Starting Guide

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Welcome

KEYNETIC is an IoT[1] device capable of detecting machine stops and counting real-time production of your parts.

It allows your operators to access a simple and intuitive production tracking interface.
Install your device by magnetization on your machine and make your workshop digital in less than 10 minutes!

After a simple and non-invasive installation, it transmits its information to your KEYPROD application to allow you to manage your workshop live.

KEYNETIC is intended to be installed according to the recommendations listed in this user manual.

The interfaces of the KEYNETIC device and the KEYPROD platform, present in this manual, are subject to change with different updates.

(1) IoT = Smart device

Packaging content (3 items)

KEYNETIC

Transmits the operating state of the machine and counts the number of parts produced through its vibratory analysis

24VDC 2.5A POWER SUPPLY

Allows powering your KEYNETIC

MACHINE FIXING PLATE WITH SCREWS

Allows screwing the KEYNETIC to its machine if necessary

OPTIONAL

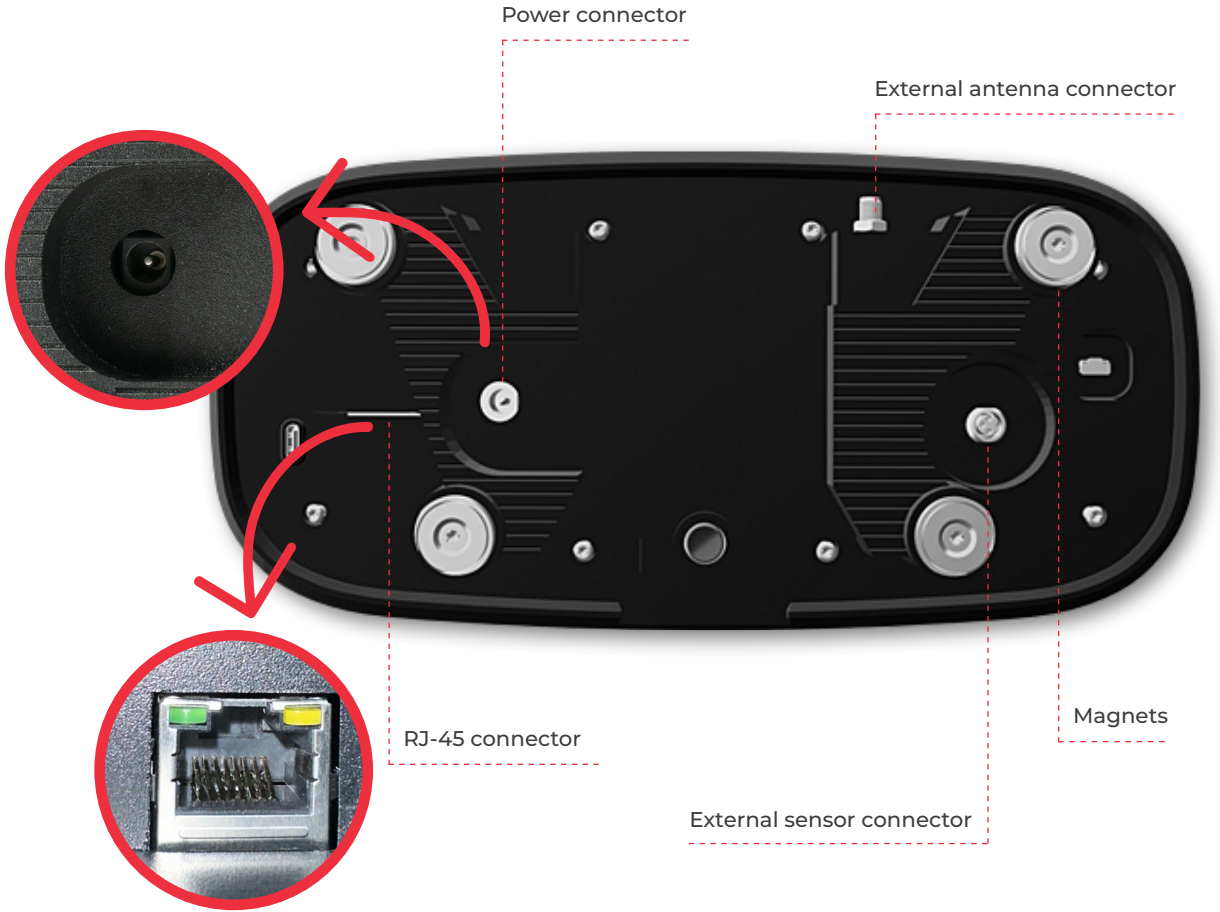
Wi-Fi Antenna

Magnetic patch

Remote vibration sensor

KEYNETIC technical description 1/2

KEYNETIC technical description 2/2



KEYNETIC

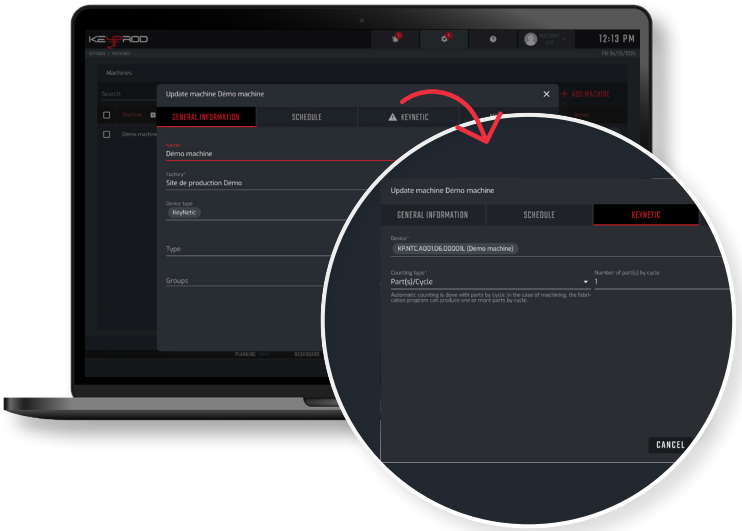
KEYNETIC INSTALLATION

