Installation guide | NB-IoT / LTE-M | IP68 industrial enclosure

Document version	V1.0
Product/Service	All NB-IoT - LTE-M IP68
Etat	Terminé

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1. LOCAL CONFIGURATION OF YOUR SENSOR

1.1. PRESENTATION OF THE IoT CONFIGURATOR NB-IoT/LTE-M APPLICATION

The range of Adeunis NB-IoT/LTE-M **sensors** equipped with an **IP68 enclosure** can be configured **LOCALLY**, via **NFC** using the **IoT Configurator NB-IoT/LTE-M.** application.

Intuitive user interface

We've designed a user-friendly, intuitive interface to make configuring your sensor even easier. The application guides you through each step of the configuration process, providing clear instructions and well-organised sections.

Instant communication via NFC

Forget complex settings and cumbersome cables. Simply bring your Android/iOS smartphone close to the product to establish an instant connection and start setting up. Our app takes care of everything!

Guaranteed security and reliability

The security of your data is our top priority. The NB-IoT/LTE-M IoT Configurator app ensures a secure connection between your smartphone and the Adeunis sensor. Rely on our solution for a seamless configuration of your sensors.

The **IoT Configurator NB-IoT/LTE-M** application can be used on an **Android** or **iOS** smartphone.

1.2. ELEMENTS REQUIRED TO CONFIGURE A SENSOR

To configure your product with the NB-IoT/LTE-M IoT Configurator application, you need:

1.3. PROCESS

The principle of configuring a product with the **IoT Configurator NB-IoT/LTE-M** application is simple:

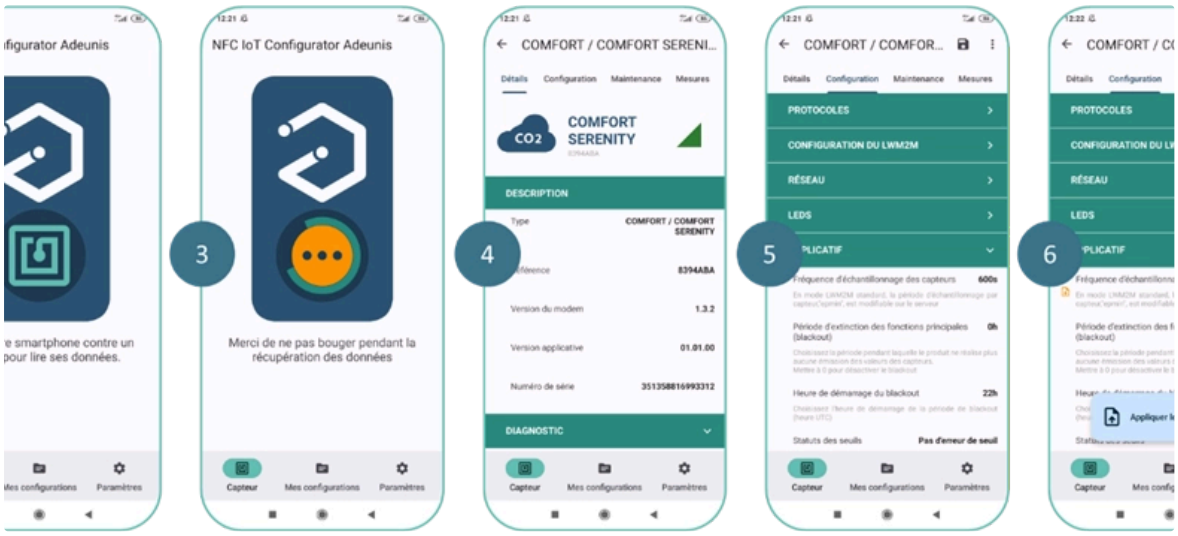
1. Download the application free of charge from :

Google Play Store https://play.google.com/store/apps/details?id=com.adeunis.nfcconfigurator

App Store https://apps.apple.com/fr/app/nb-iot-lte-m-iot-configurator/id6467626857

Adeunis website https://www.adeunis.com/assistance-documents-liens-utiles/

2. Activate NFC on your smartphone and launch the application **IoT Configurator NB-IoT/LTE-M**.
3. Place your smartphone against the product. The application recognises the product and reads the information it contains.
4. The information and current configuration of the product are automatically displayed on the **IoT Configurator NB-IoT/LTE-M** application.
5. Make any necessary changes to the product configuration quickly and intuitively, using the application's various drop-down menus.
6. Apply the new configuration to the product by pressing the "Apply Changes" button on the **IoT Configurator NB-IoT/LTE-M** application.
7. Start again by connecting another sensor (if necessary)



The application also allows saving, exporting, and importing an application configuration for quick duplication onto other products.

