Operating and maintenance instructions “Translated version”

Measuring catenary contact wire thickness by laser profilometry

Reference: ENSMESUREFC

SNCF approval number: DGOP 19369

Dear customer,

You have just purchased a product from 4NRJ.

We would like to thank you for the confidence you have shown in us and hope that this acquisition will give you complete satisfaction.

We ask you to pay particular attention to the recommendations contained in this document.

Regular inspection and maintenance are essential if equipment is to be available at all times and used in the safest possible conditions. A product's lifespan depends directly on how carefully it is used and maintained.

To ensure that the characteristics of the product are maintained, 4NRJ draws your attention to the following essential points:

- Keep up with maintenance schedule
- Replace defective components with original parts
- Do not modify anything

We hope that our equipment, designed and manufactured using the latest techniques, will provide you the service you expect.

We are fully available to our customers at any time.

4NRJ

Document information page

Created by: BUY Kevin

Date of first distribution: 24/10/2019

Document history

Date	Type of modification	Performed by	Index
24/10/2019	Creation	SANTERRE Paul	A
19/12/2019	Photo update	SANTERRE Paul	B
03/03/2020	Application update	LE GUEL Anthony	C
07/05/2020	Formatting	BUY Kevin	D
13/04/2021	Changing the measurement range	BUY Kevin	E
26/07/2022	Network modification	LE GUEL Anthony	F
16/12/2022	CE Declaration Update	SANTERRE Paul	G
12/06/2024	Modification of the factory periodicity (change to 4 years) + BOM update	BUY Kevin	I

Declaration of conformity CE

Original version

The undersigned manufacturer: 4NRJ
2 Rue Albert Calmette
ZA Les Gailletrous
41260 La Chaussée-Saint-Victor (France)

The only legal entity authorised to compile the technical file

Certifies that the equipment designated below:

Name: Measuring catenary contact wire thickness by laser profilometry
Type: ENSMESUREFC
Year of manufacture: 2019

Complies with the regulatory provisions set out in the directive(s):

- 2011/65/UE - *Directive ROHS*
- 2013/35/UE - *Directive exposition aux champs électromagnétiques*
- 2014/30/UE - *Directive compatibilité électromagnétique (CEM)*
- 2014/53/UE - *Directive équipements radioélectriques (RED)*

Complies with the regulatory provisions defined by the "harmonised" standard(s):

- EN 50581 :2013
- EN 55011/A :2017
- EN 61000
- EN 300328
- EN 62368-1

Complies with the regulatory provisions defined by the standard(s):

- NF EN 60825-1

These applicable or non-applicable regulations and standards are currently being verified.

Done at: La Chaussée-Saint-Victor On: 04/11/2019

Name: GASSELIN Benoit Function: Managing Director Signature:

IMPORTANT:

Any modification to the machine without the manufacturer's written agreement will render this declaration null and void

Contents

1. Introduction

The instructions for use are an integral part of this product. It contains important instructions on safety and use. Before using the product, please familiarise yourself with all the operating and safety instructions.

You must use the product in accordance with the instructions set out in this document and only in areas suitable for work on the catenary.

Keep this document in a safe place.

1.1 Domain of application

Please observe the conditions of use laid down for this product.

If this is not the case, 4NRJ shall not:

- Guarantee the results of the measures obtained.
- Be held responsible for the consequences of misuse.

This device is a device for monitoring and measuring catenary contact wire thickness by laser profilometry. The operation is carried out from the ground using an SNCF-approved telescopic catenary insulating pole and can be viewed on a smartphone via an application developed by 4NRJ.

Warning!

This product is designed to be used by people who are familiar with the rules and regulations of the catenary profession.

Warning: if the product is faulty, has been dropped, used improperly or modified, it may cause incidents.

Equip yourself with the appropriate personal protective equipment (non-exhaustive list).

2. Description of the tool

Composition of the kit

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N°	Designation	Reference
1	Carrying case	F16AO000100
2	Device	MESUREFC
3	Control Gauge	MFCCALIB
4	Contact wire spreader	MFCECART
5	USB-C charger (CE compliant)	ES000195
6	Smartphone holder	ES000309
7	2 SNCF-approved telescopic insulating poles with safety ring and storage bag	KICPI56 + SPI2P

Technical specifications

Usage:	**On 1500 V and 25000 V network**
Measuring range:	2 to 16 mm
Precision:	± 0,05 mm Ø contact wire < 12 mm ± 0,08 mm Ø contact wire > 12 mm
Maximum measuring speed:	1000 Measurements/second
Size of the MESUREFC device (2):	245 x 167 x 180 mm
Mass of the MESUREFC device (2):	1,5 kg
Mass of the kit:	5,3 kg
Power supply:	Battery charging via 230V / USB-C AC outlet
Battery voltage:	3,7 V
Battery capacity:	2000 mAh
Autonomy:	6 hours in use
Battery Recharge Time:	2 h
Bluetooth:	4.0
Frequency:	2.4 Ghz
Adapts to smartphone and tablet:	Screen size between 90 mm and 300 mm
Type of attachment to catenary pole:	P-FIX aluminium connection
Operating temperature:	-10 °C to 50 °C
Outdoor use:	No rain, no fog
SNCF approval:	DGOP 19369
Accessibility by dynamic QR code:	Instructions for use, certificate of conformity, date of inspection

Laser Specification

Manufacturer:	**APINEX**
Model:	TY 650 L
Wavelength:	650 nm
Laser Class (Use):	LASER CLASS 3R
Laser class (maintenance):	LASER CLASS 3B
Power output of the device (use):	5 mW
Laser output power (maintenance):	20 mW
Continuous operation	
NF EN60825-1 2014 october	
Divergence according to Ox	0.1-0.6 mrad
Divergence according to Oy	90 °
Diameter following Ox at 1/e²	1 mm
Diameter following Oy at 1/e²	1 mm

BOM

Carrying case

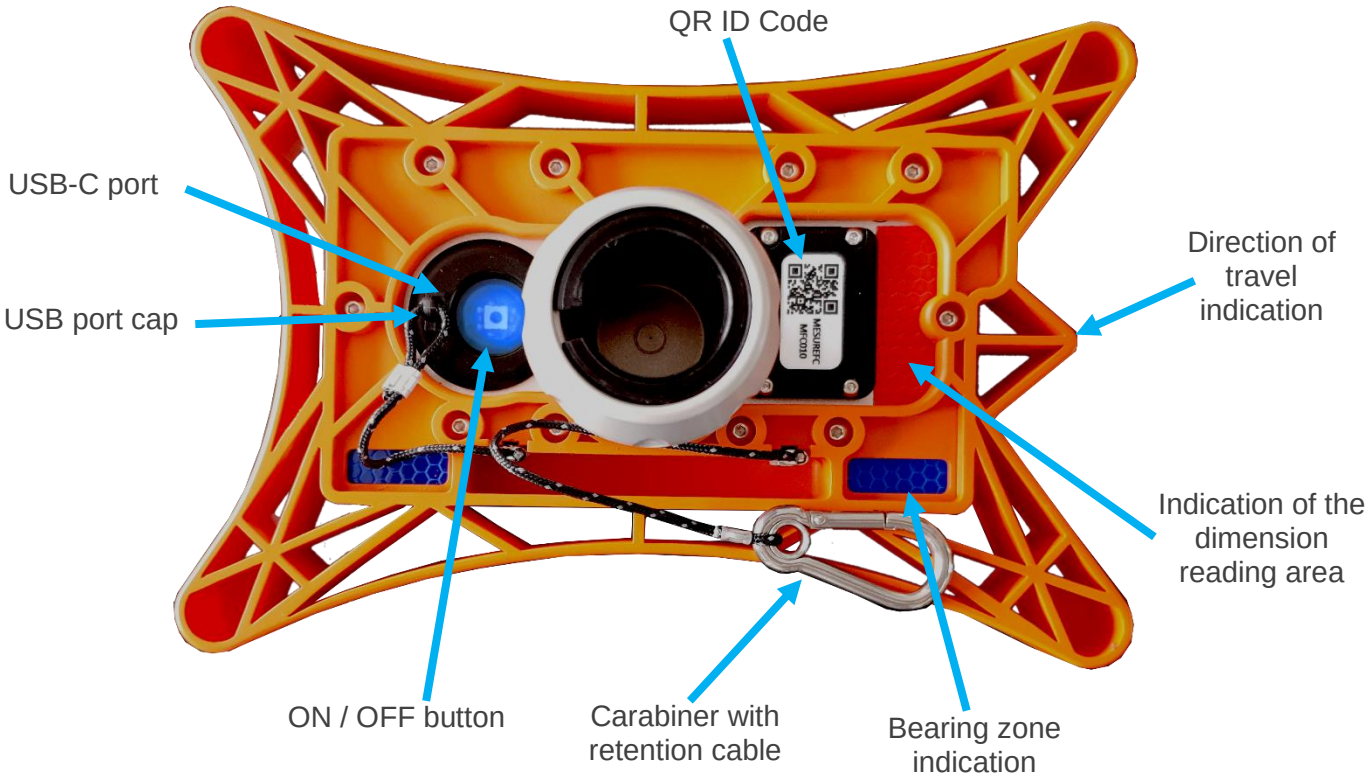
All equipment must be transported in its transport case to the intervention area. Each element has a predefined location.

(Please unlock all 4 zippers to open the suitcase)

(Please store each item in its intended location after using the product).

