



**MIDO**met  
smart metering

## MiDoMet NBloT Special

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





MiDoMet NBloT Special is the specialized NBloT datalogger for monitoring:

- pressure,
- flow,
- other analogue and/or digital sensors

Thanks to its analogue and digital entrances, it is able to connect to: pressure switch installed on the network, flow meters or generically sensors equipped with 4-20ma/0-20ma output.

The data stored by the Midomet NBloT Special are remotely transferred via NB-IoT network and using the MQTT or MQTTS open protocol, this allows data integration in any third-party management system.

## FEATURES

- Nr 4 digital inputs of which: nr.3 for connection to impulse emitters and nr.1 on-off status monitoring.
- Up to 2 analog inputs 4-20ma or 0-20ma or 0-5V
- 4G NBloT connectivity
- Resistant to hostile environments with IP68 protection
- Self-powered (more than 10 years of autonomy and replaceable battery)

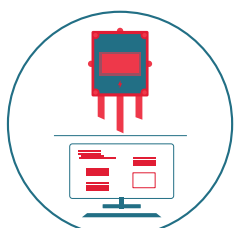
The device is equipped with a separate battery sector, isolated from the electronics one, to allow the **easy replacement** and at the same time to guarantee the **IP68** protection, thanks to which it is possible to install it in hostile environments or even in immersion.

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-IoT suppliers.

### REMOTE METER READING

for billing purposes or network monitoring



### IP68 GRADE PROTECTION

Can be installed even in hostile environment



### COLLECT DATA FROM SENSORS

Interface 4-20 mA, 0-5V or Serial RS485 ModBus

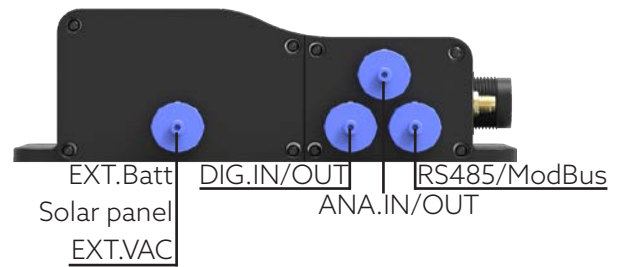
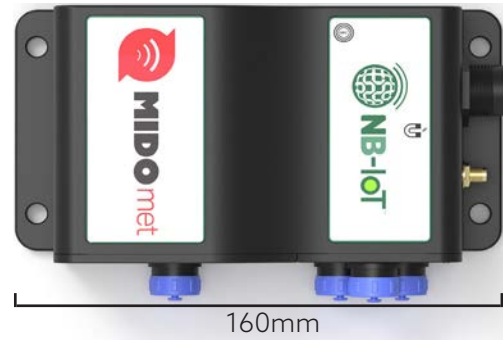


### OPEN PROTOCOLS

MQTT  
MQTTS



## DIMENSIONS



## 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.

### Data and alarms

The Mido in each communication message reports in the header all the info necessary for the message reconstruction of information relating to digital entrances: num. impulses, unit of measurement, multiplies and analogue: unit of measurement (bar, mt, but, V, etc.).

It is possible to configure the asynchronous communication of the alarm on the overflow of the minimum and maximum threshold of the thresholds of the analog probes and on the variation of the state/alarm on the entrance of the state.

### eDRX: Communication and sending controls remotely in real time

Thanks to the eDRX mode (if configured) the Midomet can interact almost in real time with the remote server to:

- change inputs configuration,
- change the sets for alarms configuration,
- receive activation profiles,
- have an immediate sending of data or/and of the state.

The Narrow Band connection can be configured with EDRX active. In this mode the MiDo receives and elaborates, with a certain frequency (a few minutes), paging messages\*.



\*affects the duration of the batteries

## NFC interface and APP

You can locally access the device via the NFC interface and the supplied app with your smartphone, to view information relating to the data inputs such as: pressure/levels, flow rates, total litres/cubic meters, voltage/internal battery status, etc.

Through the menu it is possible to carry out several operations:

- Input configuration,
- Output configuration,
- Configuration of the parameters to allow the timed execution of sequences and controls, aimed to manage the Set Point of the hydrovalve through the door OA or OD.
- Communication with the server for sending data,
- Execution of NBIOT signal test.

