MIDO met
smart metering

MiDoMet NBIoT Pressure
Smart metering via NB-IoT network
easy and reliable

MiDoMet NBIoT Pressure

MiDoMet NBIoT Pressure is the specialized NBIoT datalogger for **monitoring network pressure (or level)** MiDoMeT NB-IoT is a self-powered universal device with extensive functionality. Through the 2 digital inputs it can be used to remotely read **impulse meters**, for billing purposes or to monitor the water network. Analog input can be used to collect data from **4-20mA or 0-5V sensor**, like temp probe, pressure probe, level probe etc.
It is equipped with an NB-IoT modem for remote data transfer through open **MQTT** protocols. MiDoMet NBIoT is a robust and reliable device and thanks to the **IP68** protection degree it can therefore be installed in any environment. The device can be supplied **complete with pressure (or level) probe** and battery pack.

FEATURES

- Up to 2 digital inputs for meters or sensors
- Analog Imput 4-20mA or 0-5V (add-on module optional)
- 4G NBIoT connectivity
- Resistant to hostile environments with IP68 protection
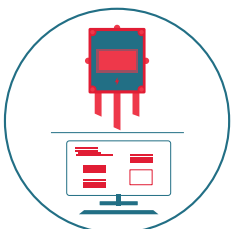- Self-powered (more than 10 years of autonomy and replaceable battery)

With MiDoMet NBIoT it is possible to create an **NBIoT fixed network remote reading system**, to remotely read data from digital sensors, overcoming the limits of a concentrator network,and reaching the most remote users, thanks to the use of the 4G NBIoT communication network.
The device is supplied **complete with SIM and connectivity** for the entire duration of the service (* Plug & BeFree contract) avoiding to sign agreements with NB-IoT suppliers. The device has **IP68 protection**, and it is therefore possible to install it in hostile environments or even in submersion. However, thanks to the special external case, the **batteries can be replaced**, at the end of their life cycle,without having to replace the entire device.

REMOTE METER READING	**IP68 GRADE PROTECTION**	**COLLECT DATA FROM SENSORS**	**OPEN PROTOCOLS**
for billing purposes or network monitoring	Can be installed even in hostile enviroment	Interface 4-20 mA,0-5V or Serial RS485 ModBus	MQTT (COAP, UDP, HTTPS)

INTERFACE AND DIMENSIONS

72mm   36mm

84mm

magnetic key

led light

NB-IoT
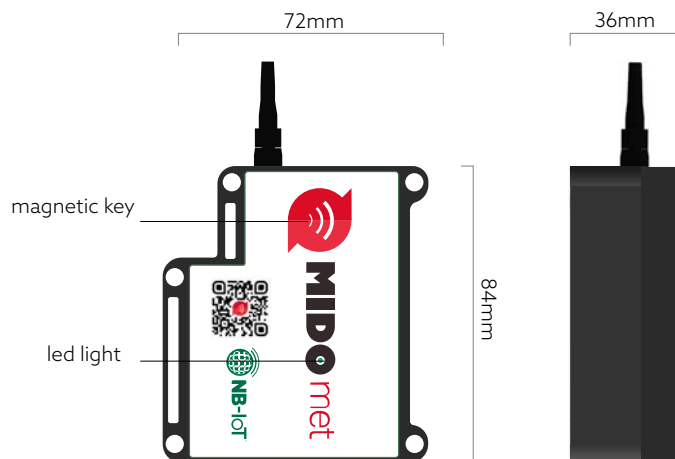
Guaranteed performances in terms of number and frequency of transmissions

The reading sampling takes place by default every 60 minutes, and every day the 24 readings are sent. This configuration guarantees a battery life that is up to 10 years.

Furthermore, thanks to the bidirectionality of the communication, sampling frequency and data sending frequency can be changed remotely, for example to start sampling campaigns at a higher frequency up to a sample every 5 minutes to analyse one or more defined points.

Storage capacity of the acquired data on the devices

MiDoMet NBIoT is equipped with an internal backup memory capable of retaining:

• the total consumption month by month,

• the hourly details of the readings of the last 31 days,

• the maximum and minimum flow rate of each day.

Furthermore, it is possible to recover data from the memory even if the device is turned off, through the NFC module.

In MiDoMet NBIoT **communication is bidirectional** and allows the device to receive commands and / or configure its parameters remotely (sampling and reading frequencies, parameter configuration). MiDoMet NBIoT is an **open and interoperable device**, data can be easily integrated into third-party or pre-existing information systems, thanks to the standard protocol used: **MQTT**.

Otherwise, the system can be supplied complete with **MiDoMet Soft cloud software**. MiDoMet Soft is a software created for the analysis and management of data relating to smart metering systems, which allows operators a constant analysis of the data, a simple and immediate supervision of the network, as well as being promptly alerted in the event of an alarm exceeding the thresholds.