Measuring catenary contact wire thickness by laser profilometry

The laser profilometry measuring device is a battery-operated tool that can be recharged using the plug supplied with the assembly. The device uses a CLASS 3B laser, the class of which becomes a CLASS 3R laser thanks to its housing. It is strictly forbidden to open the protective cover. Maintenance is reserved for 4NRJ and requires the wearing of RB1 glasses.



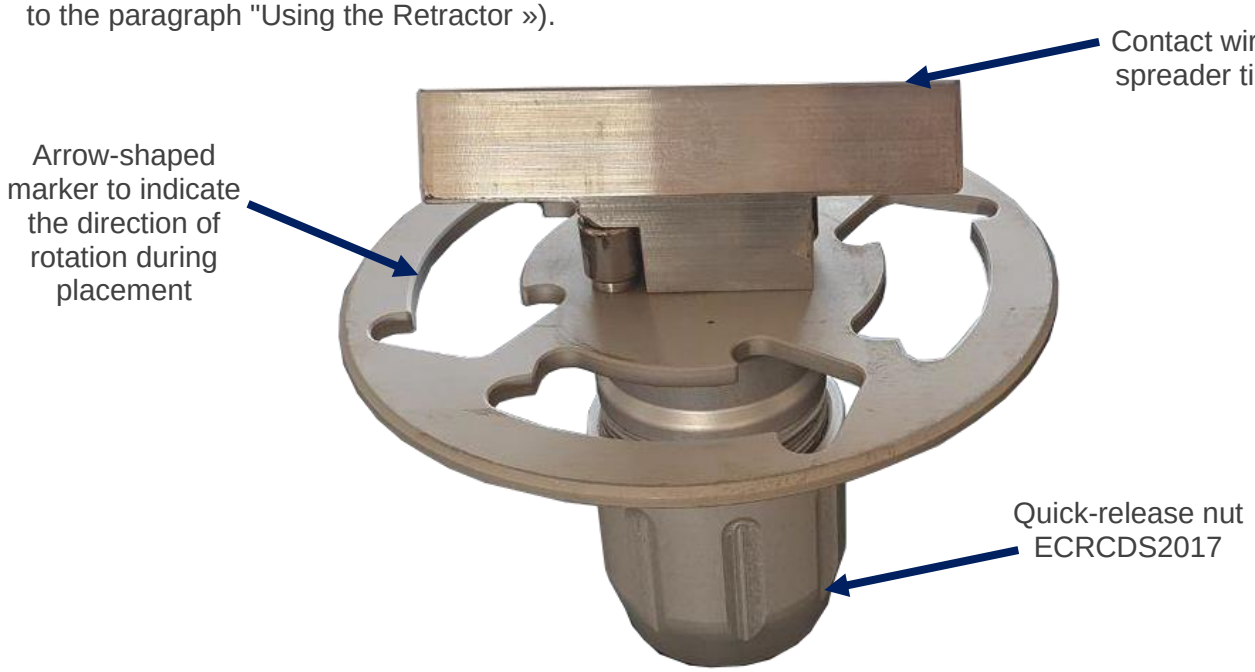
Control gauge

The control gauge must be used before each measurement campaign. This ensures that the measuring device is correctly calibrated. Each test caliber has a unique serial number. (Refer to the paragraph "Calibration Control Procedure").

Contact Wire Spreader

The contact wire spreader is only to be used if the wire you want to measure is in close proximity to another wire. As its name suggests, this makes it possible to spread the wire preventing the correct use of the measuring device.

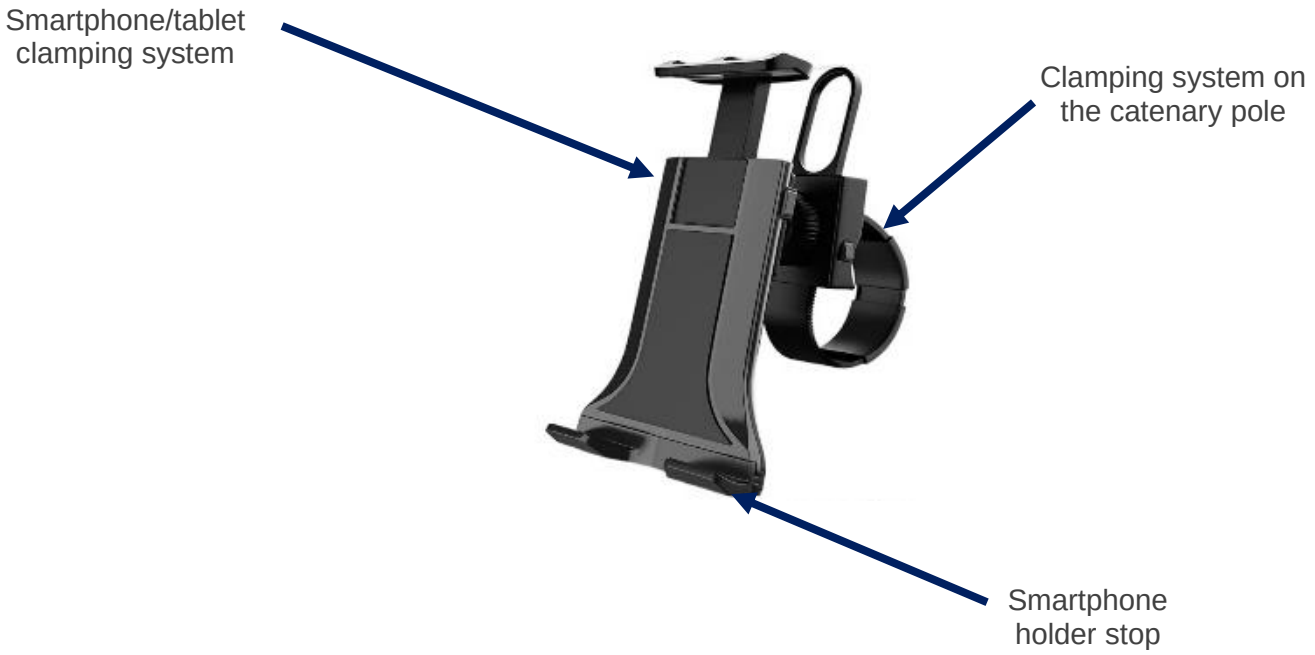
The contact wire spreader is to be installed on one of the 2 telescopic poles. The other is used with the measuring device. The measurement of the wire with the use of the spreader requires 2 agents. (Refer to the paragraph "Using the Retractor »).



Smartphone holder

The thickness of the contact wire is collected by the measuring device by laser profilometry and is directly visible on the "MESUREFC" smartphone application. Therefore, you need to use your smartphone to know the wire measurement.

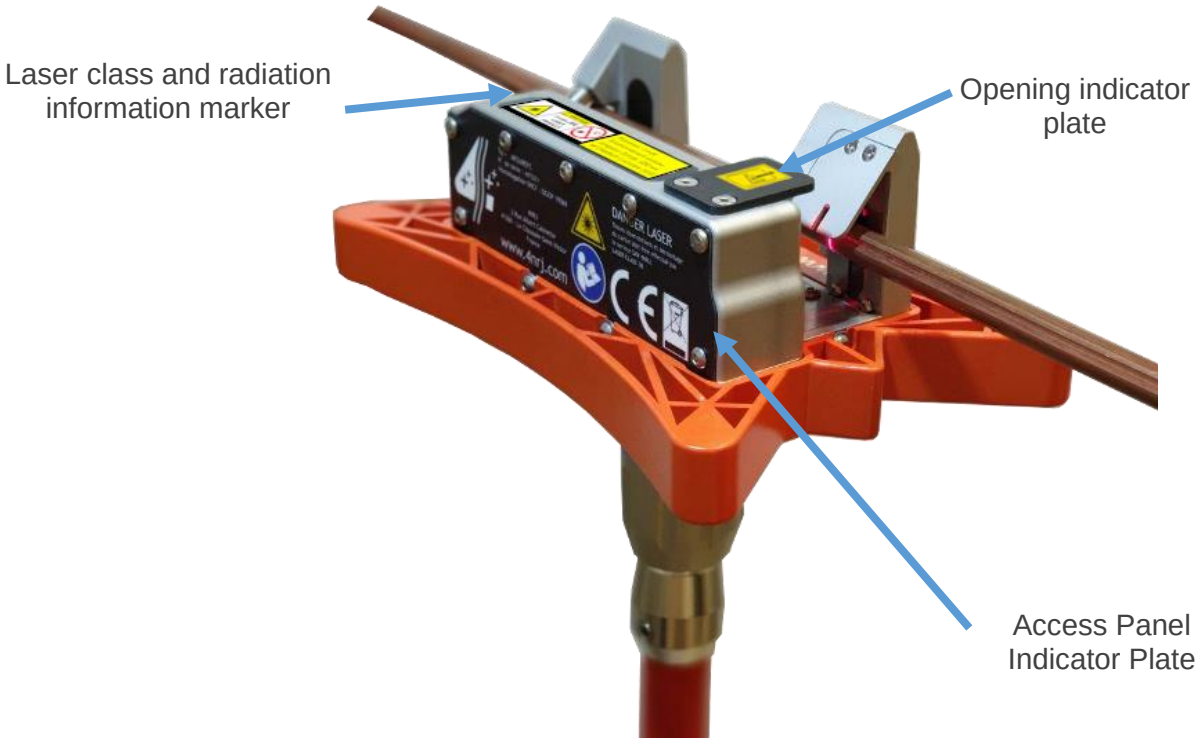
Your smartphone must be attached to the telescopic pole (on the blue tube with a diameter of Ø45) via the smartphone holder. The smartphone holder allows you to use smartphones and/or tablets with a screen size between 90 mm and 300 mm.