Requirements : associate your machine

Carefully follow the following prerequisites to successfully install your KEYNETIC:

a. From the KEYPROD platform settings, then in the «PRODUCTION» section click on PARK MACHINES

b. From the table click on «Add a machine». A context window will appear then enter the necessary information to associate your KEYNETIC to your machine.



Make sure the machine to monitor:

1 - Has an electrical outlet close to your machine

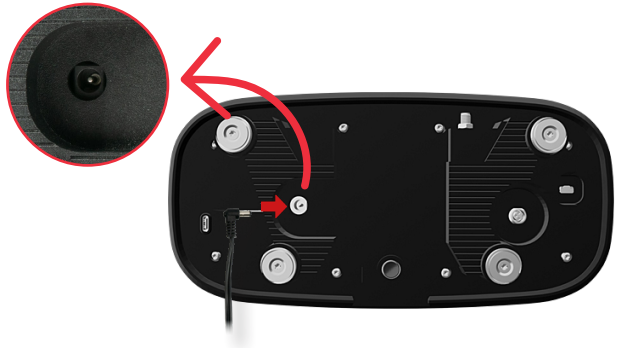
2 - Is covered by a Wi-Fi network connected to the Internet respecting the network flow

KEYNETIC installation 1/2

1 CONNECTION

Plug your KEYNETIC into the mains using the power cable.

Wait while your KEYNETIC starts up.
KEYNETIC logo will appear after about ten seconds.



2 INSTALLATION

After plugging it in, you can attach your KEYNETIC by magnetizing it directly onto the machine or by using the provided fixing plate for this purpose.

Proper positioning of your KEYNETIC is essential.
1. It must allow your device to best capture the vibrations generated by your machine to identify the production of a part.

2. It must be close to the operator's work surface to easily access the touch screen.

If it is impossible for you to meet these two conditions, you can use a remote sensor or use a computer or tablet to access your interface. For this contact your KEYPROD advisor.

