plum® WATER

MacR6 N

water flow and pressure data logger

MacR6 N is a compact device which records pressure and the water flow. It uses the current GSM network infrastructure for remote data transmission.

MacR6 N data logger can be installed directly on the water meter and record the volume using built-in inductive sensors.

It is also equipped with two configurable inputs that can be used as: pulse inputs to connect water meters using dedicated adapters of the water meter producer, pressure sensor inputs, digital binary inputs. MacR6 N data logger transmits data remotely to eWebtel platform by default. Thanks to open protocol it can be adapted into other platforms. Device is also equipped with an NFC interface for local configuration and reading of the device's recorded data using the ConfIT! data loggers mobile application.
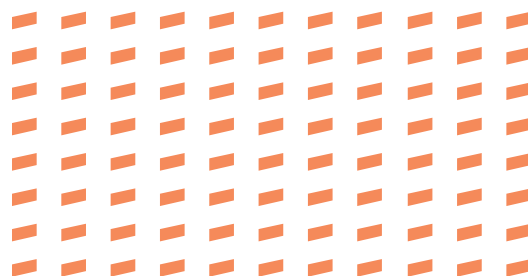
key benefits

- single type of the device with adjustable software to cover different measurement scenarios with water meters and pressure monitoring
- mobility of the device and easy adjustment between GSM networks without losing any features
- real-time water leak detection
- fully adjustable logging properties like frequency of reporting, sampling, alarming thresholds
- possibility to prioritize the alarms by giving them flags of only warning or alarm
- communication in newest industrial transmission standards
- can work as stationary data logger for local data collection by mobile phone

technical data

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dimensions	114 x 110 x 45 mm
supply	lithium battery with a nominal voltage of 3.6 V, size D according to IEC 60086-1 and a maximum capacity of 14 Ah; battery life: 10 years depending on frequency of synchronization of data to the server
protection level	IP68 in accordance with the requirements of EN 60529
operating temperature	from -25 °C to +50 °C
inputs	• flood sensor • magnetic field sensor • 2 measurement inputs: voltage 0.5 to 4.5 V • 4 digital inputs: binary – signaling or counting
pressure sensor	• option 1: pressure sensor 0-10 bar (measurement accuracy: 0.5% FS) • option 2: pressure sensor 0-26 bar (measurement accuracy: 0.5% FS) operating temperature: from 0 °C to +30 °C
data registration period	measurement data from 1 to 60 minutes, events with timestamp when event started and ended
reporting frequency	configurable from 1 to 24 times per day, direct report after occurrence of the alarm
data transmission	• local data readout via mobile device with NFC • integrated LTE Cat. M1/ NB IoT/ 2G modem • support for transmission protocols: TCP, UDP, HTTP
clock	built-in clock with time zone adjustment; synchronized with the GSM network operator or NTP time server
accessories	eWebtel - measurement data acquisition system ConfIT! data loggers - telemetry module configuration application Mac-PW - industrial pressure sensor Mac-HS - hydrostatic liquid level sensor

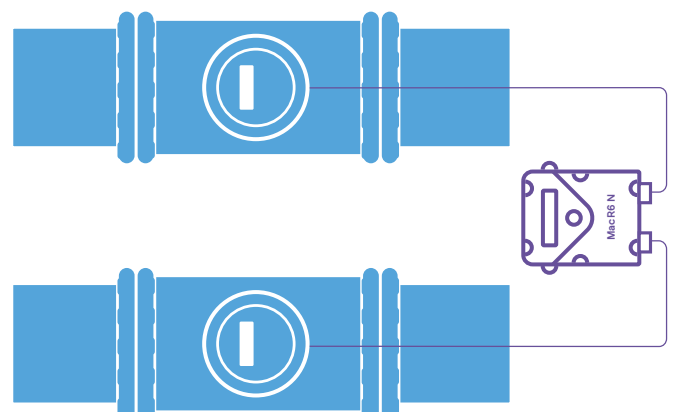# application

- **forward and reverse flow monitoring**

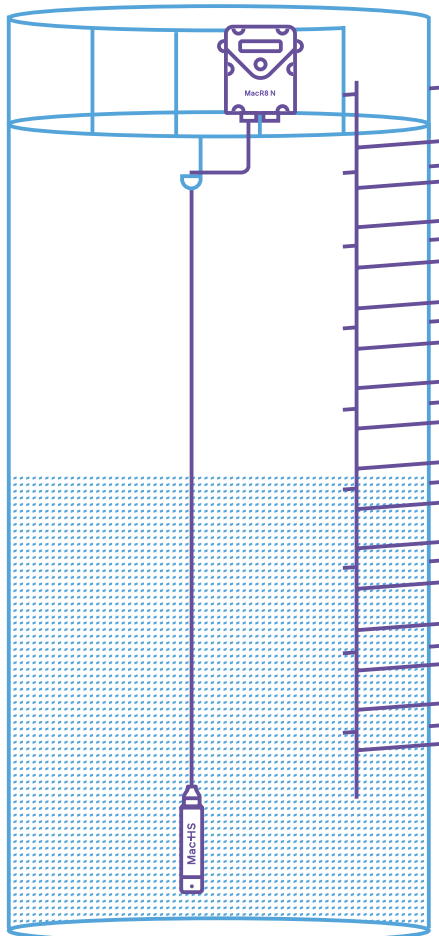 Remote measurement and registration of two way direction flow with data record.
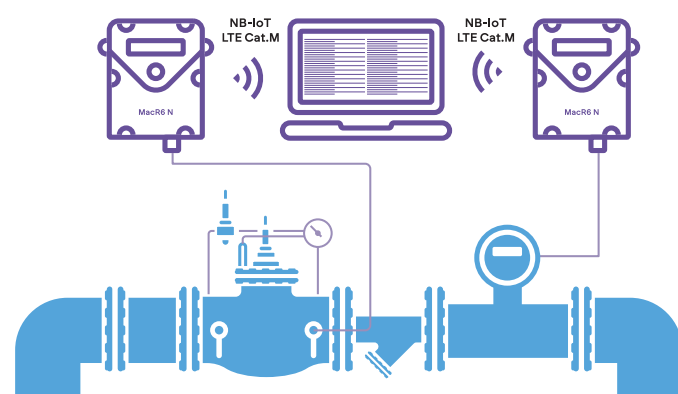
- **two water meters**

