ATTENTION

Read carefully these instructions before installing and using this device and keep them for future reference. Attention to installation and electrical wiring. ***Use this device only as described in this document and never use itself as a security device.*** *If the internet connection is lost, data logging pauses. The device must be disposed of in accordance with local standards for the collection of electrical and electronic equipment.*

CONTENTS

DESCRIPTION

IoTW is a Modbus to Wi-Fi gateway which connects a compatible device to the cloud IoT and the **Cortex** platform. Communication is established through the serial input of the device and via internet. Cortex platform can fully monitor and control many devices, send email and Viber notifications in case of an alarm. Connection to the local router is established via Wi-Fi protocol. IoTW gateway can connect to only one device through a supplied 5 pole cable; it has a control button and an indication LED. IoTW gateway is powered either with an external power supply +5Vdc or directly from the device via the serial input.

For further information please contact us via support@kiour.com mentioning your Gateway name displayed on its label.

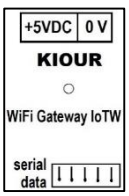
TECHINICAL SPECIFICATIONS

Power supply: +5Vdc (not included) / Minimum current operation: 1.5A
It is recommended using a power supply safety fuse: 1.5A (not included)
Humidity and temperature sensor from 0-100%RH and from -40-125°C with metal tube Φ8mm and length 14cm (not included)
Humidity accuracy from 0-90%RH ±2%RH, from 90-95%RH ±2%RH and from 95-100%RH ±3.5%RH
Temperature accuracy from -40-90°C ±0.3°C and from 90°C-125°C can reach till ±0.5°C
Cable 5 poles 0.5m length for connecting Wi-Fi gateway to the serial input of the device
Button / LED indication
Connections with plug-in terminal blocks / It is recommended using a torque wrench with maximum torque 0.4Nm
Operating temperature: -15÷+55°C / Storage temperature: -20÷+80°C
The device is mounted on Ω rail and it is restrained with one plastic bracket
Dimensions 20x59x78mm / IP20 Protection

CONNECTIONS

ATTENTION*: according to safety standards, the device must be properly positioned and protected from any contact with electrical parts. The device must be fastened in such a way that it cannot be removed without the use of tools. Disconnect the main safety switch of the installation before proceeding to any maintenance. Disconnect the power supply of the device before proceeding to any maintenance. Do not place the device near heat sources, equipment containing strong magnets, in areas affected by direct sunlight or rain. Prevent electrostatic discharges and sharp objects from been inserted to the device. Separate signal cables from power supply cables to prevent electromagnetic disorders. Signal cables must never be in the same pipe with the power supply cables.*

Connect the 5 pole cable, which you will find connected on the serial input of the gateway, to the serial input of the device. If necessary, connect also the external power supply +5Vdc to the gateway. Power up your device.



LED INDICATIONS, Wi-Fi SIGNAL AND SYMBOLS DESCRIPTION ON CORTEX PLATFORM

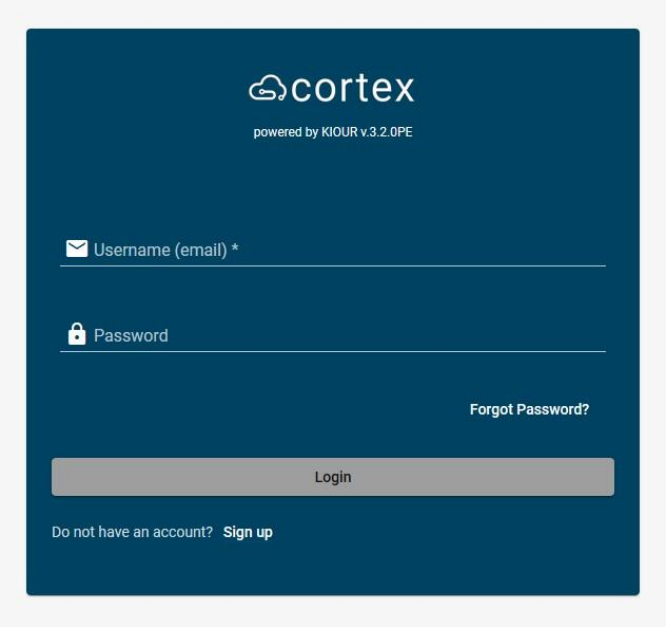
LED indications on gateway	
2 times/sec	connecting to a Wi-Fi network status
1 time/sec (quick)	claiming gateway status
1 time/sec (prolonged)	restarts every time it blinks
blinks	sends data to cloud
steady ON	no connection to router