For better placement, go to the Positioning page

KEYNETIC installation 2/2

3 ACCESS TO SETTINGS

Once the device has started up, access the configuration settings by clicking on the icon

4 LANGUAGE CHOICE

Choose the language of your KEYNETIC in the settings menu by clicking on the icon

5 WI-FI CONNECTION

Then configure your Wi-Fi:
- Click on the icon to display the list of available networks.
- Select your Wi-Fi network and enter your password.
- Confirm your entire entry by clicking OK

If your KEYNETIC does not find your Wi-Fi network, click the SCAN button to restart.
You can also manually enter the name of your Wi-Fi network.

KEYNETIC positioning assistance

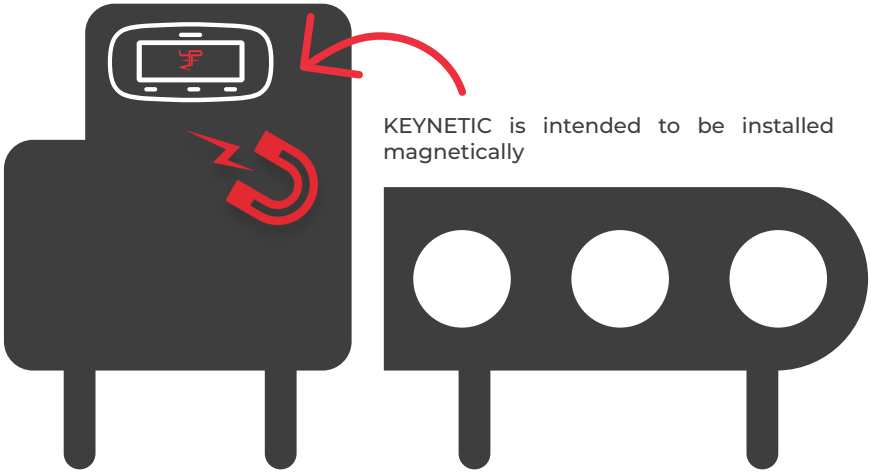
The KEYNETIC must be positioned at a place where the captured vibration is relevant to the activity of the machine to be monitored.

It is recommended to place the product near the machine's sheet metal fixings to optimize vibration capture or on the machine frame.

The most important thing is to feel the production phases.

When the optimum position is too far from the operator's station, we recommend using the sensor option and placing it as close as possible to the machine activity.

We also invite you to move it away from places where capture could be disturbed by external vibrations (e.g., conveyor, extractor).

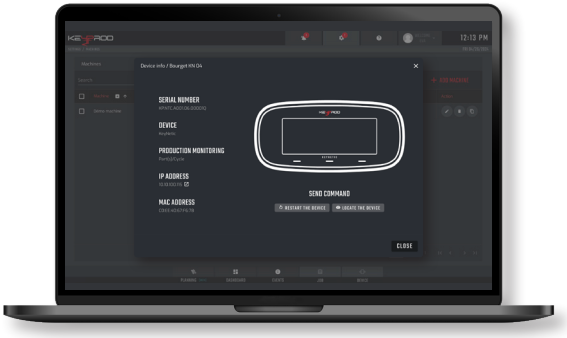


KEYNETIC is intended to be installed magnetically

KEYNETIC

SETTING UP STOP DETECTION

Access to the configuration



Your KEYNETIC is correctly connected. You can now move on to configuring stop detection to identify the stops of your machine.

To access the configuration page, **3 options** are available to you:

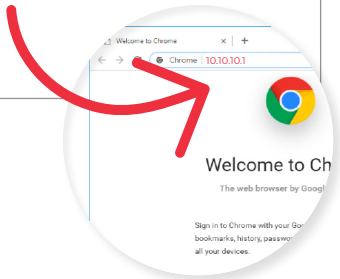
Option 1

From the KEYPROD platform settings, in the «PRODUCTION» section click on PARK MACHINES
In the «Device» column of the table, press the button KeyNetic , a context window will appear.
Then click on the IP address of the device.