📌 **NOTE 1**

Using the NFC antenna has an impact on the life of the product. To preserve battery life, it is preferable to bring the smartphone close to the product's NFC antenna only to perform an information read/write operation. As soon as the read/write operation is complete, remember to move the smartphone away from the product's NFC antenna.

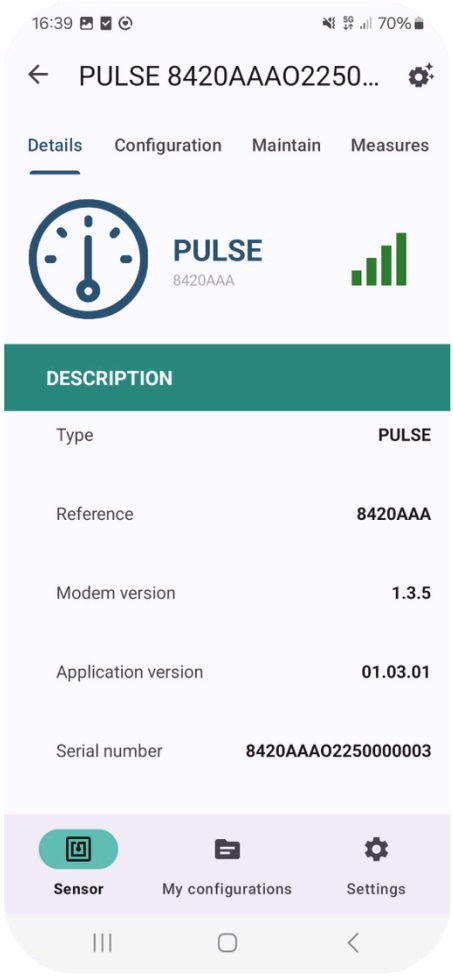
NOTE 2

The sensor is protected against unauthorised external access by an NFC security key consisting of 8 alphanumeric characters. This means that only authorised people can change the sensor's configuration via this interface.

The sensor's NFC security key can be changed by the user after the first connection. If a sensor's security key is changed, the new key must also be entered in the application settings to enable the application to continue communicating with the sensor.

1.4. AUTOMATIC IDENTIFICATION OF THE CONNECTED SENSOR

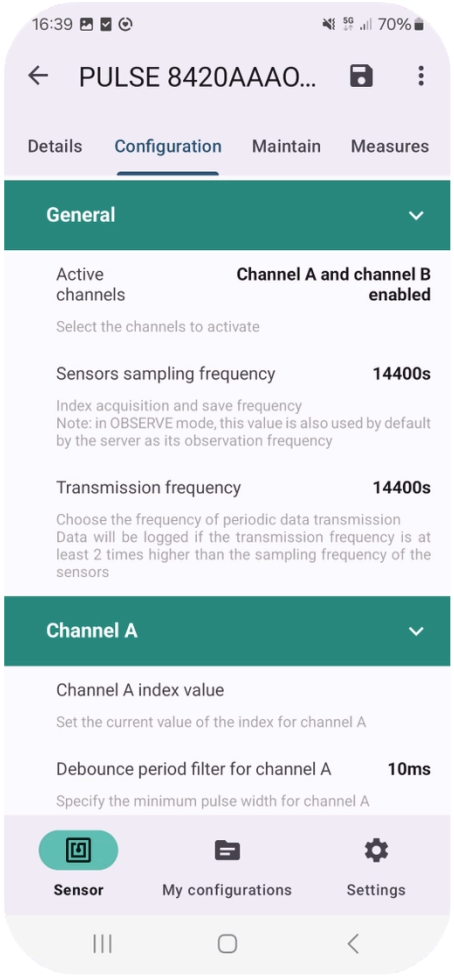
No need to search for your product in a list, the **NB-IoT/LTE-M IoT Configurator application** will automatically extract all the information from the connected product: part number, serial number, IMEI, modem version, application version, SIM status, network information, application configuration, etc.



1.5. SIMPLE CONFIGURATION OF YOUR SENSOR

Easily configure your product to meet your specific needs.

Define server, network and application parameters such as data collection intervals and communication modes in just a few clicks.