Wi-Fi signal on Cortex platform	
---	no signal – device is offline
Excellent	excellent signal
Good	good signal
Low	low signal
Very low	very low signal

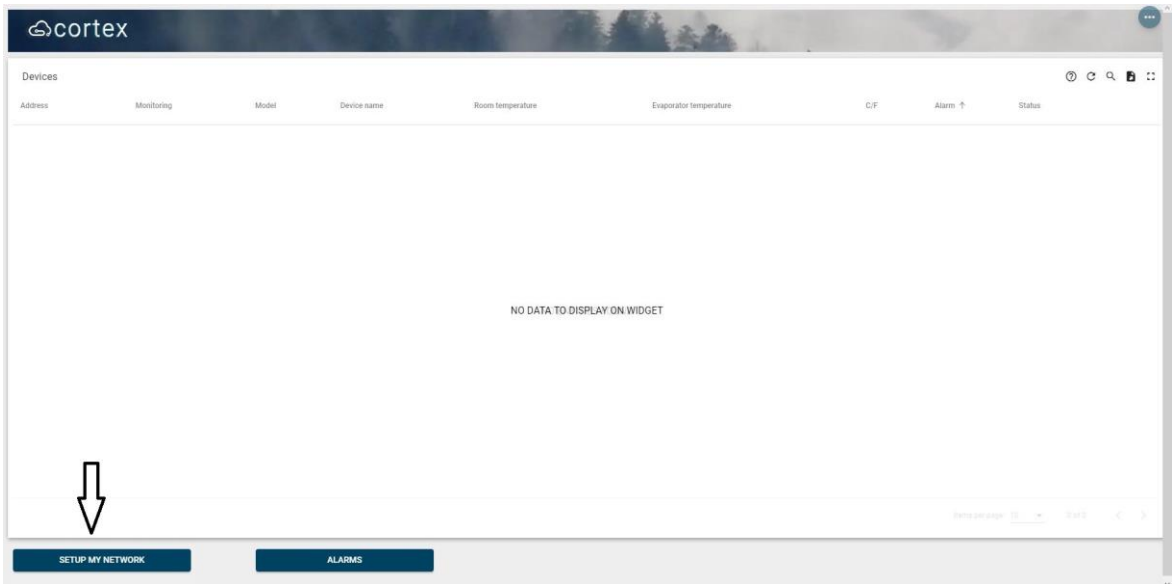
Symbols on Cortex platform	
	help
	information
	restart gateway
	edit gateway
	more details
	refresh table
	open technical datasheet
	export data
	search
	maximize screen
	minimize screen