Ou

Option 2

Connect your KEYNETIC to your computer using an RJ45 cable (not supplied), then launch your internet browser(2) and enter the URL **10.10.10.1** to access the configuration application.



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Option 3

From the interface of your KEYNETIC, on the «information» button and enter the IP address of your device directly into the search bar of your internet browser.

Once on the configuration page, click the «INITIALIZE» button

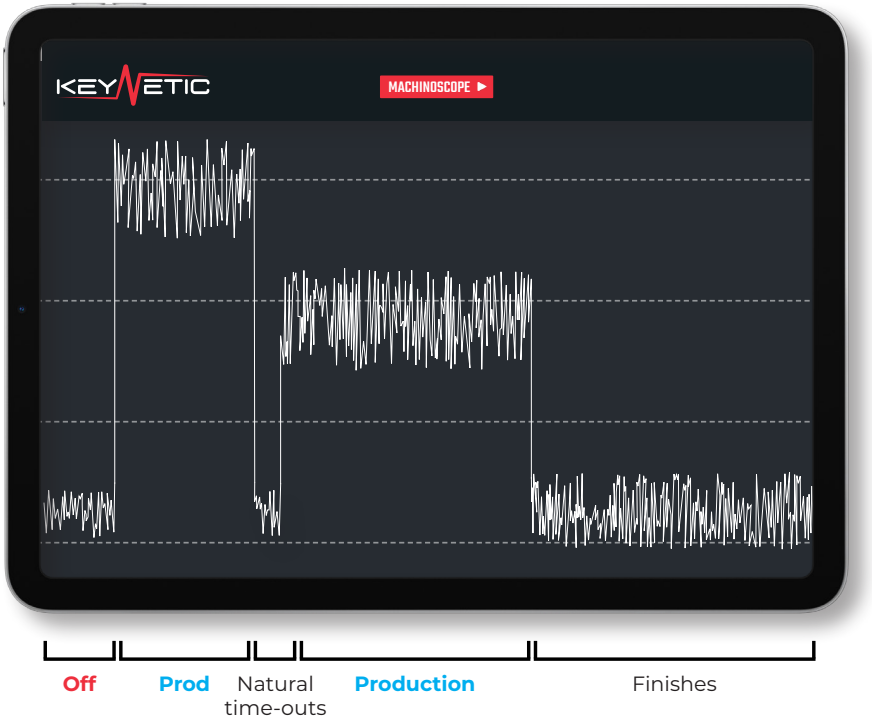
INITIALIZE

(2) We recommend using a recent version of one of the following browsers: Chrome, Edge, Firefox

Setting up stop detection 1/4

1 CAPTATION START

Once on the configuration page, you can start your capture for the entire duration of a production cycle.



Setting up stop detection 2/4

2 THRESHOLD POSITIONING

Threshold is the value used to define the On or Off status of your machine

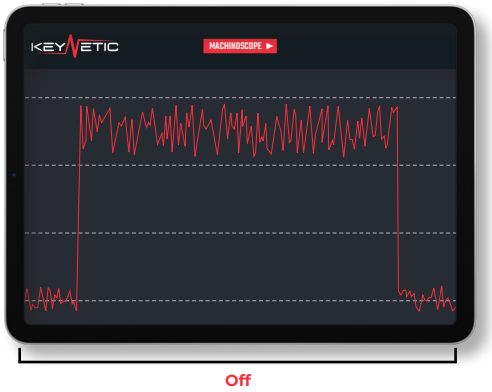
If the data reported is above the threshold, the machine will be considered On

Conversely, if the reported data is below, it will be considered Off

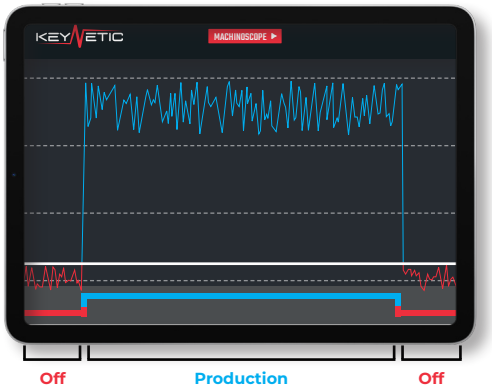
Here is an example of capturing vibration of a machine when stopped then on and then off again:

The threshold is represented by the straight white line.

