



MIDOmet
smart metering

MiDoMet NBloT Pulse

*Smart metering via NB-IoT network
easy and reliable*





MiDoMet NBloT Pulse is the specialized NBloT datalogger for monitoring digital inputs. MiDoMet NB-LoT is a self-powered universal device with extensive functionality.

Through the digital inputs it can be used to remotely read **impulse meters**, for billing purposes or to monitor the water network.

It is equipped with an NB-LoT modem for remote data transfer through open **MQTT** protocols. MiDoMet NBloT 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 **SIM and data traffic for 10 years**.

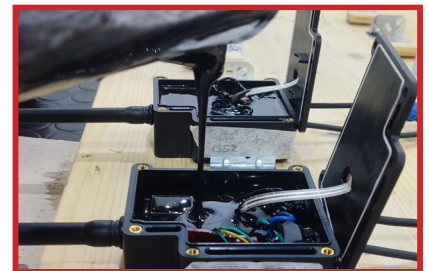
FEATURES

- Up to 4 digital inputs for meters or sensors
- 4G NBloT connectivity
- Resistant to hostile environments with IP68 protection
- Self-powered (more than 10 years of autonomy and replaceable battery)

The device has IP68 protection, thanks to a dielectric epoxy resin filling. In this way it is possible to install it in hostile environments or even in immersion.

With MiDoMet NBloT it is possible to create an **NBloT 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 NBloT 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-LoT suppliers.



FUNCTIONALITY

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 NBloT is equipped with an internal backup memory for data storage. In the absence of communication events the data are not cancelled but kept in memory. • the total consumption month by month, Up to **7100 reading samples** can be stored in the memory in the case of a configuration with 4 digital inputs, and up to **5000 reading samples** in the case of a configuration with 2 digital inputs,

Data and alarms

In each communication message, the MiDo reports in the message header all the information necessary for reconstruction of the consumption profile: num. pulses, units of measurement, multiplies.

It is possible to configure asynchronous communication of the change in status/alarm on the status input.

Intelligent algorithms and Edge computing

The device calculates on board (edge computing) the **maximum and minimum flow** in the range between two communications. It is also possible to activate an **intelligent algorithm** for characterizing the consumption profile, capable of **autonomously detecting and communicating any critical situations** (current leak, excess consumption compared to the average).

Communication protocol and interoperability with third-party data management systems

MiDoMet NBloT 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 (or MQTTS)**.

MiDoMet Soft &Cloud

Or, the system can be supplied complete with MiDoMet Soft cloud software. MiDoMet Soft is the software created for the analysis and management of data relating to smart metering systems, which allows operators to constantly analyze the data, simple and immediate supervision of the network, as well as the possibility of being promptly alerted in case alarm when thresholds are exceeded.

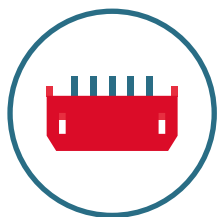
Device programming and maintenance

It is possible to access the device locally, via the **NFC** interface and the **App**, with your smartphone to view information relating to input readings such as: totalised litres/cubic metres, internal battery voltage/status, etc.

Through the **maintenance menu** it is possible to carry out various operations: digital input configuration, communication with the server to send data, execution of NBloT signal tests.

The presence of a **LED** on the membrane allows you to check the status and success of all operations. Furthermore, there is a **magnetic button**, with which it is possible to make timely checks on the status of the device.





INPUTS

	MD.NB.1.14.2	MD.NB.1.14.4
Digital inputs	2 IN	3 IN + 1 IN on/off
Retrofitting	Can be integrated into meters/sensors already installed	



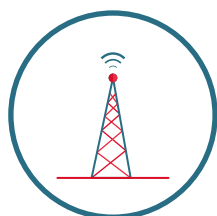
ANALISYS

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



POWER

Battery	Internal Li-SOCL2 9000mAh 3,6V + HPC1520
220VAC Power Supply (optional)	220VAC (AC/DC internal transformer with IP68 connection cable)
Solar Panel (optional)	Solar panel 4W 6 cell ER18650 battery pack total capacity 18000mAh



COMMUNICATION

NBLoT Modem	SIM7020E NBLoT
Supported Protocol	MQTT (COAP-UDP-HTTPS optional)
Antenna	Internal antenna Or External one (optional)