Manufacturer's plate

The measuring device has several mandatory indications because it uses a laser.

The class nameplate and information about the radiation emitted, the opening signboard and the signboard for the access panel.



- The class marker plate of the emitted radiation information provides information on the characteristics of the laser

- The opening indicator plate, provides information on where the laser comes out.

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- The indicator plate for the access panel provides various information about the device. In particular, its serial number, its SNCF approval number (DGOP 19369), the address of the manufacturer 4NRJ and the dangers associated with the laser component of the product. It is mentioned that it is forbidden to disassemble the protective housing (only reserved for maintenance by 4NRJ). By opening the protective housing, a higher class of radiation emitted is accessed.

2.3 Risks and general recommendations

To ensure that the tool works properly and fulfils its vital safety role, it is essential to check that it is in good condition at all times, both before and after use.

Always comply with network consignment procedures.

Risk of use:

- Beware of the risks associated with the laser. Do not look at the laser.
- Do not disassemble the protective housing.
- Do not position a reflector focus between the laser and the receiver.
- Maintenance interventions are strictly reserved for 4NRJ's after-sales service.

(During maintenance, the laser is Class 3B and wearing an RB1 scope is mandatory).

- Scrupulously follow the instructions given in the device manual.

General recommendations (non-exhaustive list):

- ✓ Visually inspect the condition of the tool before use.
- ✓ Visually inspect the condition of the poles before use.
- ✓ Avoid shocks to your tool and pole.
- ✓ Follow the various stages of the operating procedure.
- ✓ In the event of damage, please contact 4NRJ after-sales service.
- ✓ It is forbidden to change the physical appearance of your tool (non-exhaustive list: painting, engraving, marking).
- ✓ All modifications must be approved in writing by 4NRJ.
- ✓ Do not use in rainy, humid and foggy weather.

Storage & transport (non-exhaustive list):

- ✓ Carry the tool in its suitcase until it is used.
- ✓ Avoid any risk of damage to the device during transport.
- ✓ Store the tool in a clean, dry place.
- ✓ Storage temperature: -15°C to +60°C.

Maintenance (non-exhaustive list):

- ✓ Wipe the device with a clean, lint-free cloth before and after each use. Be careful with the glass parts. Do not use flammable products.

Refurbishing the tool:

- ✓ If necessary, certain elements must be replaced by elements of the same type. Contact the 4NRJ after-sales service.

If necessary or in doubt, return the product to 4NRJ, which will check and repair it.

4NRJ
2 Rue Albert Calmette
ZA Les Gailletrous
41260 - La Chaussée-St-Victor - France
Telephone: +33 (0)2 54 42 05 12
Email: **contact@4nrj.com**

Usage procedure

The MESUREFC laser profilometry measuring system is a control device for measuring the thickness of the contact wire. However, if the equipment is not maintained and controlled, it may lead to erroneous measurements (refer to the paragraph periodic inspection). The device is equipped with a memory to visualize the shocks that have occurred on it. There are some rules to follow in order to use it correctly.

Before starting, please download the "MESUREFC" app on your Smartphone (Android System).

MESUREFC

PLAYSTORE

Flash the QR Code above to access the MESUREFC application on the PLAYSTORE.

It is a measuring device, so it should be kept clean at all times and the tool should not be damaged.

Device Login Procedure

To connect your smartphone to the device, follow the instructions below.

1. Press the ON/OFF button to turn on the tool.

A blue light will illuminate.

ON / OFF button

If a red light comes on, it means that the device needs to be charged.

1. Launch the "MESUREFC" application on your smartphone.

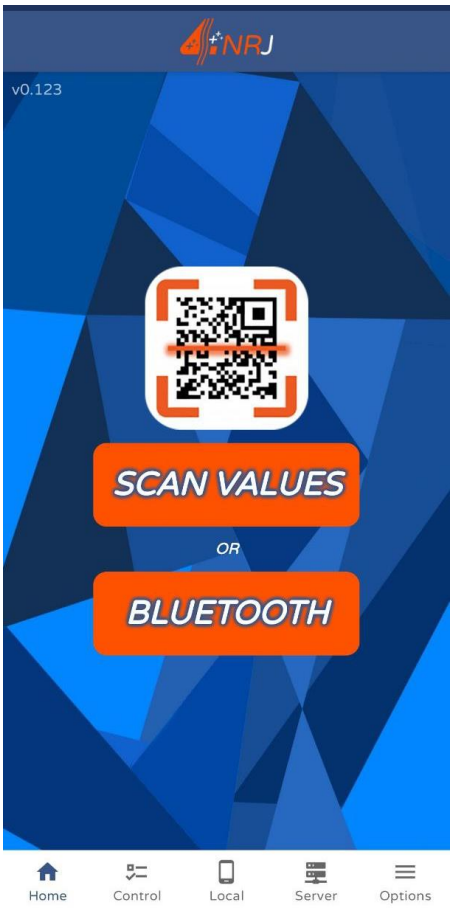
   When you first log in, the application will ask you for permission to access various information about your smartphone. Allow access for the app to work properly.

   The tool connects to your smartphone via the app and via a BLUETOOTH connection. Make sure your phone's BLUETOOTH is turned on.

2. Press the "LOGIN" button.

3. Scan the QR code located on the bottom of the device.

This QR code also allows you to know the date of the next factory inspection and to access various information about the tool.

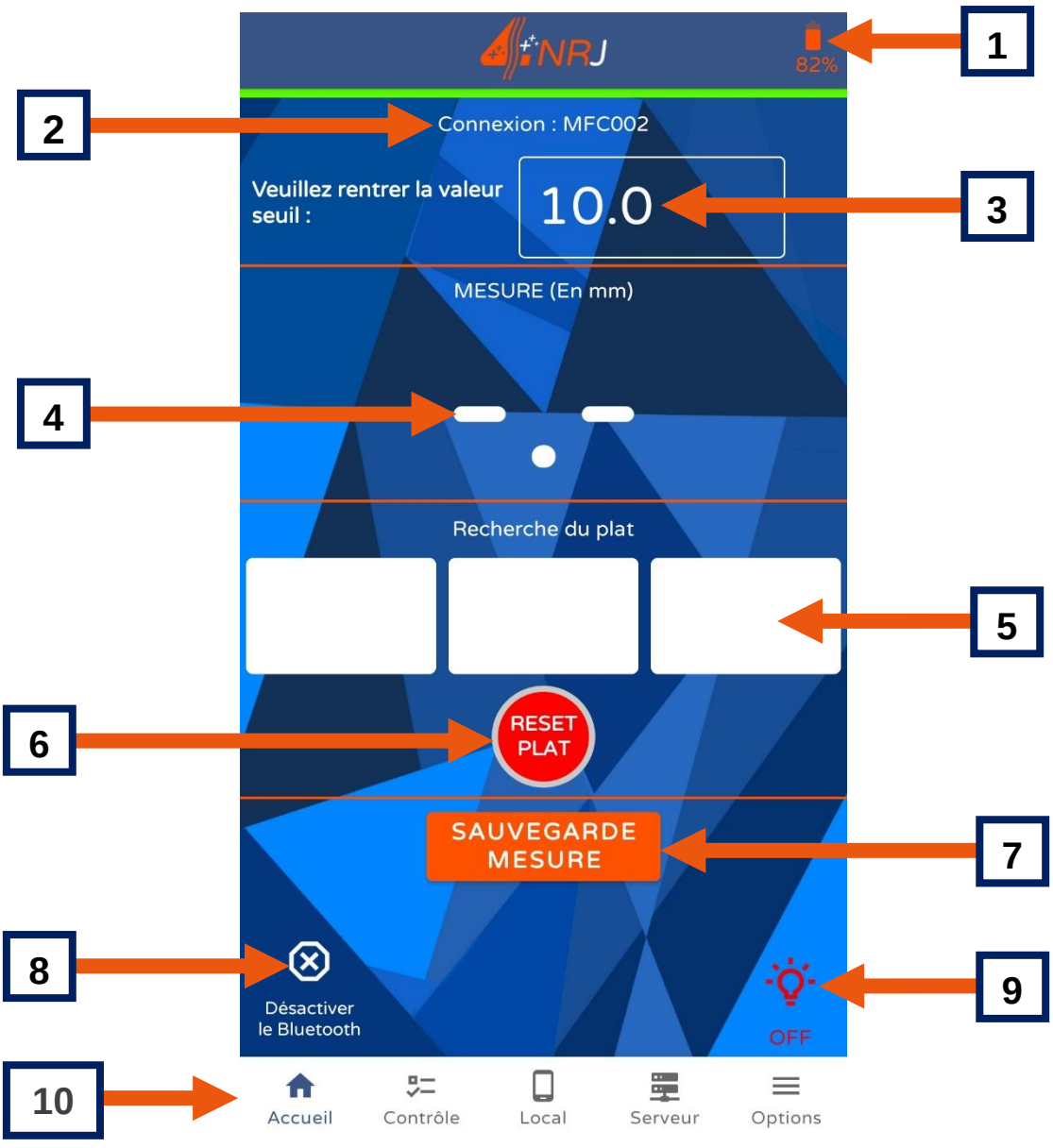


4. The app is connected to the tool if the app recognizes your tool's serial number and the color bar changes to green.

If the color bar remains yellow with "Searching..." ", make sure the device is turned on.