Without threshold



With threshold



Setting up stop detection 3/4

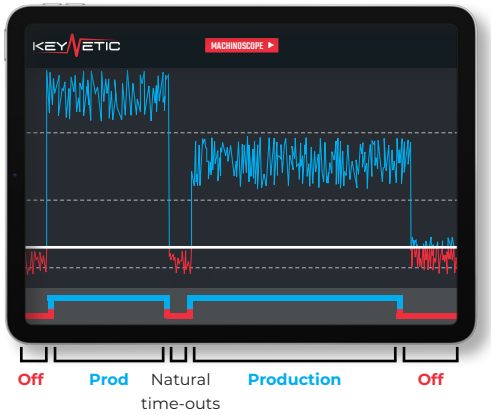
3 BUFFER ADJUSTMENT

The buffer is a period of buffer time between two state changes.

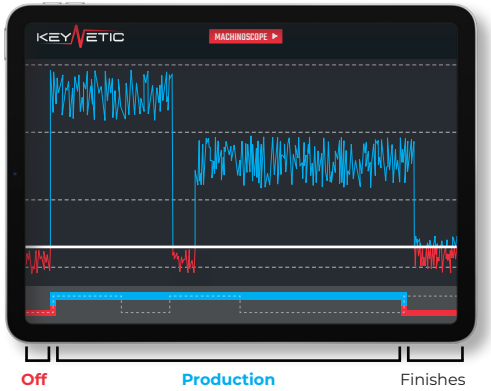
This buffer smoothes out changes in machine state by eliminating abnormal vibration peaks and dead times durin a cycle.

A short buffer makes the information more real time but it is more sensitive to parasitic or surrounding vibrations, while a longer bufferprovides more relevant information, but less frequent and less precise.

Without buffer



Threshold + Buffer



Setting up stop detection 4/4

4 SENSITIVITY MANAGEMENT

Combined with the buffer, a proper level of sensitivity will influence uncertain vibrations to be considered ON or OFF.

A high sensitivity gives more weight to the On state.

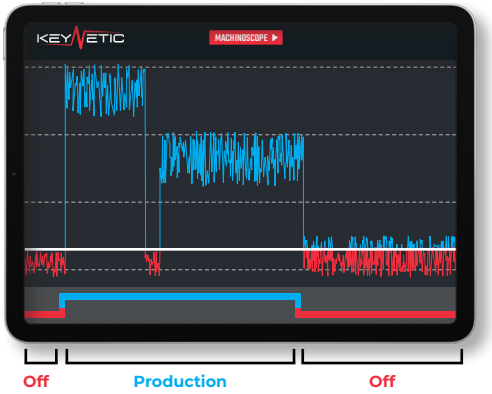
Increasing the sensitivity makes the KEYNETIC more sensitive to parasitic noises (e.g., unexpected shocks or door openings).

This can, for example, be useful for finishing operations where vibrations above the threshold are rarer.

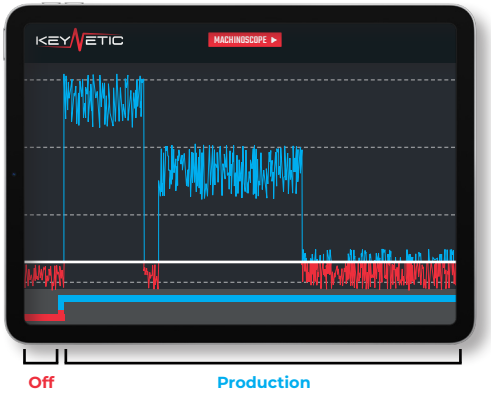
Lowering the sensitivity allows favoring the «OFF» state.

Lowering the sensitivity too much may prevent the KEYNETIC from recognizing certain production phases.