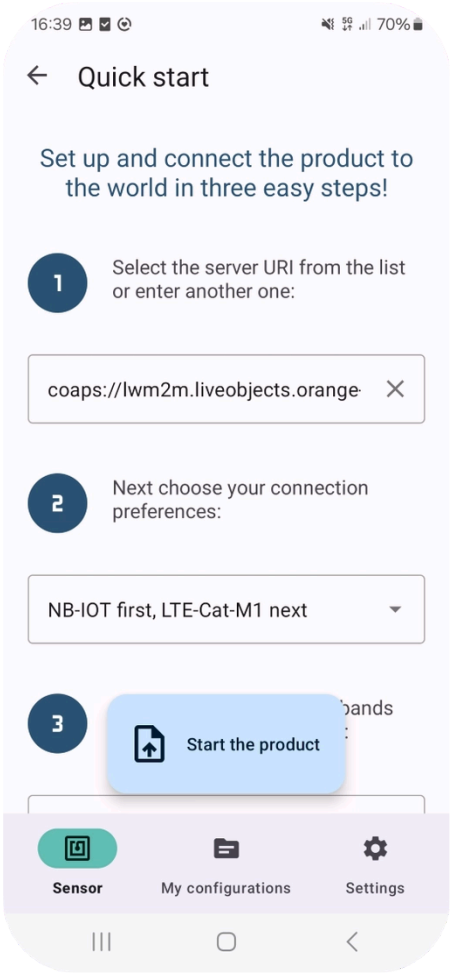


1.6. QUICK START FUNCTION IN 3 EASY STEPS

Get your sensor up and running in no time with our "Quick Start" function.

In just three steps, set the server URI, configure the network connection preferences, and then automatically start the product (switching from PARK mode to PRODUCTION mode).

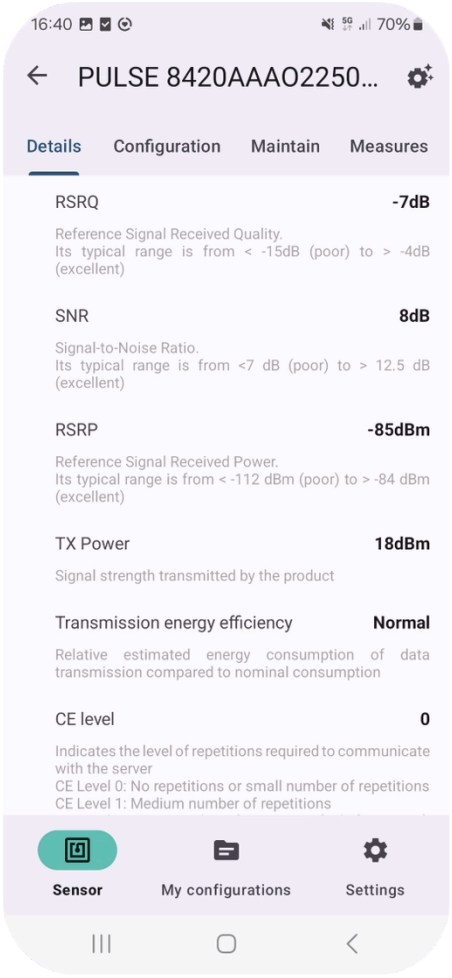
The product will then communicate with the server according to its default application configuration.



1.7. CHECKING THE QUALITY OF THE NETWORK

The **IoT Configurator NB-IoT/LTE-M** application allows you to view the values of the following network parameters in real time: RSRQ, SNR, RSRP, transmission power, emission energy efficiency, CE level, PSM support.

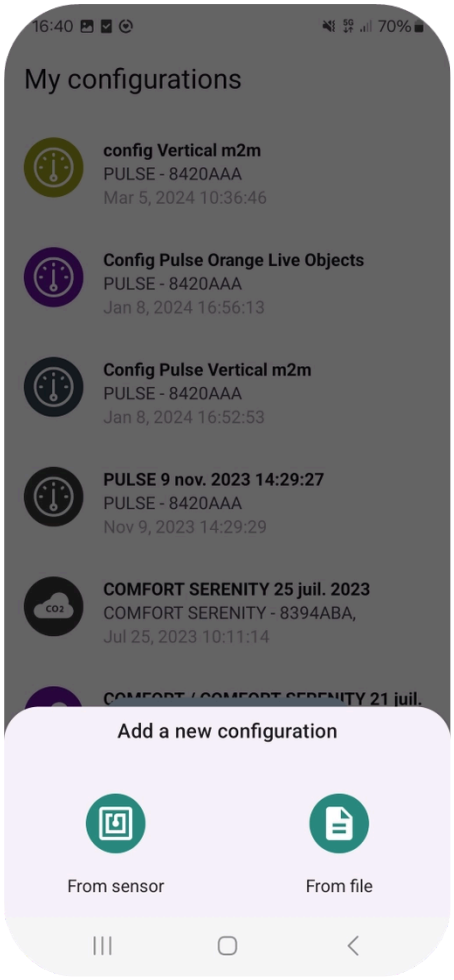
To make it easier to assess whether the product is working properly, a pictogram also gives a visual indication of signal quality.