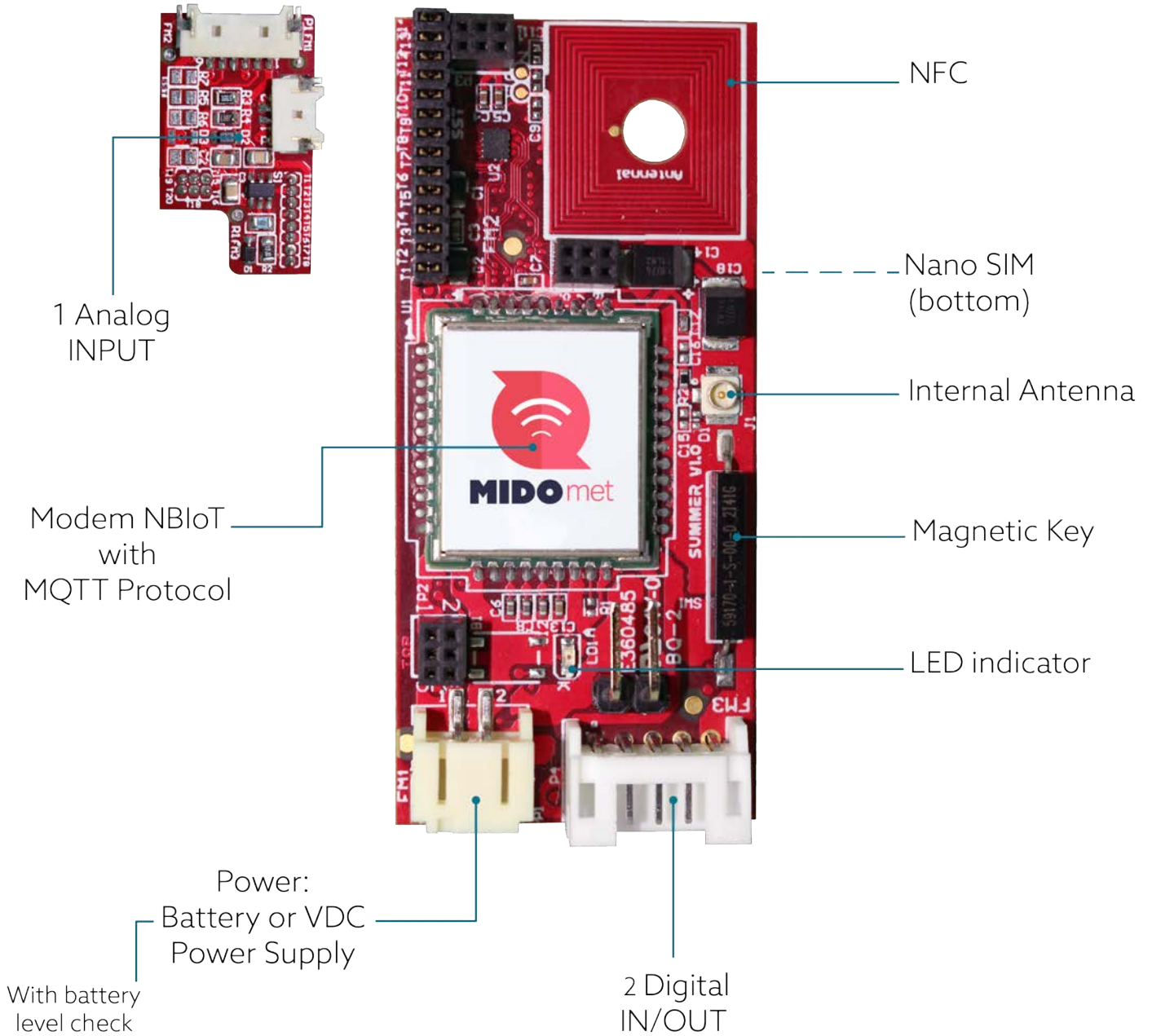**Device programming and maintenance**

It is possible to access the device locally via the **NFC interface and App** with your smartphone, to view data from the readings of inputs such as: total liters/cubic meters, pressure detected, voltage/ internal battery status, etc.

Through the maintenance menu it is possible to carry out various operations: configuring digital inputs, analog inputs and outputs, communicating with servers for sending data, performing NBIoT signal tests.
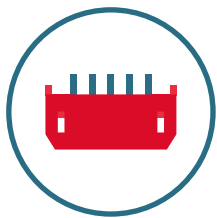
The presence of a led on the membrane allows you to check the status and success of all operations.

In addition, there is a magnetic button, with which it is possible to make instant checks on the device status.

MiDoMet NBIoT Pressure (MD.NB.1.15.2)

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NFC

Nano SIM
(bottom)

Internal Antenna

Magnetic Key

LED indicator

1 Analog
INPUT

Modem NBIoT
with
MQTT Protocol

Power:
Battery or VDC
Power Supply

With battery
level check

2 Digital
IN/OUT

INPUTS

INPUTS	2 digital IN + 1 analog IN 4-20mA o 0-5V
Retrofitting	Can be integrated on previously installed meters

ANALISYS

CPU	Arm® Cortex-M4 32-bit
STORAGE	DataFlash 4MByte + 64KBit di Backup

POWER

BATTERY	Li-SOCL2 3.6V 9000mAh + HPC1520
EXTERNAL POWER	EXT 3-4Vcc (OPT)
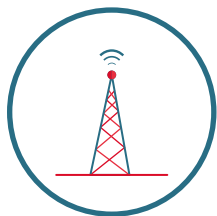
COMMUNICATION

NBIoT Modem	SIM7020E NBIoT
Supported Protocol	MQTT (COAP-UDP-HTTPS optional)
Antenna	Internal antenna Or External one with 3mt cable (optional)

INTERFACES

External access	NFC e APP
Interaction	Magnetic Key
Visual signal	Led Light
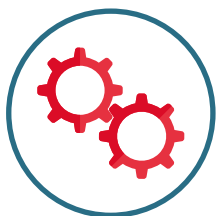
MECHANICAL CHARACTERISTICS

Assembly	dowels Ø 6
Temperature cond.	Working temperatures:-20/55 C °
Protection Level	IP68

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