Threshold + delay



Threshold + delay + sensitivity



Setting up stop detection completed

YOUR KEYNETIC IS NOW CONFIGURED

Move on to setting up Automatic Counting

KEYNETIC

SETTING UP AUTOMATIC COUNTING

Setting up automatic counting 1/3

You can now teach it to count.

To set up the automatic counting of your KEYNETIC, you need to create a series change in your KEYPROD interface. The series change is used for Setting Up your machine before launching a new part to be produced.

This is the time when it is necessary to perform the learning of your device's vibration to teach it your production cycles.

1 CREATING A CHANGEOVER

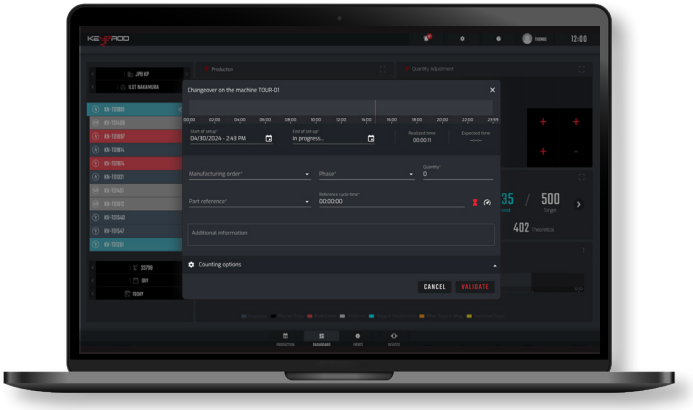
To create a series change for the machine you just equipped.

- Go back to your KEYPROD interface, go to the PRODUCTION dashboard
- Click on the «JOB» section
- Select «Changeover»

2 INFORMATION OF A CHANGEOVER

All the requested information must be completed:

- Manufacturing order
- Quantity
- Part reference
- Cycle time
- Phase



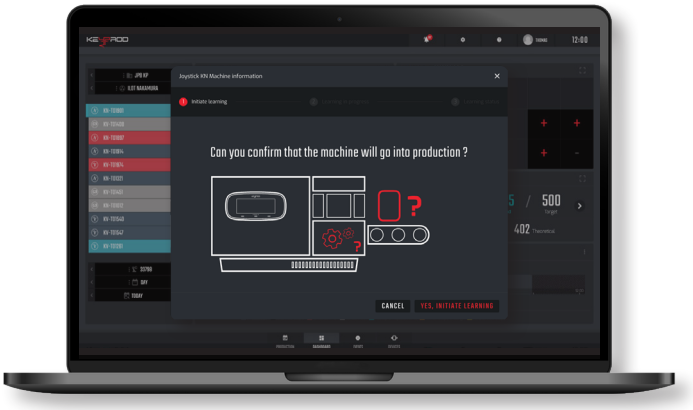
3 CLOSURE OF A CHANGEOVER

Once the series change has been launched on your interface and your machine is ready, you can close it by clicking VALIDATE on the opened window.

Setting up automatic counting 3/3

4 LAUNCH A CHANGEOVER

Click on the button START CHANGEOVER
wait until the learning status is displayed.



5 WAITING TIME

Your KEYNETIC will learn during 2.5 complete production cycles.

Once finished, click close.

During the learning, the light strip of your device will be green

In case of learning failure, click on redo the learning or continue without counting. Once the learning is completed, your device will automatically start counting!

Congratulations! Your setup is complete

YOUR KEYNETIC IS NOW SET-UP

START YOUR ADVENTURE IN THE INDUSTRY OF THE FUTURE

You can now follow your machine in real time and enjoy the functionalities of KEYPROD

Light strip

FIXED GREEN

FIXED GREEN
Machine in production

FIXED ORANGE

Micro-stop

YELLOW FLASHING

Device blinking to indicate its location

RED FIXED

Machine stop

ⓘ The duration of a micro-stop is configurable on your KEYPROD interface

Legal notices

WARRANTY: KEYPROD guarantees your KEYNETIC for 2 years against defects in material and workmanship. Only concerns what is contained in the original packaging. (cf: Pack contents). Invalid in case of non-compliance with the installation, storage, or use precautions of the product. KEYPROD does not guarantee this product against normal wear and tear, nor against damage caused accidentally or due to misuse.