CREATE AN ACCOUNT TO THE CORTEX PLATFORM

1. Open a web browser to your pc or mobile and go to https://cortex.kiour.com.

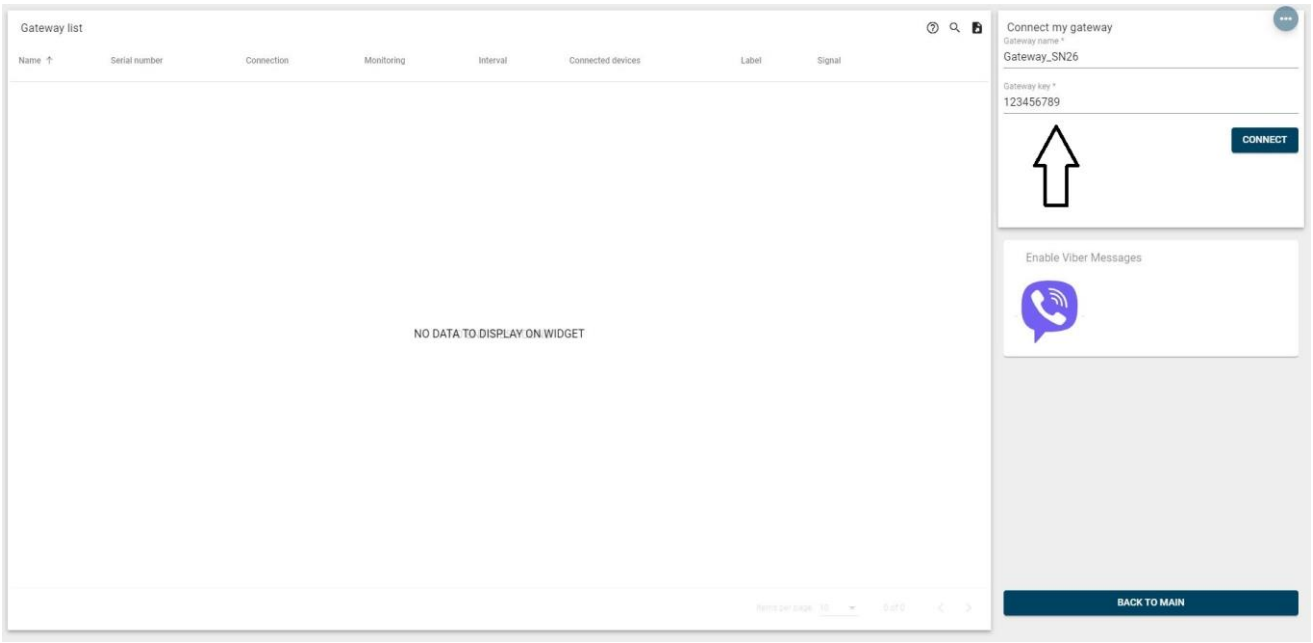


2. Create an account by clicking on "**Sign up**". The registered email is the one which will receive all notifications in case of an alarm and cannot change afterwards. Only the password can change.
3. Once the account is created, an activation email is sent to your mailbox which must be confirmed. Click the link and it will redirect you to the main dashboard of the Cortex platform.
4. To the main dashboard, it is displayed "**NO DATA TO DISPLAY ON WIDGET**" because no devices is yet connected.
5. To the bottom of the page, click on **SETUP MY NETWORK**.

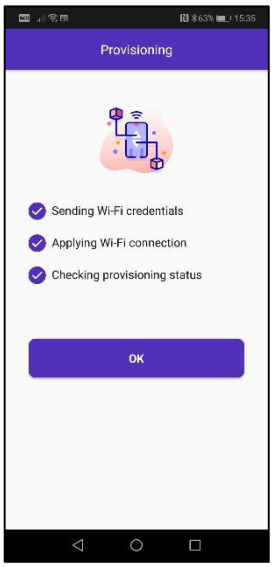


6. Check the page below, where you should enter **Gateway name** and **Gateway key** as noted on the gateway's label:

Attention to the correct registration of underscore " _ " when you register the Gateway name. Do not click on **CONNECT**.

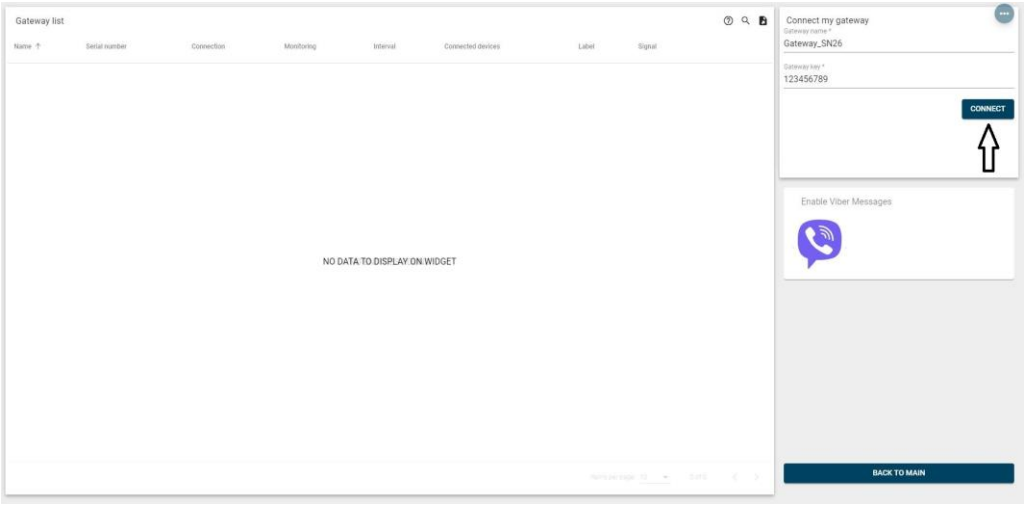


INITIAL START-UP OF GATEWAY AND CLAIMING IT



1. Connect the serial input of the device to the gateway via the supplied cable. Power up the device and the gateway if needed.
2. Gateway's LED starts blinking 2 times/second, which indicates that the gateway is waiting to connect to the local Wi-Fi.
3. Download and install the application **ESP BLE Provisioning** to your smartphone and accept access to everything that the application asks for. Connection between your mobile and the gateway is established via Bluetooth BLE, so activate Bluetooth on your device and give access to the application.
4. Open the application and click on **"Provision new device"**. Scan the QR code on the gateway's label.