If you forgot to scan the device and have already perched it on the contact wire, you can pair with the tool by tapping the magnifying glass in the top left and selecting your tool's serial number.

Application Visualization



1	State of charge of the MESUREFC device
2	The serial number to which the app is paired
3	Value of the alert rating threshold (in mm) to be entered manually
4	Value measured by the device (in mm)
5	Thickness orientation of the catenary contact wire (guideline)
6	Incline reset
7	Saving the measurement
8	Disabling Bluetooth
9	Turning the device's LED on and off
10	Menu bar

11	Main screen (contact wire measurement)
12	Calibration Control Procedure
13	Recording the measurement on your phone
14	Measurement recording on server
15	App Option

Calibration Control Procedure

Before each measurement campaign! It is recommended to check the tool using the control gauge provided in the carrying case.

1. Press the "Control" button on the menu bar.

2. Follow the procedure of the application.

   A. Put the control gauge on the measuring tool.

   The white thrust washer of the control gauge must be positioned on the laser sensor side and in contact with the tool.

   Suspend the measuring tool by holding only the handle of the control gauge.

   B. Press the "CONTROL" button and view the result.

Calibration control procedure successfully performed

Calibration control procedure not validated

If the calibration check procedure is not validated, please repeat this operation.
In the event of a second inspection that has not been validated, please contact 4NRJ.

Placement of the MESUREFC on the telescopic insulating pole

Once you have paired your smartphone with the measuring device and have completed the calibration control procedure, you can install the measuring device on one of the two catenary poles.

1. Insert the pole head into the ECRCDS2017 clamping nut and tighten it by hand.

2. Hook the carabiner of the device to the safety ring of the pole.

⚠ **ATTENTION: It is imperative to use the MESUREFC tool with one of the two catenary telescopic insulating poles supplied with the assembly. These are equipped with a safety ring to prevent the tool from falling out in the event of an incorrect tightening of the nut.**

⚠ **These poles must be in very good condition in order to maintain their characteristics.**

Installation of the MESUREFC on the catenary contact wire

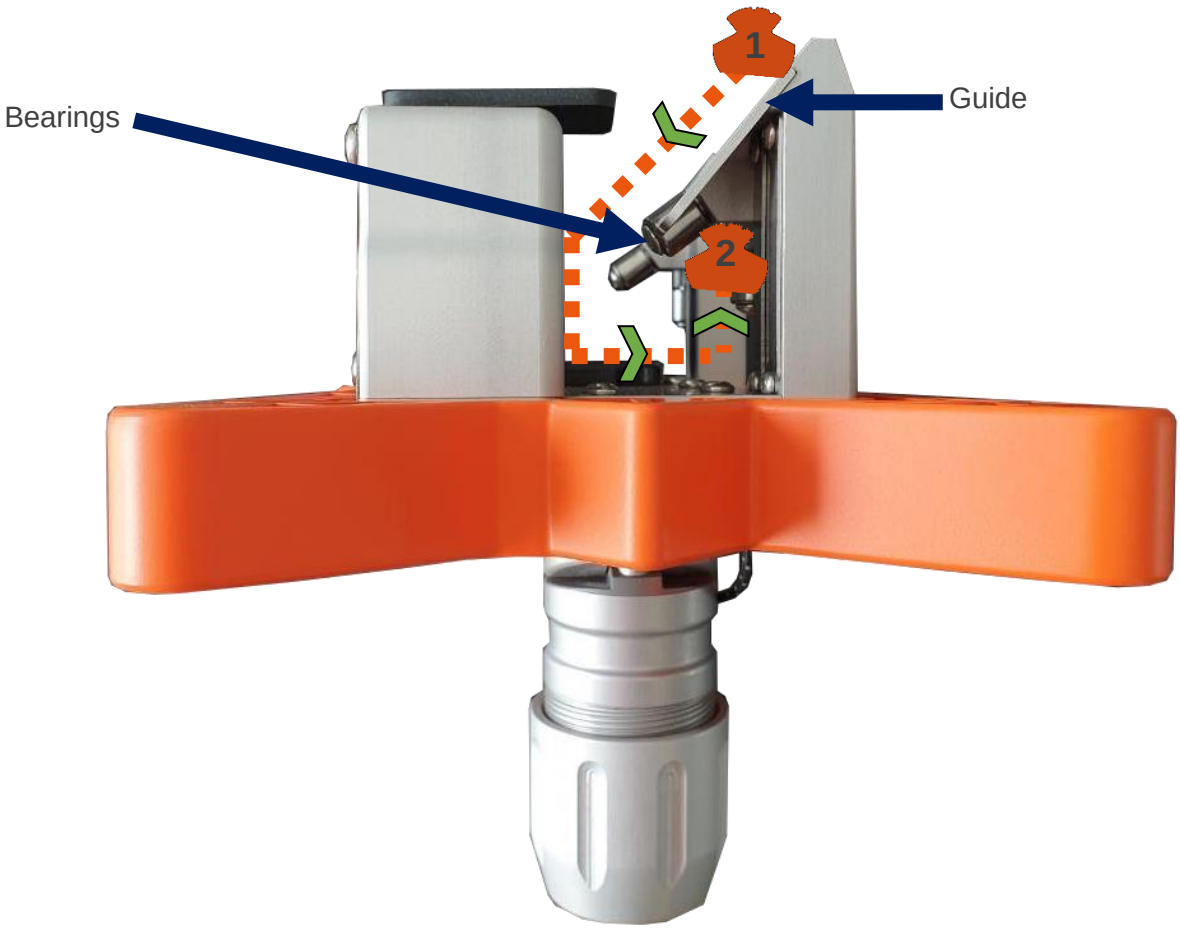
Once the measuring device is installed on the catenary pole, the different tubes of the telescopic pole must be deployed, so as to position the device at the height of the contact wire.

1. Deploy the pole.

⚠ **ATTENTION: The foamed top tube of the insulating pole must be fully extended and the length adjustment is done with the middle tube.**

When the device is at the level of the contact wire.

2. Slide the contact wire onto the guide.
3. Position the tool on top of the contact wire resting on the bearings.



When the device is correctly positioned on the contact wire, it must be able to slide on the contact wire.

The catenary pole must be suspended and not touch the ground.

Installing the smartphone holder on the catenary pole

Once the measuring device is positioned on the contact wire, install the phone on the catenary pole.

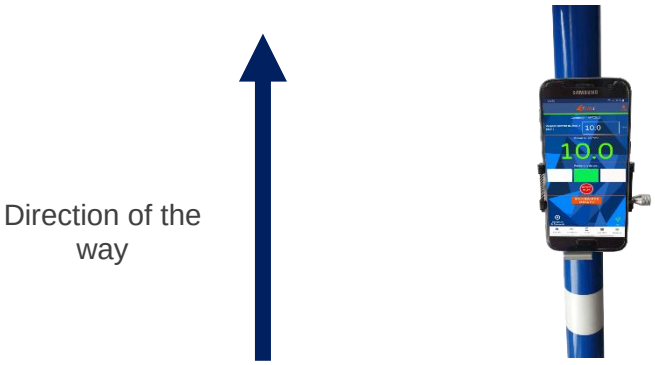
1. Clip the smartphone holder onto the blue down tube (Ø45) at the level of your view in the direction of the way.

2. Install your smartphone on the holder by tightening the screw.

A light hold is enough, if the tightening is too much, it may damage your smartphone.

The phone holder is made to accommodate smartphones with screen size between 90 mm and 300 mm. If necessary, remove the case from your smartphone.

It is important to put your smartphone in the direction of the way. The application retrieves the inclination of the pole, helping to find the axis of the contact wire wear.



Threshold value

Once your smartphone is installed, you are able to use the measuring device and retrieve the thickness of the contact wire.

1. Start by entering the detection threshold value. Click on the input field and use the numeric keypad to enter the desired value, then press "OK".

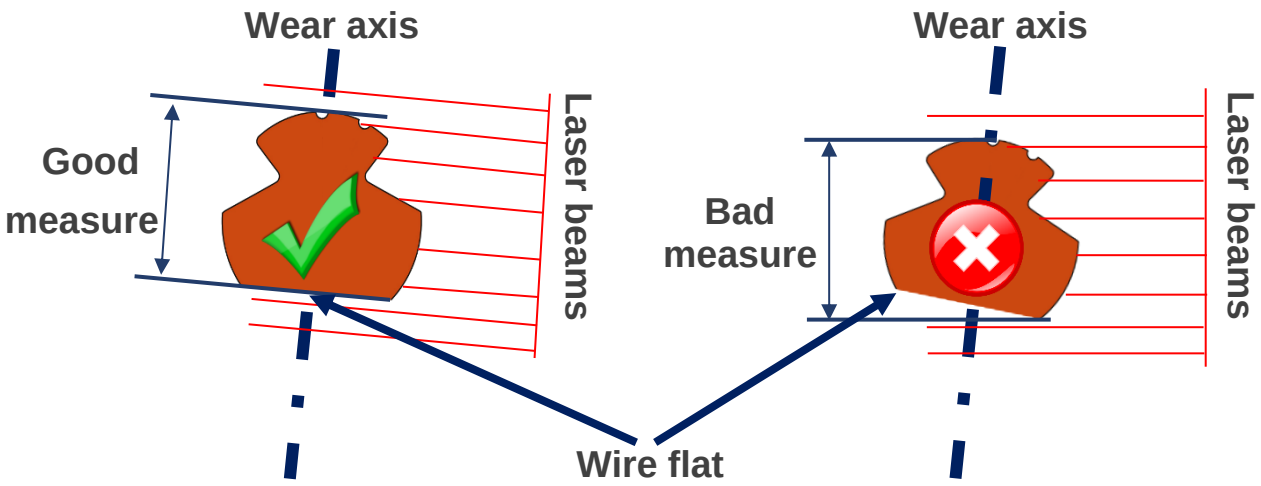
The app will emit an alert (red value and audible alert) when the measurement is below the threshold value. By default, the threshold value for the application is 10 mm.