1.8. EXPORTING/IMPORTING A CONFIGURATION

Take advantage of a unique configuration management space directly in the application:

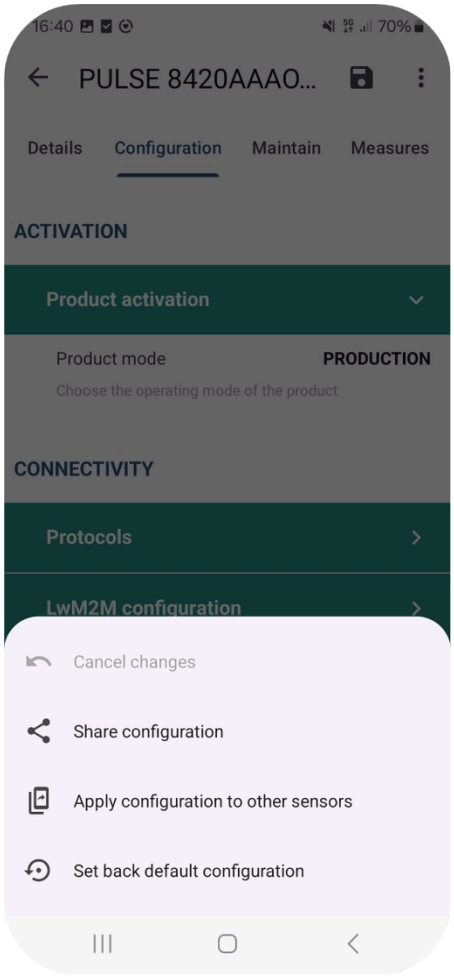
- Import a JSON file or retrieve the configuration of a specific product via NFC,
- Apply saved configurations to a product,
- Duplicate them across several products with a simple gesture.



1.9. RESTORING THE DEFAULT VALUES OF A CONFIGURATION

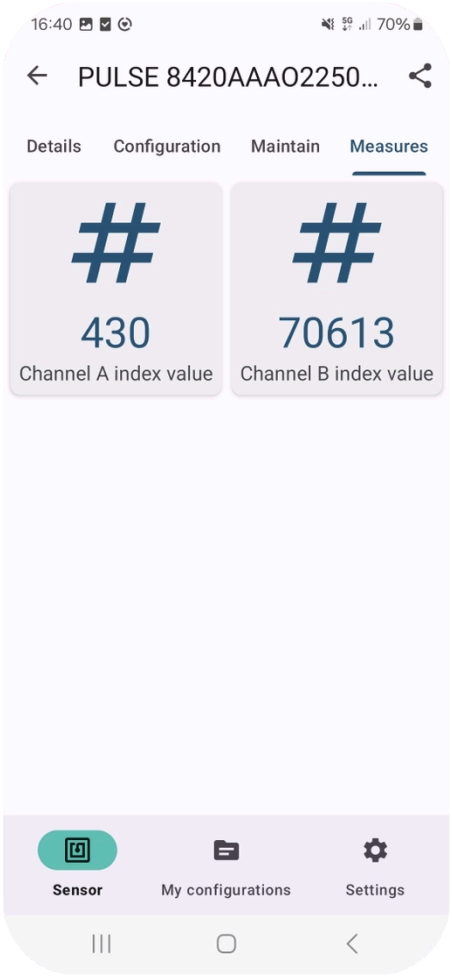
Once your product is connected to the application, click on the "Configuration" tab in the main menu.

To restore the default values for all the settings, click on the three dots at the top of the screen and select "Set back default configuration".



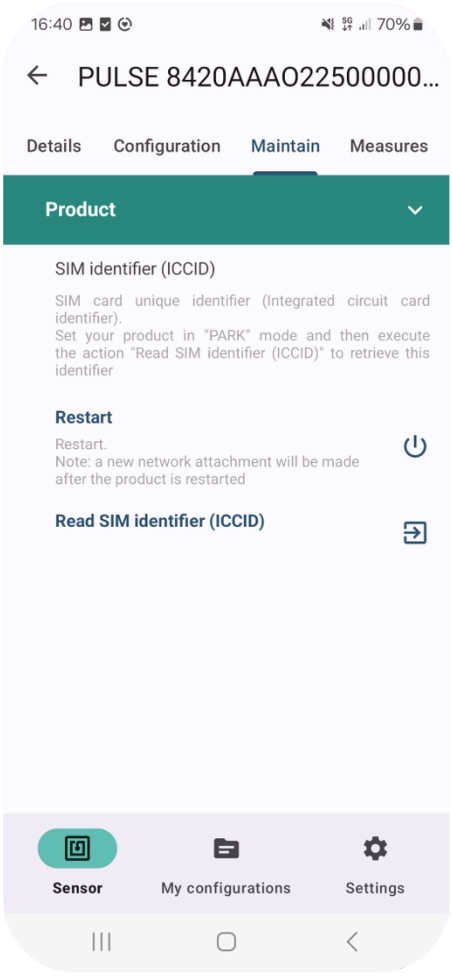
1.10. REAL-TIME DISPLAY OF DATA

The NB-IoT/LTE-M IoT Configurator application goes beyond simple configuration by giving you the option of viewing the latest data measured by your sensor in real time.