INTERFACES

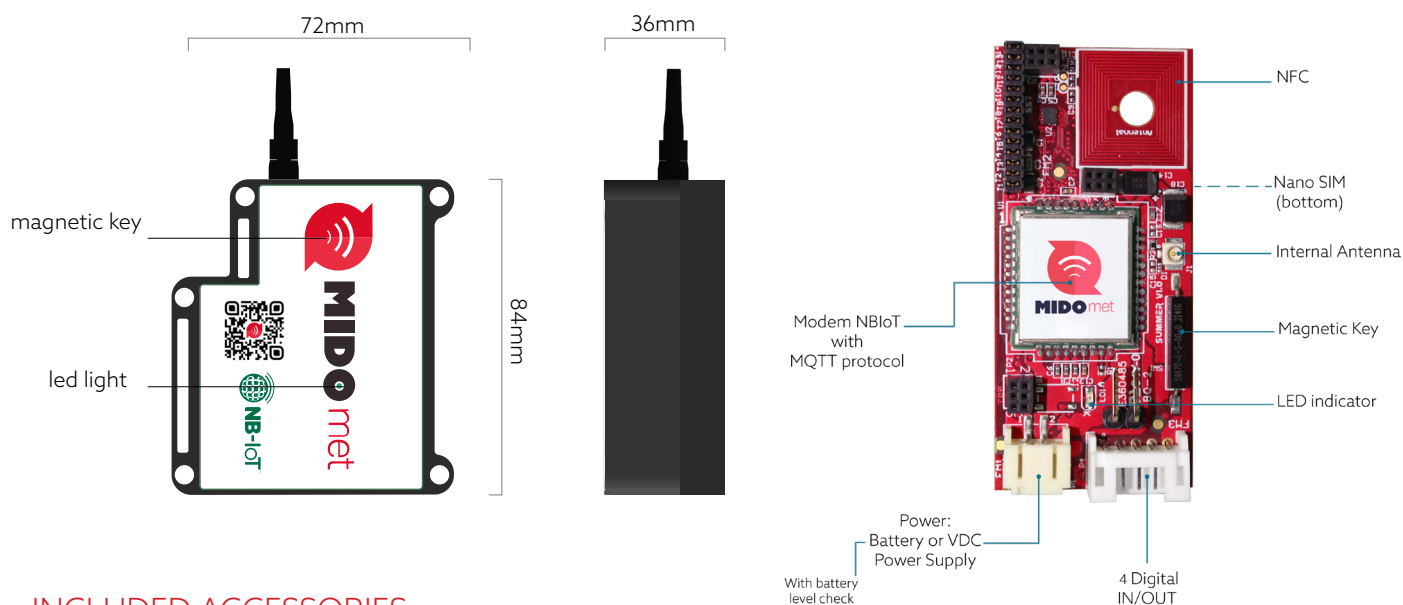
External access	NFC e APP
Interaction	Magnetic Key
Visual signal	Led Light



MECHANICAL CHARACTERISTICS

Assembly	dowels Ø 6
Temperature cond.	Working temperatures:-20/55 C °
Protection Level	IP68 (dielectric, shrinkage-free medium viscosity epoxy resin filling)

INTERFACE AND DIMENSIONS



INCLUDED ACCESSORIES

MD.CAB.LIYY.4P



Cable for digital input (output) wiring
50cm Unitronic® LiYY 26AWG + IP68 4 pin gold-plated brass connector + sealing cap

OPTIONAL ACCESSORIES

MD.CON.12



IP68 splitter connector (1 input wire and 2 output wires) for digital inputs for wiring pulse emitters or digital outputs.

MD.PRO.COAX.1M



Coaxial extension cable SMA (male) to SMA (female) RG174 length 1m

MD.ANT.EXT.2DB



External antenna with IP68 protection

CONFIGURATION OPTIONS

VERSION	Digital Inputs	Antenna*	ALIMENTAZIONE		
			Battery	Power Supply 220V	Solar Panel
MD.NB.1.14.2	2	Internal	Internal 9000mAh + HPC1520		
MD.NB.1.14.2.VA	2	Internal	HPC1520**	MD.ALI.1.2.36	
MD.NB.1.14.2.PS	2	Internal	HPC1520**		MD.PS.4W
MD.NB.1.14.4	4 (3 + 1 ON-OFF)	Internal	Internal 9000mAh + HPC1520		
MD.NB.1.14.4.VA	4 (3 + 1 ON-OFF)	Internal	HPC1520**	MD.ALI.1.2.36	
MD.NB.1.14.4.PS	4 (3 + 1 ON-OFF)	Internal	HPC1520**		MD.PS.4W

*External antenna option available

**Backup battery pulse capacitor