Thickness > Threshold value **Thickness < Threshold value**

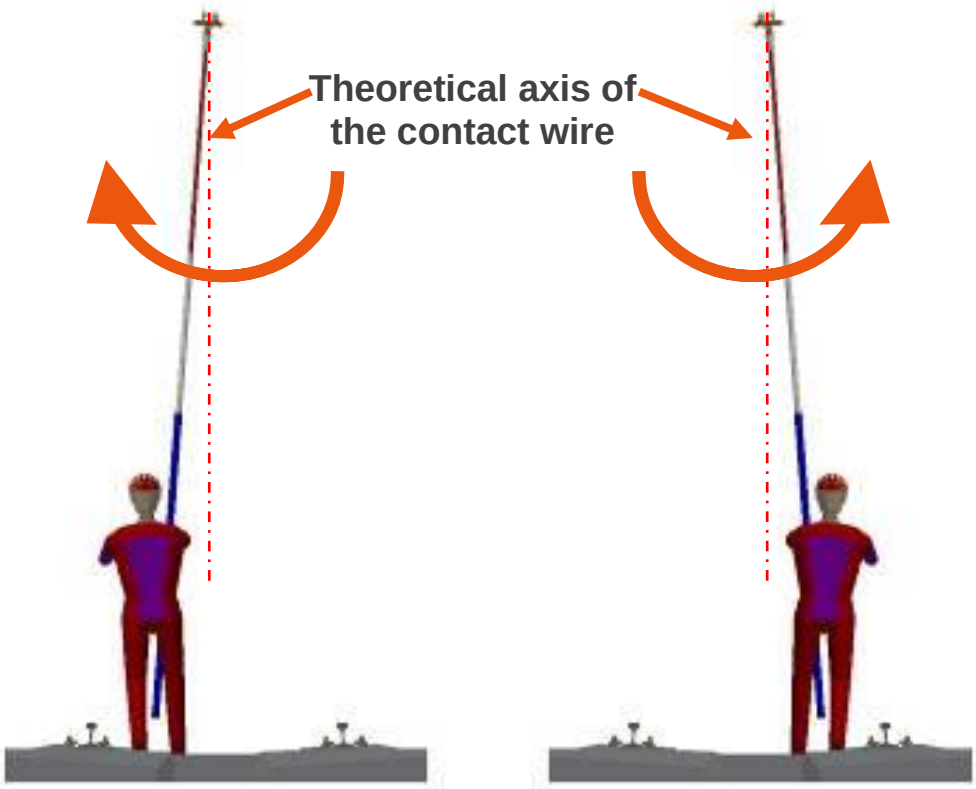
Flat search

Contact wire wear is not systematically parallel to the way. To measure contact wire thickness correctly, the first step is to find the wear axis of the wire.

Contact wire wear is measured from the top of the cylindrical part to the flat of the contact wire.



1. After placing the device on the contact wire, press the "Reset Flat" button.
2. Rotate from left to right around the contact wire with the catenary pole.



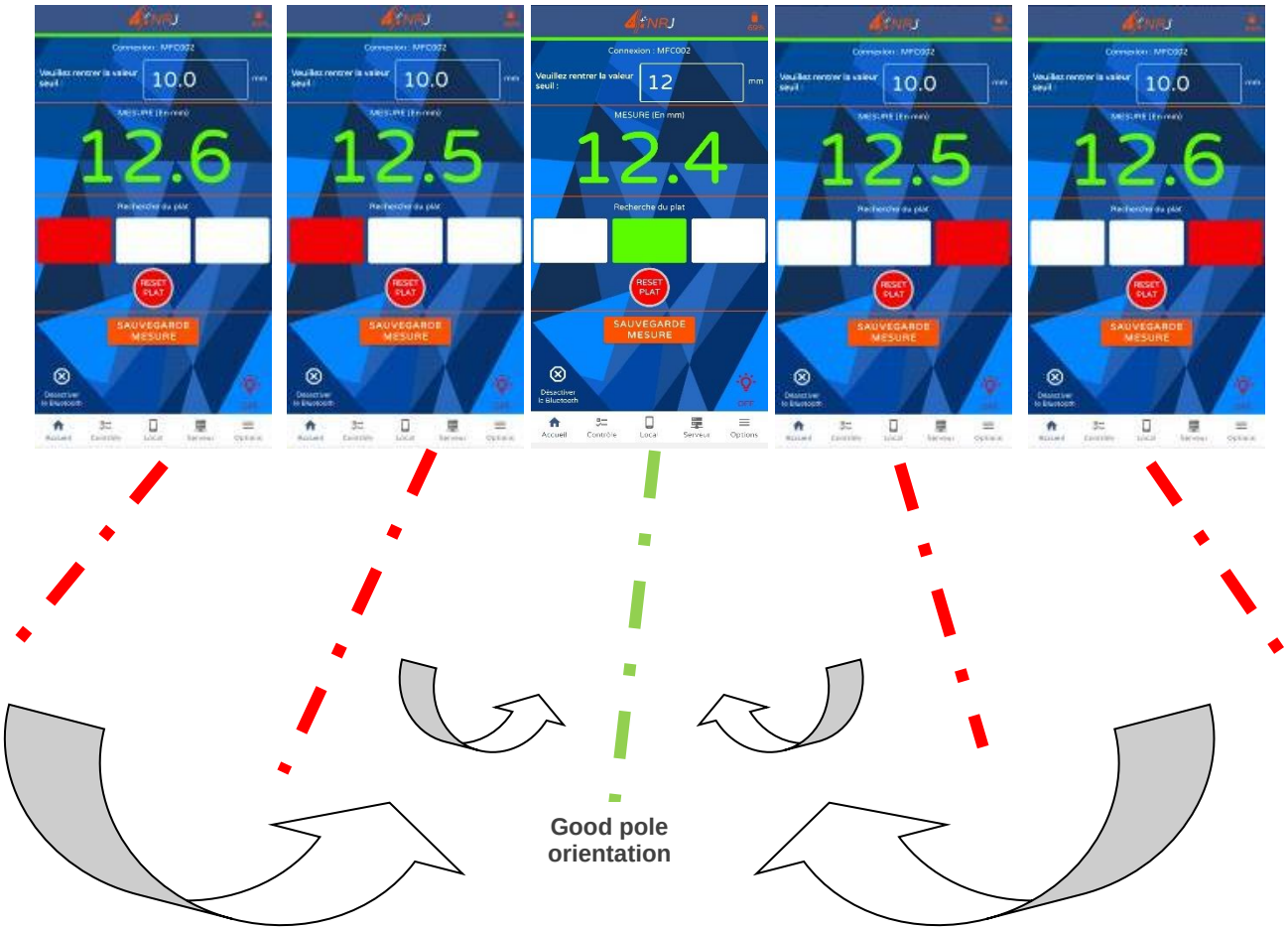
3. Look for the lowest wire thickness value and position yourself on it.

The application recovers the inclination of the pole when the thickness of the contact wire is lowest.

Use the colored squares to find the inclination. When the middle square is green, it means that you have the right inclination of the pole.

4. Make sure to keep the square green as long as you're taking measurements.

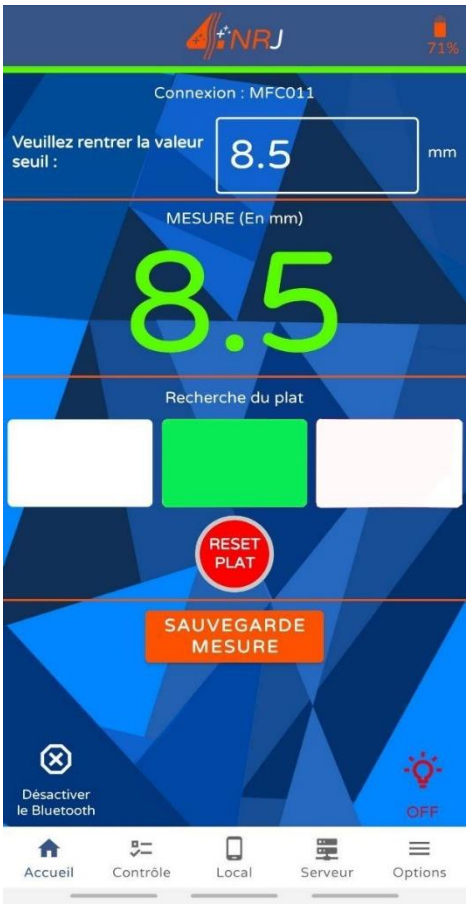
If you tilt the pole too much compared to the recorded incline. The squares can turn red. Reorient the pole so that you have the green square again (direction of the white square).