  Remote measurement and registration of flow from two water meters.
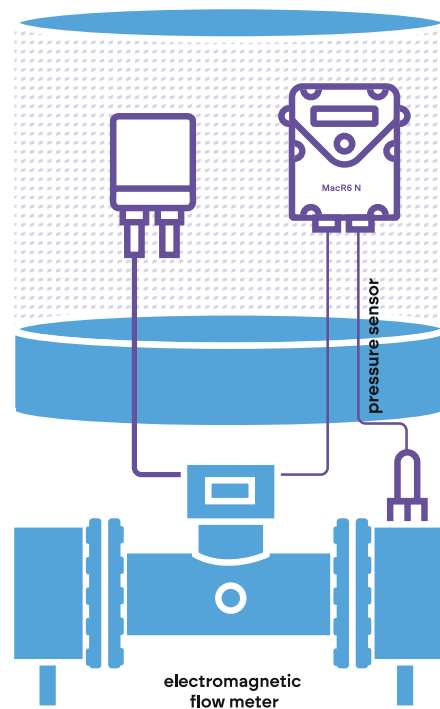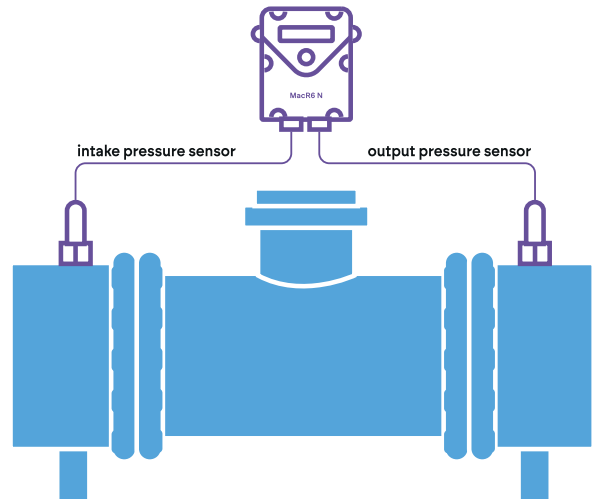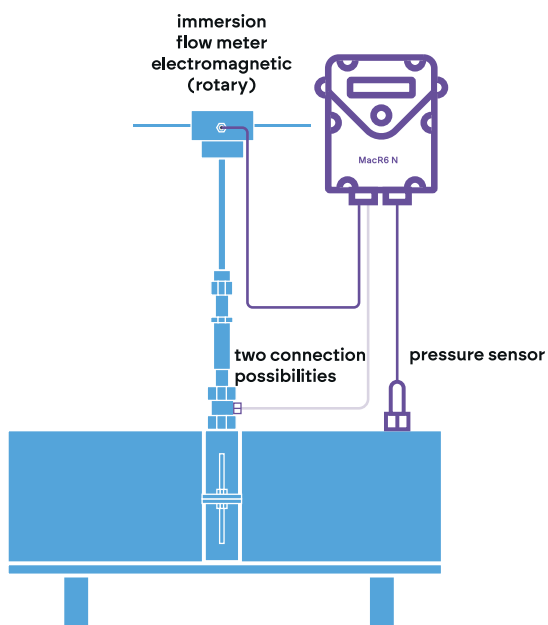
Remote water level monitoring.

MacR8 N

MacHS

MacR6 N

intake pressure sensor

output pressure sensor

↳ **other examples**
of installations with the MacR6 N data logger

immersion
flow meter
electromagnetic
(rotary)

MacR6 N

two connection
possibilities

pressure sensor

MacR6 N

pressure sensor

electromagnetic
flow meter

electromagnetic
flow meter

pressure sensor

MacR6 N

electromagnetic
flow meter

pressure sensor

MacR8 N

benefits
of digitising the water utility

- reducing water losses
- increasing the efficiency of work and personnel
- generating more profit
- secure data of critical infrastructure enterprise

diagram
of the equipment

IoT

observation of parameters
and information about alarms

NB-IoT
LTE Cat.M

NB-IoT
LTE Cat.M

MacR6 N

MacR6 N

pressure
sensor

SCADA
integration