Do not disassemble your KEYNETIC or try to open it.

SAFETY MEASURES: The KEYNETIC product is equipment intended for exclusively professional use.

Place your KEYNETIC away from projections (liquids, particles, etc.). Clean the product with a soft cloth. Caution: Do not immerse or spray liquid on the product. The product is designed to operate at ambient temperatures from 0°C to 50°C. Make sure not to exceed this maximum temperature during the operation of the product. The product has a touch screen for communication, do not place at a height greater than 2m from the ground. Use only the accessories provided with your KEYNETIC to ensure optimal installation, power, use, and warranty conditions.

Protect your KEYNETIC from shocks and falls. Avoid banging or damaging the product. Avoid exposure to electromagnetic fields. Keep the KEYNETIC away from the face, body, pacemakers, and other electronic medical devices (more than 20 cm away). Do not disassemble the product. Never open the product case and make sure the case is securely fastened before powering it on.

The attachment of the KEYNETIC is done using four magnets. The effort generated when approaching the machine (or the metal support provided) is significant, hold the KEYNETIC firmly by the 2 sides. Never let cables get pinched between the magnets of the KEYNETIC and the machine to be monitored. Before any connection, check the condition of the cords. Never connect the product to a cord that has an insulation fault or whose power block shows signs of shocks or cracks.
Stop using the product if any part is cracked, broken, or if it overheats. Then contact the KEYPROD support service: support@keyprod.com

STORAGE CONDITIONS: Please follow the following recommendations for the storage of your KEYNETIC:

store the product in a clean and moisture-free place;
keep it away from heat sources;
respect the storage temperatures (0°C/+50°C).
keep the product away from mechanical shocks (crushing, falling...)

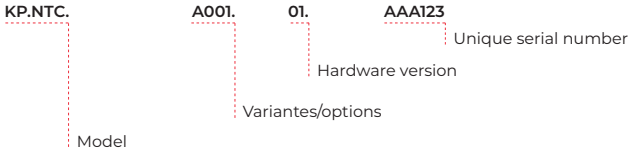
SOFTWARE AND UPDATE: Over The Air update deployable remotely. More information at: www.keyprod.com

ENVIRONMENTAL PROTECTION: Please respect local rules regarding waste disposal when disposing of the packaging and product. Drop them off at a collection point so that they are properly recycled.

Do not dispose of used electronic equipment in an ordinary trash bin.

COMPLIANCE: KEYPROD declares that this product complies with the essential requirements and the relevant provisions of Directive 2014/53/EU, and Directives ROHS 2011/65/EU and 2015/863/EU. The latest applicable version of the declaration of conformity can be viewed on the website www.keyprod.com.

PRODUCT MARKING AND IDENTIFICATION:
The serial number KP.NTC.A001.01.AAA123 is broken down as follows:



Label French Fab

KEYPROD Logo

Technical Specifications

Features		Description
Transformer input voltage range		100-240 Vac, 50/60 Hz
Transformer output voltage		24 V dc
Nominal current		2,5 A
Power		60 W
Operating temperature range		0 à 50°C
Storage temperature range		0 à 50°C
Maximum tolerated relative humidity		80%
Maximum tolerated altitude		2000 m
Use		Industrial indoor
Dimensions mm (L x l x h)		270 x 130 x 60
Weight		1,3 kg
Level of pollution		2
Level of protection (following IEC 60529)		IP2X
Device WiFi communication configuration KP.NTC.A001.01	Network frequences	WiFi 2,4 GHz (b/g/n) : 2400 – 2483,5 MHz WiFi 5 GHz (a/n/ac) : 5150 – 5350 MHz
	Transmitting power	100 mW
	Number of canals / separation	WiFi 2,4 GHz : 13 canaux / 20-40 MHz WiFi 5 GHz : 1 canal / 20 MHz - 40 MHz -80MHz

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