



MacIQ GM

IoT module for gas meters

MacIQ GM module is a compact solution designed to convert traditional mechanical gas meter into smart telemetry device without replacing it. It is a solution detecting increments on the gas meter totalizer and transmitting this to the billing system. Device is compatible with Honeywell gas meters.

MacIQ GM is a solution that does not require building infrastructure or using any industrial components for proper work. Communication over NB-IoT network is stable, reliable and secured.

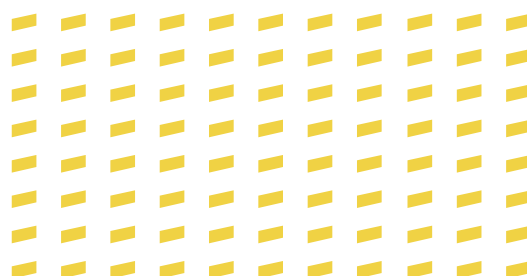
key benefits

- gas usage profile transmission to the head-end system
- enabling readouts from low accessibility places
- high installed meters, closed buildings requiring personal access
- gas flow control and immediate alarming about potential fraud on the object
- enabling access to historical gas consumption in high resolution
- quick installation and minimum effort configuration using modern mobile application

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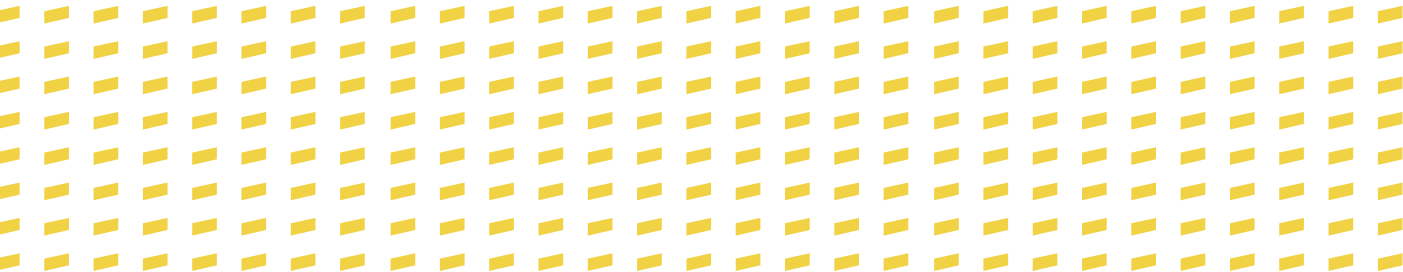
gas.plum.pl
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edition
1.0c, 25.03.2025



technical data

dimensions	109,2 x 35 x 24,7mm
housing material	polycarbonate
protection rating	IP65, in accordance with EN 60529
temperature range	- storage: from -25°C to +50°C - operation: from -25°C to +50°C
display	optical indicator for server communication
communication with gas meter	set of three magnetoresistive sensors allowing direct mounting on the gas meter
power supply	- lithium battery with a nominal voltage of 3.6v, size aa according to iec 60086-1, with a capacity of 3.8ah; - operational period: 15 years, depending on signal level, operating temperature, data synchronization frequency to the server (at least once daily)
data logging	- built-in NB-IoT modem - local communication (optional optical interface IEC 62056-21) - support for transmission protocols depending on operating technology: SMART-GAS, UDP; optionally: LwM2M, DLMS - built-in internal antenna, operator key in the form of MFF2 chip (eSIM)
rejestracja danych	- data recorded at intervals of 1 - 24 hours - unique identifier for each record - storage of recorded data in internal memory
IoT server alarms	- magnetic field manipulation on the gas meter measurement system (magnetic field sensor, 5 minutes) - instantaneous flow greater than the gas meter's measurement range (G4 gas meter - Qmax - 6 m³/h for a 10-minute flow) - gas leakage (flow above 2x Qmax – 12m³ for 2 minutes flow) - reverse flow - low battery
scheduling	wide range of configurations allows for reports sent at a specific hour, day of the week or month, or after a selected, measured amount of m³
time synchronization	NTP time server or optionally obtained from the GSM network
explosion-proof construction	for zone 2 explosion hazard areas



Why is it worth choosing the MacIQ GM module?

- easy „plug&play” installation directly on the gas meter**

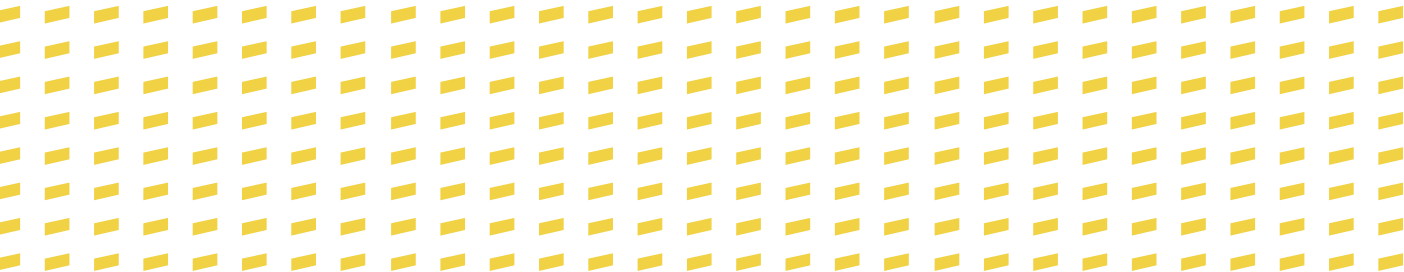
A solution dedicated to the gas meter of a specific manufacturer. It does not require additional adapters, screws, or seals. The installation is designed to be carried out by the gas connection user (individual consumer).
- maintenance-free solution**

The battery ensures operation without the need for replacement throughout the entire validity period of the gas meter's certification. The operating algorithm adjusts the transmission schedule according to the expected operational period.
- applied NB-IoT technology**

NB-IoT technology ensures operation with a built-in antenna at a signal drop to 164 dBm. This allows for the elimination of antenna installations and operation in difficult locations (basements, metal cabinets of measurement points, etc.).
- high measurement accuracy**

The patented method of gas meter synchronization ensures correct meter reading.
- real-time alarms**

Real-time alarm notifications about magnetic field manipulation on the gas meter measurement system, instantaneous flow greater than the gas meter's measurement range, gas leakage, and reverse flow.



compatibility



Honeywell
gas meter