1.11. CARRYING OUT MAINTENANCE ON A SENSOR

Once your product is connected to the application, click on the "Maintain" tab in the main menu.



2. INSTALLING AND MOUNTING YOUR SENSOR

2.1. POSITIONING

There are two key rules for optimizing radio ranges:

- The first one consists of positioning your product as high as possible.

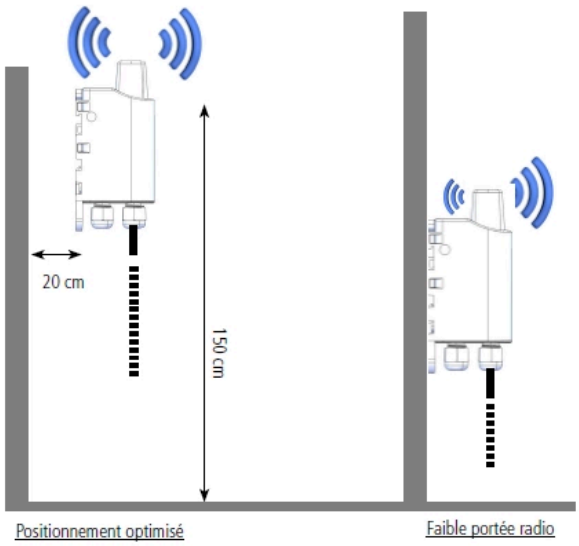
- The second one consists of limiting the number of obstacles in order to avoid excessive attenuation of the radio wave.

Position

To the extent possible, install the transmitter at a minimum height of 1.50 m and do not attach it to the wall.

Obstacles

Ideally, the product must be 20 cm away from any obstacle and, if possible, near an opening (the closer the obstacle is, the more the emitted power will be absorbed). All the materials encountered by a radio wave will attenuate it. Bear in mind that metal (metal cabinets, beams, etc.) and concrete (reinforced concrete, partitions, walls, etc.) are the most critical materials for the propagation of radio waves.

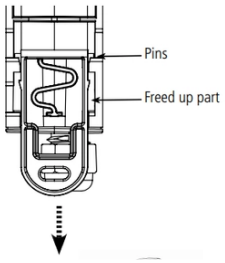


2.2. MOUNTING

Adeunis sensors can be fitted in 3 different ways, depending on the environment in which they are to be deployed.

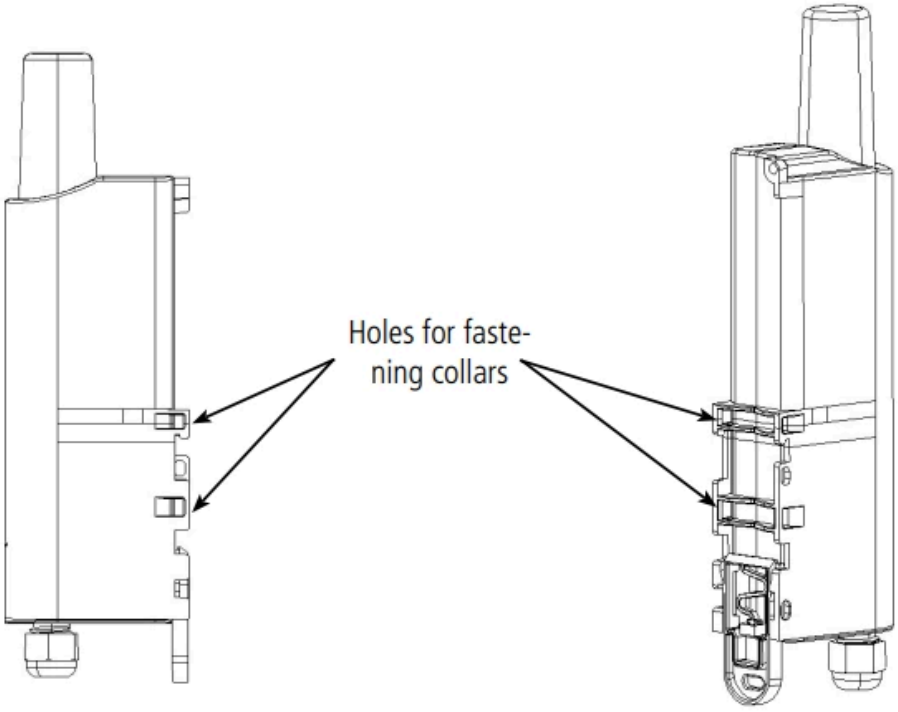
Mounting on tube or mast

Clamp fasteners allow the product to be securely fixed to a mast or tube.