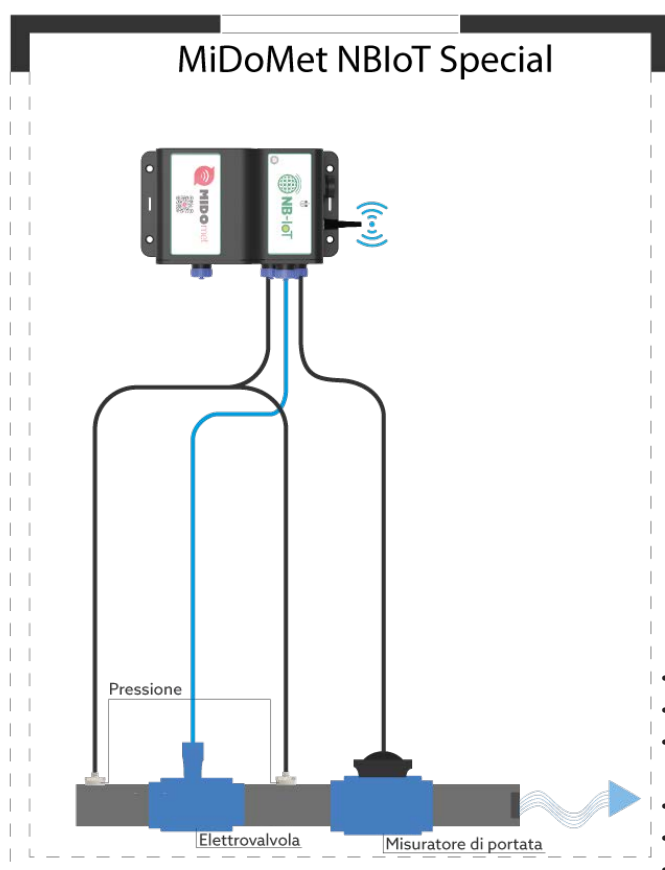
## Interaction with magnetic button and LED

The device is equipped with a magnetic button, which can be activated through a simple magnet. Thanks to the presence of a LED on the membrane it is possible to interact with the device to make timely checks, such as: the verification of the narrow band coverage in the position of the Installation, and the verification of the success of the connection with the remote server.

## Remote configuration

In Midomet NBloT **communication is bidirectional** and allows the device to receive commands and/or to configure the parameters remotely:

- configuration of analog and digital entrances,
- Configuration of the parameters to allow the timed execution of sequences and controls aimed at command through the door o or or or the setting of the Set Point of the hydrovate.
- Configuration of communication parameters (SIM, operator, frequency band) and the remote server,
- Configuration sampling and data transmission parameters,
- Possible alignment/realignment of the counting value with the mechanical counter.



## Communication protocol and interoperability with third party data management systems

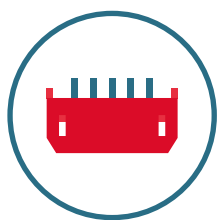
MiDoMet NBloT is an open and interoperable device, data can be easily integrated into third-party or pre-existing information systems, thanks to the standard protocol used: MQTT(or MQTTS).

## MiDoMet Soft &Cloud

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.

## Compliant:

- RoSH2 Directive 2011/65/EU
- RED 2014/53/EU: radio device;
- EMC Directive 2014/30/CE: electromagnetic compatibility;
- Directive 2014/35/CE: low voltage;
- Protection: CEI EN 60529;
- Regulation (CE) n. 1907/2006 REACH



### INPUTS

Digital	4 Digital IN
Analog	2 analog IN 4-20mA o 0-5V
Retrofitting	Can be integrated on previously installed meters



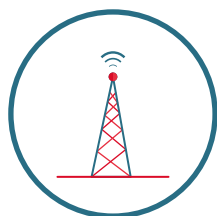
### ANALISYS

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



### POWER

Battery	Replaceable 9000mAh Battery Pack + HPC1520 backup
External Power (optional)	220vac (AC/DC transformer inside, IP68 connection cable supplied)
Solar Panel (optional)	4W panel with 6-cell ER18650 battery pack. Total capacity 18000mAh



### COMMUNICATION

NBLoT Modem	SIM7020E NBLoT
Supported Protocol	MQTT/MQTTS
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

## 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

### MD.CAB.LIFY.4P



50cm Unitronic® LifYY 26AWG analogue  
input wiring cable complete with IP68 4-pin  
gold-plated brass connector and sealing cap

## OPTIONAL ACCESSORIES

### MD.ANT.EXT.2DB



External antenna with IP68 protection

### MD.BATT.36V



Additional external 38Ah battery pack.

### MD.CON.14



P68 splitter connector (1 input wire and  
4 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.SIM.HD



External SIM HOLDER for Nano SIM IP68  
and sealing cap

### MD.JBOX.M686



IP68 compensation chamber for relative  
pressure or level sensor complete with  
breathing valve

## CONFIGURATION OPTIONS

VERSION	Digital Inputs	Analog Inputs	Antenna*	POWER SUPPLY		
				Battery	220V Power Supply	Solar Panel
MD.NB.1.16.6	4 (3+1 ON-OFF)	2	Internal	Internal 9000mAh + HPC1520		
MD.NB.1.16.6.VA	4 (3+1 ON-OFF)	2	Internal	HPC1520**	MD.ALI.1.2.36	
MD.NB.1.16.6.PS	4 (3+1 ON-OFF)	2	Internal	HPC1520**		MD.PS.4W

\*External antenna option available

\*\*Backup battery pulse capacitor