Repeat the "Reset Flat" operation after each pendulum pass.

Contact wire wear measurement

Once the inclination of flat is found, move on the contact wire by rolling the device on the wire. Keep the perch orientation when you move.



Wire thickness greater than or equal to the threshold value

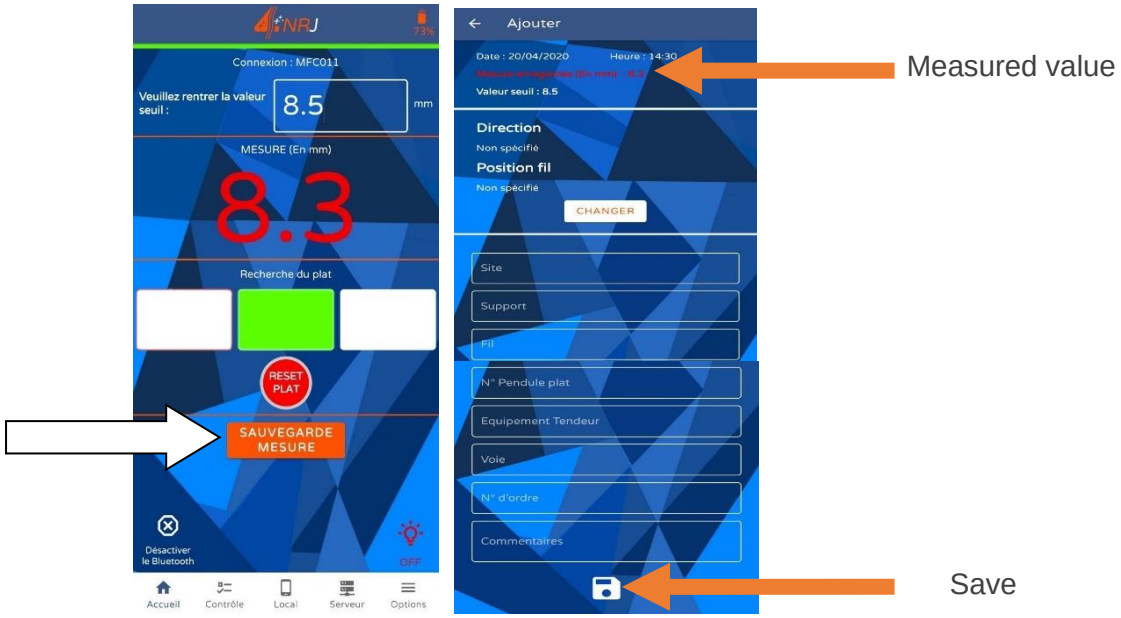
Wire thickness below threshold value

When the wire measurement is less than the threshold dimension you entered. The operator is warned by an audible signal and the measurement are turning red.

Data save

The values measured with the app can be stored locally on your smartphone and can even be retrieved from a server with your computer.

1. To save a measurement, press the "SAVE MEASUREMENT" button.
2. Fill in the input fields to enter the various information about the measurement, and press "Save" (the floppy disk logo).



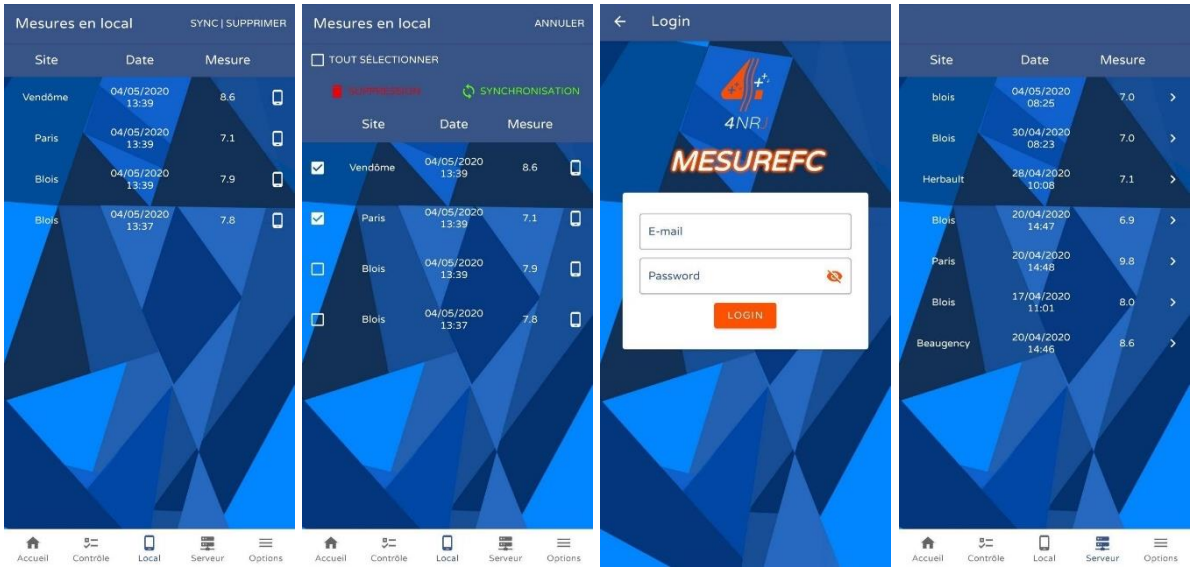
By default, the measurements are saved in the phone's memory.

1. To view the measurements taken with your smartphone, tap the "Local" tab in the menu bar.

You can change the fields of a value that has already been saved by tapping on smartphone logo.

You have the option of exporting the measurements to a server in order to recover them on your computer station.

1. To export the measurements, press the "Local" tab in the menu bar and press the "sync/delete" button.
2. Select measurements you want to sync with your server account and tap "SYNC".
3. Enter the username and password for the app to synchronize the values with your account.



If you do not have an account, please contact 4NRJ.

Telephone: +33 (0)2 54 42 05 12

Email: contact@4nrj.com

4. Log in to www.4nrj-apps.com to view your values.
5. Fill in your login details and select "MESUREFC".
6. View your measurement series.

You can also delete the measured values with your smartphone.

1. To delete the saved data, tap the "Local" tab on the menu bar and press the "sync/delete" button.
2. Select the measurements you want to remove and press "OVERPRIME".

Using the contact wire spreader

When there are 2 nearby catenary contact wires, moving the device may be less easy. The spreader is planned to improve the movement of the latter. This manoeuvre requires an additional agent to be carried out.

1. Install the spreader on the second catenary pole by tightening the ECRCDS nut on the pole tip.

⚠ **ATTENTION: It is imperative to use the MESUREFC tool and the spreader with the two catenary telescopic insulating poles supplied with the assembly. These are equipped with a safety ring necessary for the correct use of the tool.**

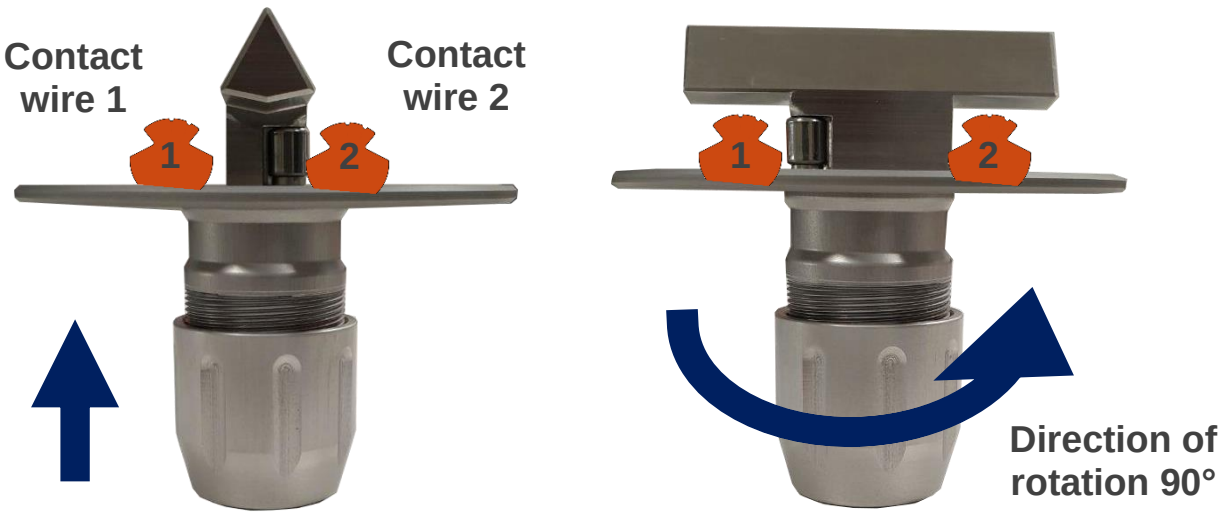
⚠ **ATTENTION: These poles must be in very good condition in order to maintain their characteristics.**

⚠ **ATTENTION: The foamed top tube of the insulating pole must be fully extended and the length adjustment is done with the middle tube.**