To optimize fastening onto a tube or mast, we recommend you remove the Rail-DIN locking/unlocking lever.

To remove it, pull the lever down until the locking pins are opposite a
freed-up part and then remove the lever.

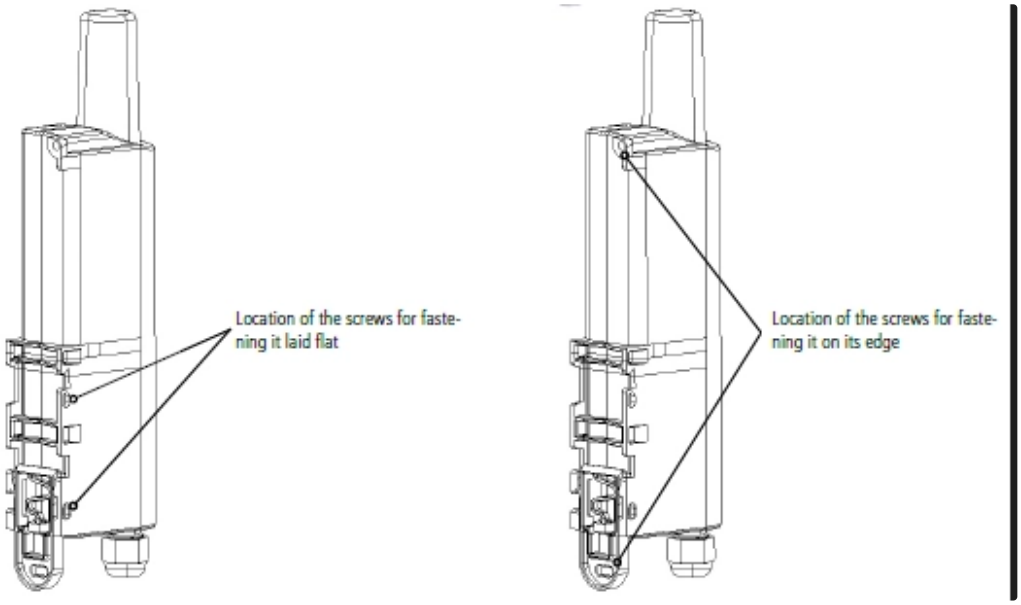


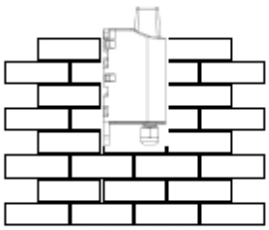
Fixing with screws

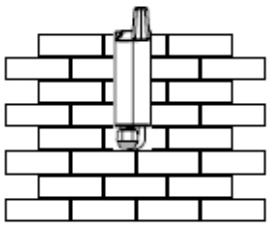
To fix your product to a flat surface, you will need 2 CBLZ 2.2 x 19mm screws and 2 SX4 plugs (or equivalent).

Two positions may be selected: Laid flat or on its edge:

- Placing it on its edge enables the product to be placed at a distance from its support and helps achieve better propagation of the radio waves.
- If you opt for laying it flat, make sure you remove the Rail-DIN locking/unlocking lever, as explained above.



