a special algorithm
- Exceeding the upper and lower pressure limit alarm
- Low battery alarm
- Registration of GSM network absence



OptoBTeX



Optical head consistent with IEC 62056-21 equipped in a Bluetooth transmitter.

Recorders configurator



Mobile application for Android devices (smartphones, tablets). Available for free download from Google Play.

MacReader/MacReader +



Mobile application for Android devices (smartphones, tablets) used for reading the recorded data. Available for free download from Google Play.





eWebTEL

Management system

eWebTEL is a management platform for comprehensive surveillance of the monitored water supply network. It allows for graphical visualization of data transferred from water meters, geolocation of devices with history of recorded data, and generating reports on:

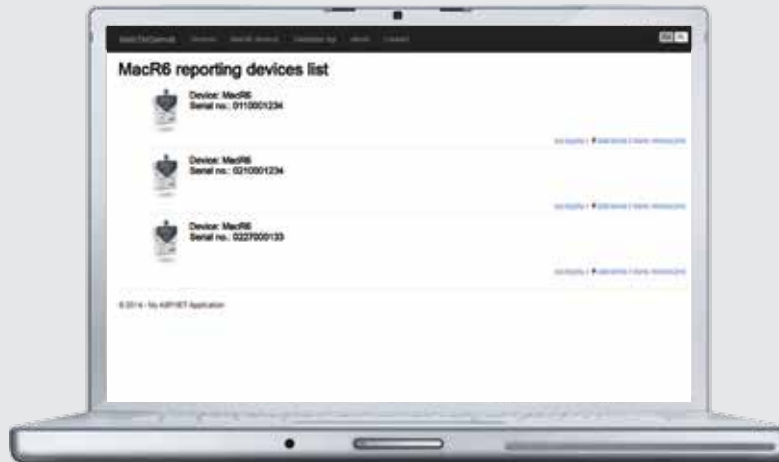
- monthly water consumption for individual customers or groups of customers,
- occurrence and duration of failures,
- history of use for a particular customer or groups of customers,

eWebTEL allows you to group devices according to various criteria such as area, zone, technical person, etc. Additionally, the system allows you to create and edit data sets of water meters.

Advantages of eWebTEL

- It allows you to optimize the operating costs of meter readings, enables
- analysis of correct selection of water meters and facilitates
- management of the water supply network





Features of the eWebTEL System

- The system is based on web browsers (IE, Firefox, Chrome, etc.)
- It has the ability to export data in CSV and TXT formats
- Allows personalization with password protection of the configuration parameters
- System in Polish (System in English)
- Data archived on a server