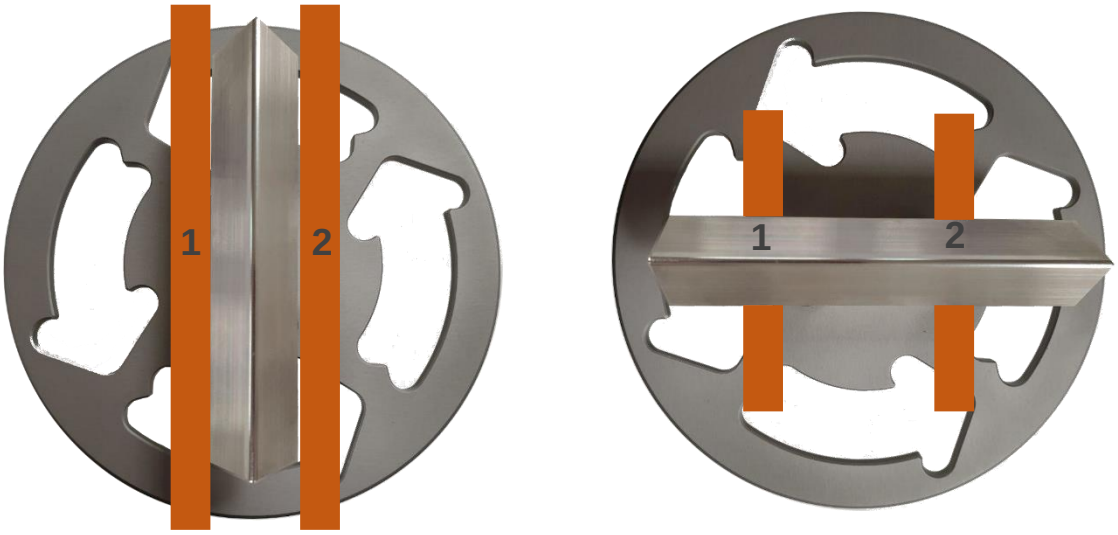
2. Stand upstream of the agent handling the MESUREFC measuring device.

The distance between the spreader and the measuring device may vary depending on the flexible or rigid spacing of the 2 contact wires.

3. Position the tip of the spreader between the 2 contact wires.
4. Rotate the spreader 90° counterclockwise to spread the 2 wires.



The direction of rotation is represented by the arrows visible on the spreader.



End of maintenance

Once you have finished taking your measurements, start by removing your smartphone and the smartphone holder from the catenary pole, then remove the measuring device from the contact wire.

When doing so, handle the poles with care so as not to drop the poles and tools on the ground.

1. Lift the catenary pole with the measuring device and move the tool to release the contact wire.

2. Fold the tubes of the insulating pole starting with the middle tube (white tube Ø37).

Fold the tubes, keeping the pole vertical.

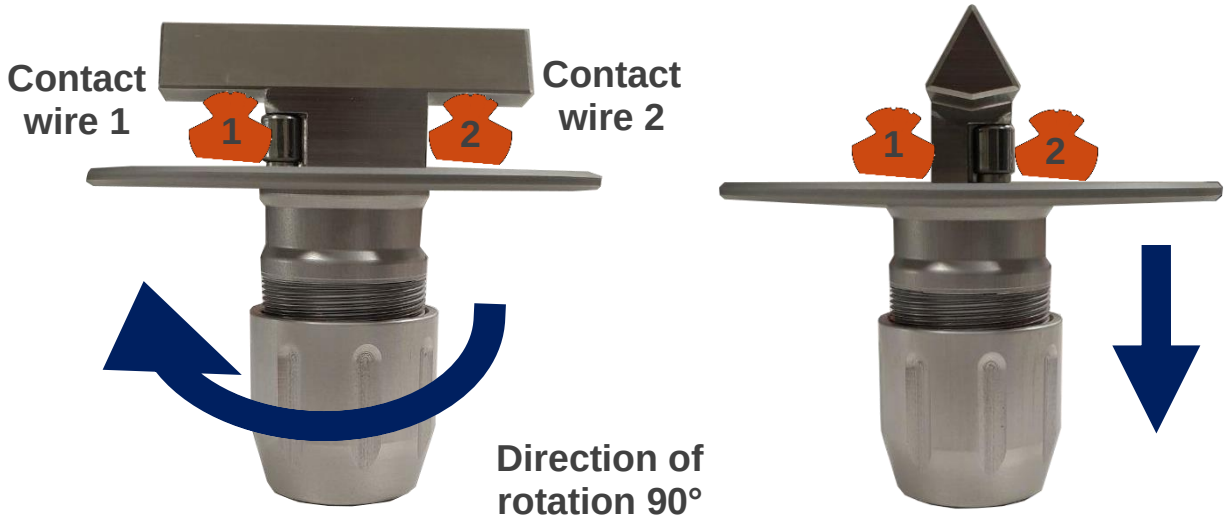
Do not drop the measuring device. This could damage it.

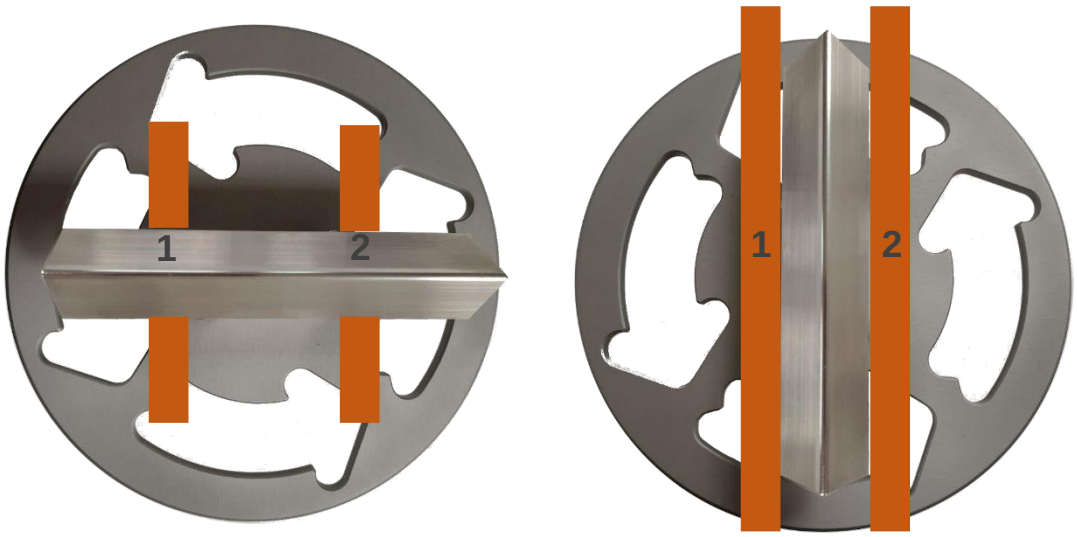
3. Remove the measuring device from the catenary pole.

If you have used the spreader with the measuring device, please remove the measuring device from the contact wire before undoing the retractor.

To remove the spreader:

1. Rotate the spreader clockwise by 90° so that it is positioned in the axis of the contact wires.





The direction of rotation must be the opposite of that represented by the arrows of the spreader.

2. Fold the pole tubes to release the contact wires.

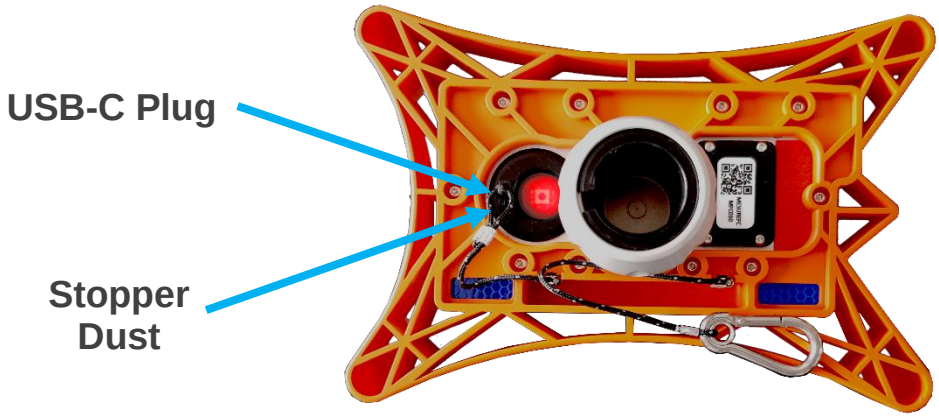
Store the individual parts of the set in the transport case in the places provided, taking care to clean them beforehand.

Be sure to clean tools with a lint-free and clean cloth to remove any impurities and traces of moisture that could cause condensation in the suitcase. The use of flammable products is to be avoided.

After each use, remember to recharge the measuring device with the charger supplied with the assembly.

The battery status is indicated on the MESUREFC app.

The tool light will also turn red if the unit has exceeded the battery threshold.



Please use the charger provided in the suitcase. If another charger is used, it may have different charging characteristics.

Replace the USB-C dust cap after charging the device. This prevents pollution from entering the device.

Periodic inspection

Product control is essential to ensure a long product life.

Refer to the table below for the frequency of checks to be carried out.

Inspection frequency	Before each measurement campaign	After each usage	1 year	4 years
Calibration control	X			
Cleaning with a clean cloth		X		
Customer Control			X	
Factory usine				X

The laser profilometry measurement system (Ref: ENSMESUREFC) is to be checked every year by the customer following the control procedure (see Appendix) and every 4 years by 4NRJ.

The date of the inspection and the number of days remaining before the next inspection can be seen by scanning the QR code under the device. (See Appendix)

The device, even if kept in a store, must be checked by 4NRJ every 4 years.

In the event of a problem, please contact our After-Sales Service, specifying your requirements:

Telephone: +33 (0)2 54 42 05 12

Email: contact@4nrj.com

Disposal

The product must not be disposed of with household waste.

