



Nemos N200+ Series



- The NEMOS N200 + is a data acquisition device with GSM communication and battery power designed for operation in manholes and environments susceptible to flooding (degree of protection IP68). It has four digital inputs suitable for pulse flow meters, and two analog.
- When designing the NEMOS N200 + we were inspired by the classic design principle "form follows function". Some of the most original features of the equipment are a consequence of this philosophy: the hexagonal shape and the antenna arrangement.
- The hexagonal configuration allows the electronic card and two double battery packs to be installed in the smallest possible volume. In this way, the NEMOS N200 + contains up to four times more energy than usual while maintaining a discreet size.
- - The antenna connector on the top provides great versatility, allowing two configurations: integrated antenna or external antenna. The integrated high-performance antenna guarantees excellent coverage in most cases, leaving the option of an external antenna for those cases that require it. A single model covers all the possibilities.
- - For the configuration and diagnosis, the Nemos N200 + has Bluetooth communication that allows carrying out these tasks comfortably from outside the manhole avoiding the need to carry out this work in confined spaces.

Pressure:

The NEMOS N200 + is the most advanced data logger in its industry for line pressure monitoring. This is due to a very energy efficient implementation, which makes continuous pressure measurement feasible, despite the restrictions imposed by battery power.

Pressure monitoring is configurable in two modes:

- Low consumption mode: The pressure is read every second. In this way, statistics of maximum, minimum, and average of each recording period are generated. The autonomy penalty is negligible.



- Transient detection mode: The pressure is read between 8 and 128 times per second depending on the configuration and the pressure gradient detected, recording the pressure transients and water hammer. The high sampling frequency of 128Hz allows the capture of peak pressures with great fidelity.

Batteries and autonomy:

The NEMOS N200 + comes with two battery capacities: a 7.2v and 14AH pack or two packs for a total of 7.2v and 28AH. This is, respectively, twice and four times the usual in the sector.

Zeus Web and Apps:

MICROCOM offers free Zeus Web service to monitor its stations from a web browser or from the Android and iOS mobile applications.

Zeus Server:

Those customers who prefer to have full control of their system, have the option of installing Zeus Server on their own servers and have all the advantages of Zeus Web and the possibility of integrating the data from MICROCOM devices in external SCADAs through OPC UA .

Characteristics:

- 4 digital inputs for flow meters.
- 2 analog inputs configurable in voltage or 4 / 20mA loop mode.
- 2 voltage outputs in range 5 to 24v for supplying analog probes.
- Optionally 1 or 2 integrated pressure probes.
- IP68 protection (2m 100 days).
- Available in 2G / 3G and NB-IoT version
- Configuration and local diagnosis by Bluetooth
- Historical download by GPRS or GSM.
- History depth greater than 90,000 records.
- High precision real time clock (5 sec / month) and automatic synchronization function by NTP.
- Typical autonomy of 10 years (registering flow every 5m and transmitting once a day).
- Easy configuration through configuration software under Windows®, both locally and remotely by means of GSM data call.
- Free application for receiving alarms and downloading historical data (Zeus).
- Remote firmware update.
- 5 year warranty.

Technical Specifications:

Power	Lithium Metal Battery Pack 7.2v 14AH
IP Grade	IP68 at 2 meters 100days
Operating Temperature	-20C to +75C
GSM Modem	u-blox, available in 2G,3G and NB-IoT
Antenna	$\frac{1}{2} \lambda$ dipole
History Depth	>90,000 records
Real time clock	High accuracy \pm 2ppm with automatic NTP synchronization
Configuration and diagnostics	Bluetooth 4.0
Cable Length	2 m

Nemos N210 &N220	
Pressure Sensors	1 or 2 inputs x 8mm hydraulic tube 0-20bar (Options 0-1bar, 0-10bar)
Sampling Rate	Low power mode 1Hz
	Transient detection mode: Adaptive, upto 128Hz on primary pressure sensor
Accuracy	0.4%