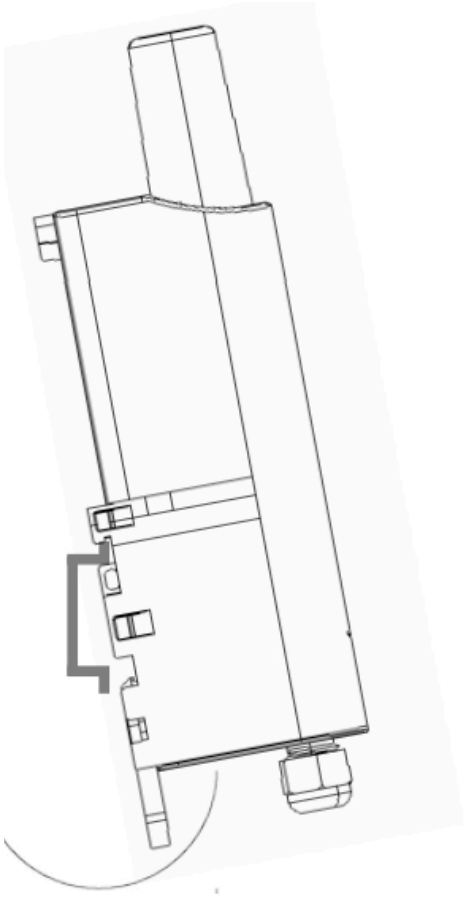

Fastening laid flat


Fastening on its edge

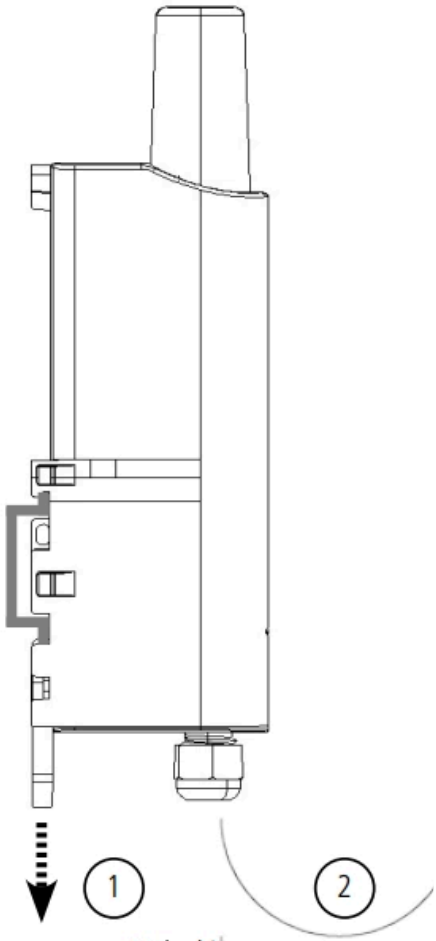
DIN-Rail fixing

This system, integrated into the casing, enables the product to be fastened onto a standard 35 mm rail:

- To fit the casing, place the upper inserts on the rail and lower the product to clip it into position.
- To remove the product, pull the unlocking lever down and disengage the product from the rail.



Locking onto the DIN-Rail

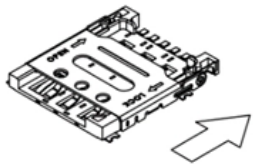


Unlocking

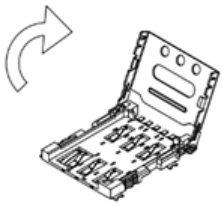
3. SIM CARD INSTALLATION

SIM CARD INSTALLATION PROCEDURE:

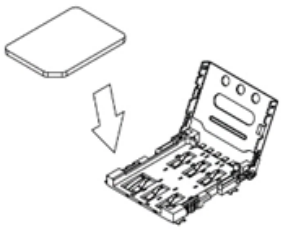
1. Verify that the product is in PARK mode using the NFC IoT Configurator application
2. Open the casing
3. Detach the electronic card from the front face of the casing
4. Carefully slide the metal cover from the "LOCK" position to the "OPEN" position



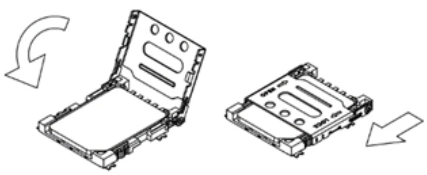
5. Open the metal cover to allow for the insertion of the Nano SIM card



6. Place the Nano SIM card against the contacts, with the chip facing down



7. Close the metal cover and slide it to the "LOCK" position



8. Place the electronic card back into the front face of the casing
9. Close the casing

CAUTION

Make sure the product is in PARK mode when inserting or removing a SIM card. Inserting or removing the SIM card with the product powered on can damage it.

📌 **NOTE**
Configuring a PIN code is not supported in the COMFORT product.

4. STARTING UP YOUR SENSOR

Your sensor is delivered in PARC mode, so it is in standby mode and consumes very little power.

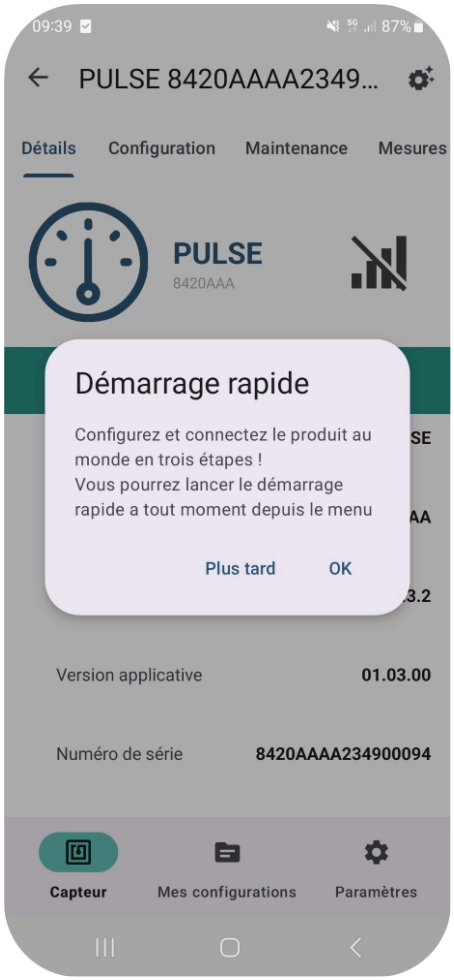
The product's NFC interface remains active so that you can read and modify the product's configuration and start it up via the **NB-IoT/LTE-M IoT Configurator application**.