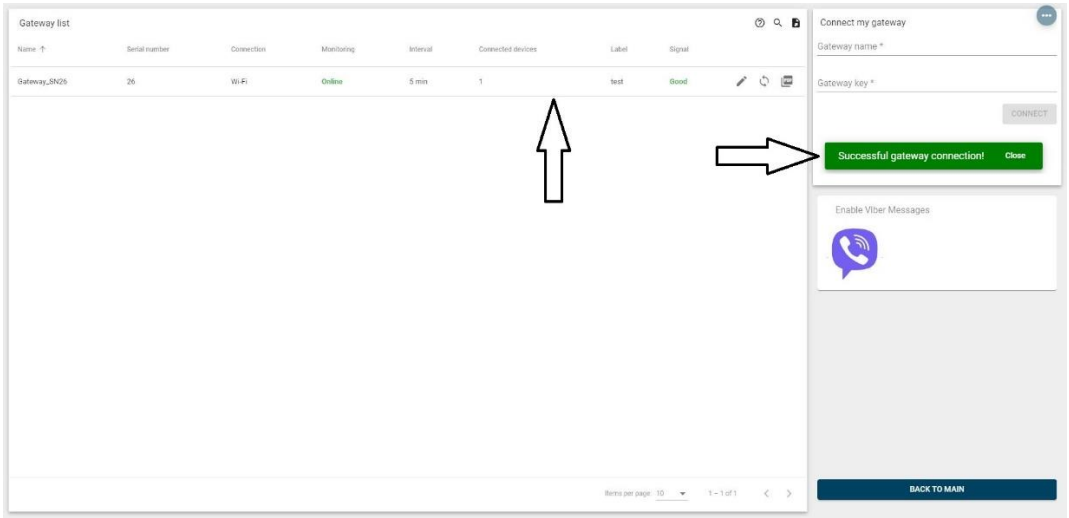
   *If the scanner does not operate, click on "**I don't have a QR code**". On the gateway's label find its data: BLE Name and PIN and select your gateway.*
5. A list with the available networks appears and we register the desired Wi-Fi network. The successful connection appears on screen, same as the left picture here. The connection between the gateway and the local Wi-Fi network is successful and complete.
6. Gateway's LED starts blinking now 1 time/second, which indicates that the gateway is waiting to connect to your Cortex account.
7. Click on **CONNECT** as it is indicated on the following screen:



A message of successful connections pops-up: 

*If the connections fails, please toggle the gateway's power and press **CONNECT** again.*

8. The gateway is successfully connected and appears on the list:



We can connect multiple gateways to an account using this procedure and check them all from the gateway's list.

Gateway's connection to the Wi-Fi is executed only once and there will be no need to repeat this procedure, except only if you want to change the Wi-Fi network on your gateway. The application is used only for this procedure and not for the monitoring and controlling the device.

If your smartphone has an old operating version, the application might not be available or not operate accordingly. Please find another smartphone to access the application.

If the Wi-Fi data are registered incorrect, please repeat all steps.

**In case of not being able to connect your gateway with the above procedure, please go to paragraph "*Alternative way of register a Wi-Fi network".

GATEWAY PLACEMENT AND Wi-Fi SIGNAL

To the bottom of the main dashboard page, click on **SETUP MY NETWORK.**

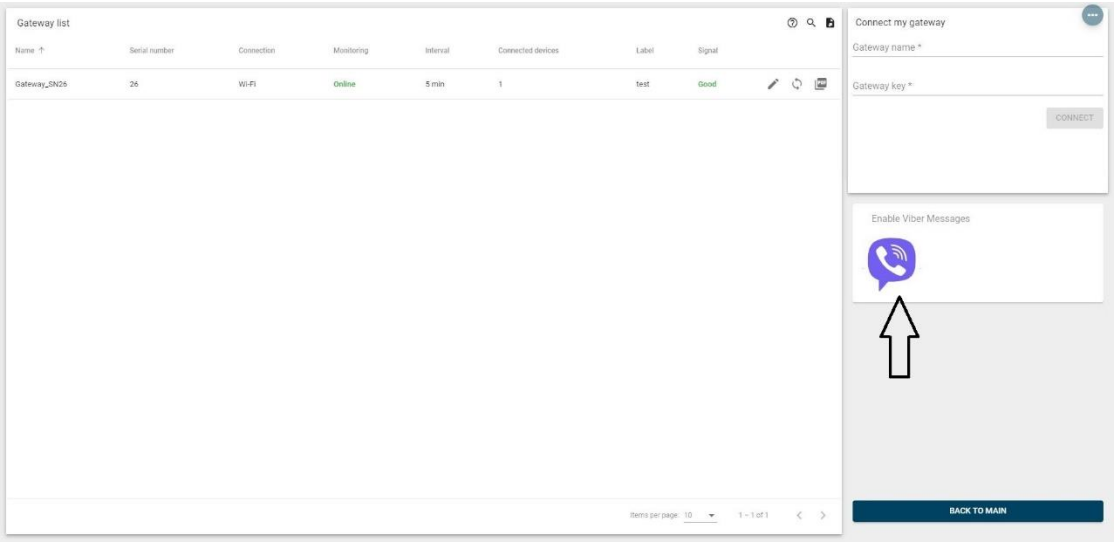
Wi-Fi signal is a column on the gateway's list and has the following 4 signal levels: **Excellent**, **Good**, **Low**, **Very low**.

When the indication "---" is displayed, there is no signal available.

It is recommended to place the gateway in a place where **Very low** signal is not displayed.

ENABLE MOBILE MESSAGING VIA VIBER

1. Download and install Viber application to your mobile or pc. Viber messaging is unlimited and free of charge.
2. To the bottom of the main dashboard page, click on **SETUP MY NETWORK.**
3. Click on and give access to everything Viber application might ask for.



4. A welcome message appears on Viber from contact KIOUR. Please send your full name, email and mobile number.
5. In the next few hours, Viber messaging will be activated and you will be informed via a confirmation mail that the service is activated.

To register more mobile numbers, please contact us to support@kiour.com .

NOTIFICATION VIA EMAIL AND VIBER MESSAGING

Email notifications are sent to the registered account email (Cortex username). Viber messages are activated only if all the steps of paragraph "Enable mobile messaging via Viber" are executed and you have received a confirmation email that the service is activated.
Once an alarm is activated, a notification via email and Viber is sent. There is no notification when the alarm is deactivated.

To register more emails, please contact us to support@kiour.com .

ADJUSTING THE CONTROLLER CONNECTED TO GATEWAY

Search for the technical datasheet of the relevant device for more information regarding programming its parameters.
The device is able to communicate with the IoTW gateway, only if the following two parameters are set as follows: **Add = 1** and **bAU = 3**.