4.1. USING THE QUICK START FUNCTION

The **NB-IoT/LTE-M IoT Configurator application** offers a "quick start" function for the product, enabling you in just 3 clicks to configure the server URI, configure the network connection preferences and finally launch an automatic start-up of the product (switching from PARK mode to PRODUCTION mode).

The product will then communicate with the server according to its default application configuration.

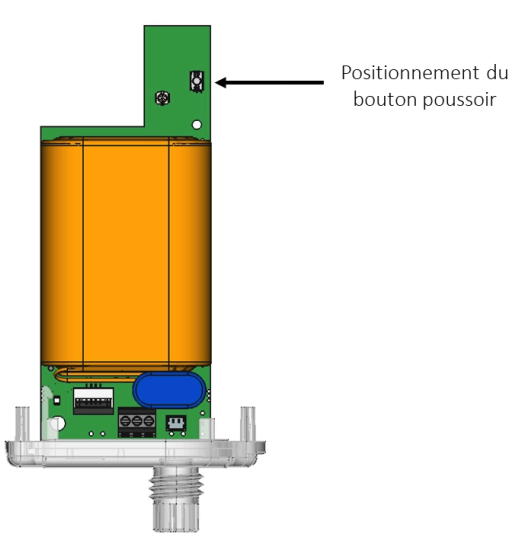
Make sure that the product contains a Nano SIM card before using the "quick start" function. If the product does not detect a SIM card when it starts up, the red LED will flash for 30 seconds and then the product will automatically return to PARK mode.



4.2. OTHER PRODUCT START-UP MODES

In order to use the product's other start-up modes, the user must first have configured the product's server and network parameters via the **IoT Configurator NB-IoT/LTE-M** application.

Product start-up via push button



To start the product using the push-button, remove the screws from the base, then pull on the cable gland to unstick the base and remove the circuit board from the case.

Then press the button for longer than 5 seconds.

The green LED lights up to indicate that the button has been pressed.

Re-insert the card following the guide rails inside the case and screw it all the way in to ensure a watertight seal.

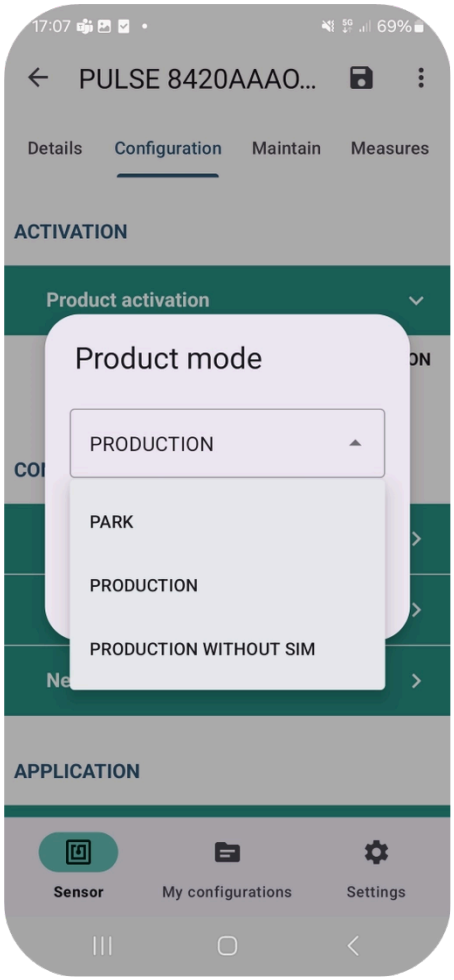
Once the product has been configured in PRODUCTION mode, it will immediately attempt to attach to the network in order to take measurements and communicate them to a server.

Starting the product via the NB-IoT/LTE-M IoT Configurator application

Go to the "Configuration" section of the main menu.

In the "Activation" sub-section, switch the product to "Production" mode to start it up.

Once the product is configured in PRODUCTION mode, it will immediately attempt to attach to the network in order to take measurements and communicate them to a server.



5. OPENING AND CLOSING YOUR SENSOR CASING

1. Remove the screws from the baseplate
2. Pull on the cable gland to remove the base plate
3. Reinsert the card, following the guide rails inside the case
4. Screw tight to seal