CONNECTION TO HUMIDITY/TEMPERATURE SENSOR SHT31

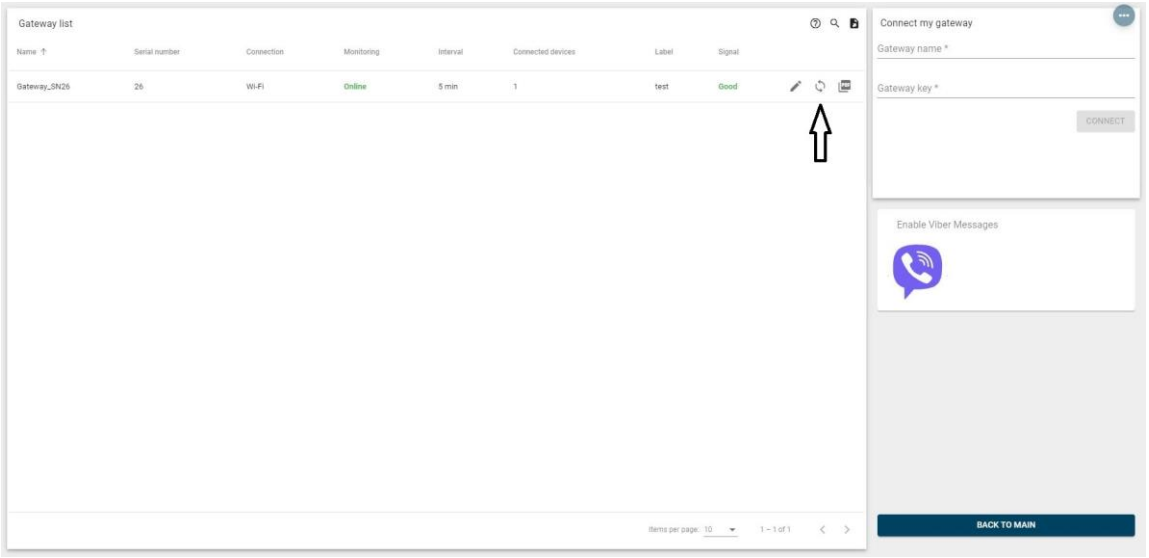
Humidity and temperature sensor from 0-100%RH and from -40-125°C with metal tube Φ8mm and length 14cm
Humidity accuracy from 0-90%RH ±2%RH, from 90-95%RH ±2%RH and from 95-100%RH ±3.5%RH
Temperature accuracy from -40-90°C ±0.3°C and from 90°C-125°C can reach till ±0.5°C

The humidity/temperature sensor SHT31 can connect to gateway through a 4pin plug-in terminal block. The sensor can be connected at the same time with a controller to gateway; every gateway can log and control at the same time a KIOUR controller and a humidity/temperature sensor. Through the Cortex platform we can adjust high/low temperature alarms and high/low humidity alarms among with the corresponding delay alarms.

REMOTE RESTART OF GATEWAY

If you want to restart your gateway through the Cortex platform, follow these steps:

1. To the bottom of the main dashboard page, click on **SETUP MY NETWORK.**
2. Click on ( ) next to your gateway and wait 10 seconds. Check the **Status** column to display **Online,** which indicates that the gateway has restarted successfully.



ERASE OLD Wi-Fi NETWORK AND REGISTER A NEW ONE

In order to erase a Wi-Fi network from the IoTW gateway and register a new one, follow these steps:

1. Press and hold the gateway's button while you power it up. Gateway's LED starts blinking fast and it has entered setup mode. Release the button.
2. Press again the button and hold it more than 5 seconds. Release the button. LED starts blinking 2 times/second: old Wi-Fi network is erased and the gateway is waiting to connect to the local Wi-Fi network.
3. Follow steps 3 - 5 from paragraph "Initial start-up of gateway and claiming it " to register a new Wi-Fi network.

ALTERNATIVE WAY OF REGISTER A WI-FI NETWORK

If you are unable to connect your gateway as described on steps 3 - 5 from paragraph "Initial start-up of gateway and claiming it ", check the following:

1. Press and hold the gateway's button while you power it up. Gateway's LED starts blinking fast and it has entered setup mode. Release the button
2. Press again the button and hold it more than for 20 seconds. Release the button. LED starts blinking 3 times/second: the gateway is waiting to connect to the local Wi-Fi network using an alternative way.
3. Find on gateway's label the BLE Name and PIN.

4. Open the application **ESP BLE Provisioning** and click on **Provision new device**. From the list find your gateway and register its PIN.
5. A list with the available networks appears and we register the desired Wi-Fi network. The connection between the gateway and the local Wi-Fi network is complete.
6. Gateway's LED starts blinking now 1 time/second, which indicates that the gateway is waiting to connect to your Cortex account. Continue with steps 7 and 8 described on paragraph "Initial start-up of gateway and claiming it ", in order to connect your gateway to your account.

Gateway's connection to the Wi-Fi is executed only once and there will be no need to repeat this procedure, except only if you want to change the Wi-Fi network on your gateway. The application is used only for this procedure and not for the monitoring and controlling of the device.

Made in Greece.

CE RoHS TÜV AUSTRIA HELLAS ISO 9001:2008 No. 01013192

The device is under two year's guarantee. The guarantee is valid only if the manual instructions have been applied. The control and service of the device must be done by an authorized technician. The guarantee covers only the replacement or the service of the device. KIOUR PC implements a Quality Management System according to EN ISO 9001:2015 Standard with registration number 01013192. KIOUR preserves the right to adjust its products without further notice.