Recycle the product via an authorised waste disposal company or your local recycling service.

Comply with current regulations.

If in doubt, contact your recycling centre.

3. Warranty

Purpose of the Warranty

The warranty covers damage to the tool resulting from an internal defect. The only tool that can be guaranteed by 4NRJ is one that has been invoiced by 4NRJ and is still under a 2-year distributor guarantee.

Content of the warranty

The warranty covers the cost of repairing the tool specified below:

- The cost of parts.
- Labour costs.
- Transport costs.

Cover applies to transport costs in Metropolitan France only.

Replacements

Where repair is impossible or more expensive than replacement, a new product with equivalent technical characteristics will be substituted.

Loan

When repairs are expected to take a long time, the loan of equipment that is functional and in good condition is possible, subject to availability.

Effective date and duration of cover

The guarantee takes effect on the date of delivery of the equipment. The warranty is limited to 2 years.

To benefit from the guarantee

In the event of a claim, the owner must:

- Report the damage within 5 working days, specifying the date, nature and circumstances, to 4NRJ (information below).

On receipt of equipment:

- An appraisal will enable 4NRJ to decide whether to take responsibility for the equipment under warranty.

The guarantee does not apply to:

- Devices that are not used in accordance with the manufacturer's instructions or that are not maintained or cleaned properly.

- The cost of transporting the device, the cost of the repairer's journey and the cost of labour relating to an unjustified request for service or to damage that is not guaranteed or not detected by the after-sales service.

- Intervention or repairs carried out by persons not approved by 4NRJ, any makeshift or temporary repairs remaining at the customer's expense, and the consequences of any aggravation of the damage resulting therefrom.

- Damage external to the device (non-exhaustive list): theft, fall, lightning, flood, fire, etc.

- Wear parts and accessories (non-exhaustive list) (batteries, cables, seals, filters, etc.)

- Aesthetic damage

4NRJ
2 Rue Albert Calmette
ZA Les Gailletrous
41260 La Chaussée-Saint-Victor - France
Telephone: +33 (0)2 54 42 05 12
Email: **contact@4nrj.com**

APPENDICES

Appendix A - Summary of the operating procedure

Appendix B - QR Code overview

Each tool (Ref: MESUREFC) has a unique QR code. This allows you to connect to the tool, access various information about the device and track the date of the next customer inspection.

How does the QR code work?

There are 3 different ways of using the QR code.

- **1st method:** The “MESUREFC” application which allows you to connect to the device (available on the PLAYSTORE).
- **2nd method:** The QR Code reader "4NRJ Codes" only available on the PLAYSTORE (ANDROID Smartphone and Tablet).
  Most 4NRJ tools are equipped with QR codes. This application can also be used to carry out customer checks on your tools if required.
- **3rd method:** A QR Code reader available from the PLAYSTORE, APPSTORE or WINDOWS PHONE.

1st method: 4NRJ CODES

• Download the “MESUREFC” application on the PLAYSTORE.

MESUREFC PLAYSTORE

• Open the application, press “CONNECTION” and scan the QR code with your smartphone.

Refer to the “Usage” chapter.

2nd method: 4NRJ CODES

- Download the "4NRJ CODES" application from the PLAYSTORE.

4NRJ CODES PLAYSTORE

- Open the application and flash the QR code with your smartphone.

  You have access to:
  - Product validity (date of next customer check and number of days remaining).
  - The product instructions for use.
  - The product's certificate of conformity.

View product validity status

With the 4NRJ Codes application, you can also carry out customer checks on the tools you need and access the history of flashed tools.

3rd method: QR Code reader

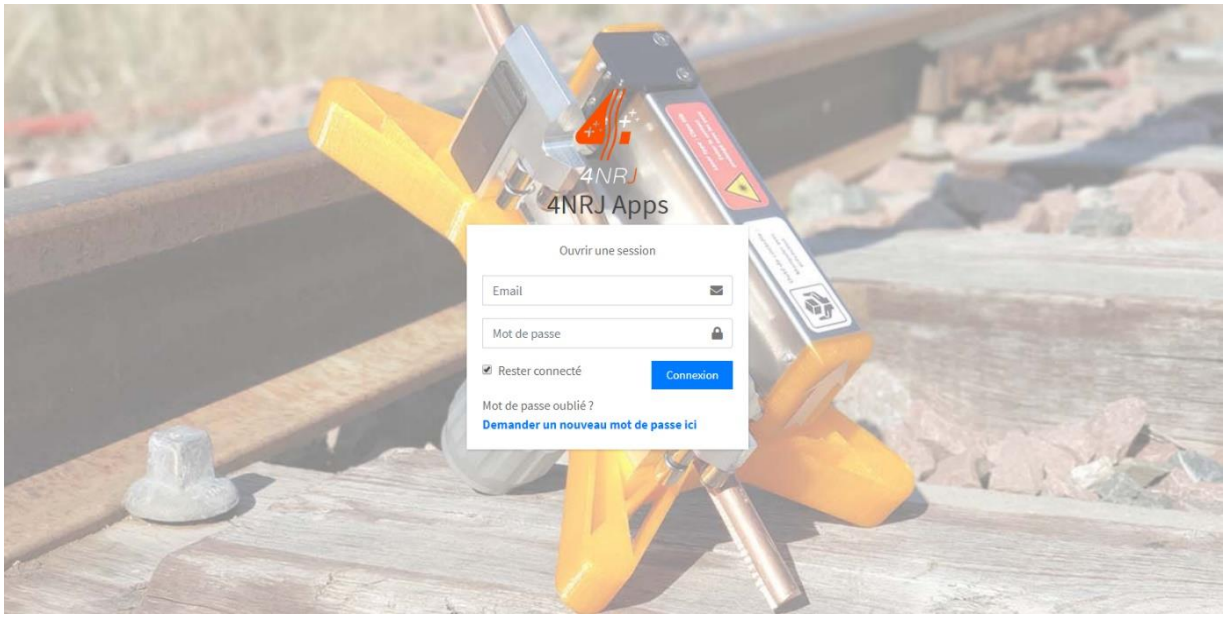
- Download a QR Code reader application from the PLAYSTORE, APPSTORE or WINDOWS Phone
  (QR Droid, QR Code Reader, etc.).
- Open the application and flash the QR code with your phone or tablet.
  You have access to:
  - Product validity (date of next customer check and number of days remaining).
  - The product instructions for use.
  - The product's certificate of conformity.

Appendix C - Data logging

Once you have carried out the measurements with your device, you have the option of processing the data from your computer station.

To do this, log in to the address below and select "MESUREFC".

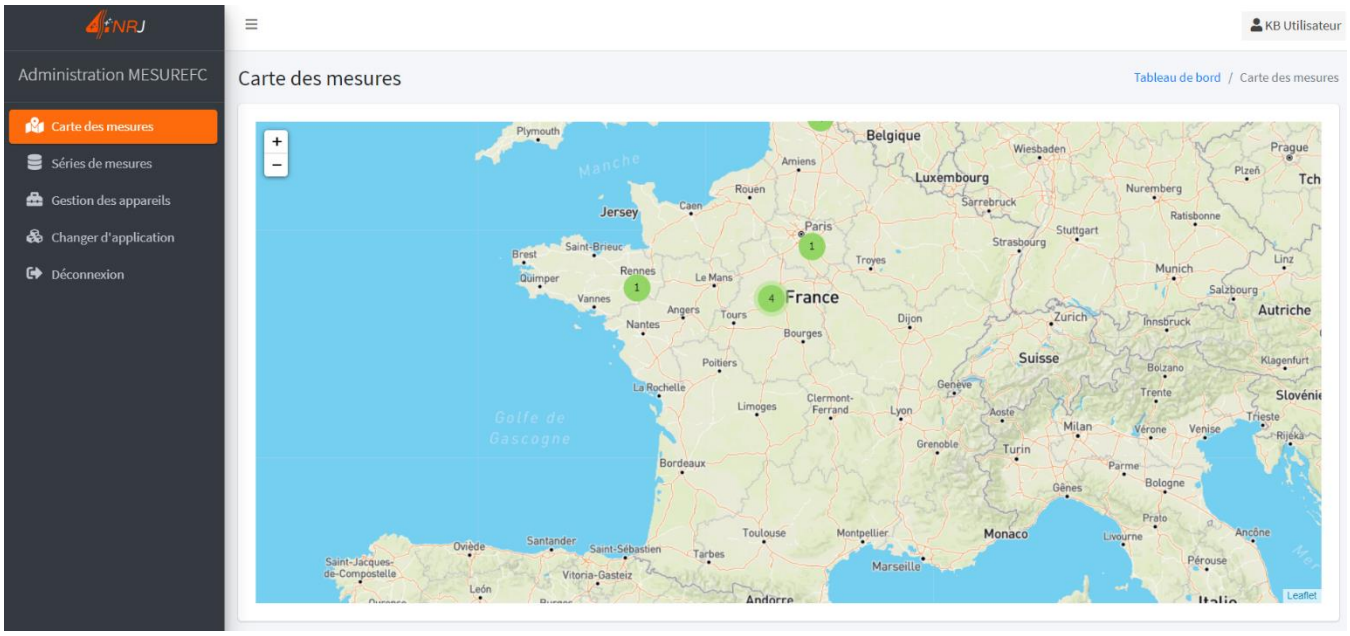
https://4nrj-apps.fr/



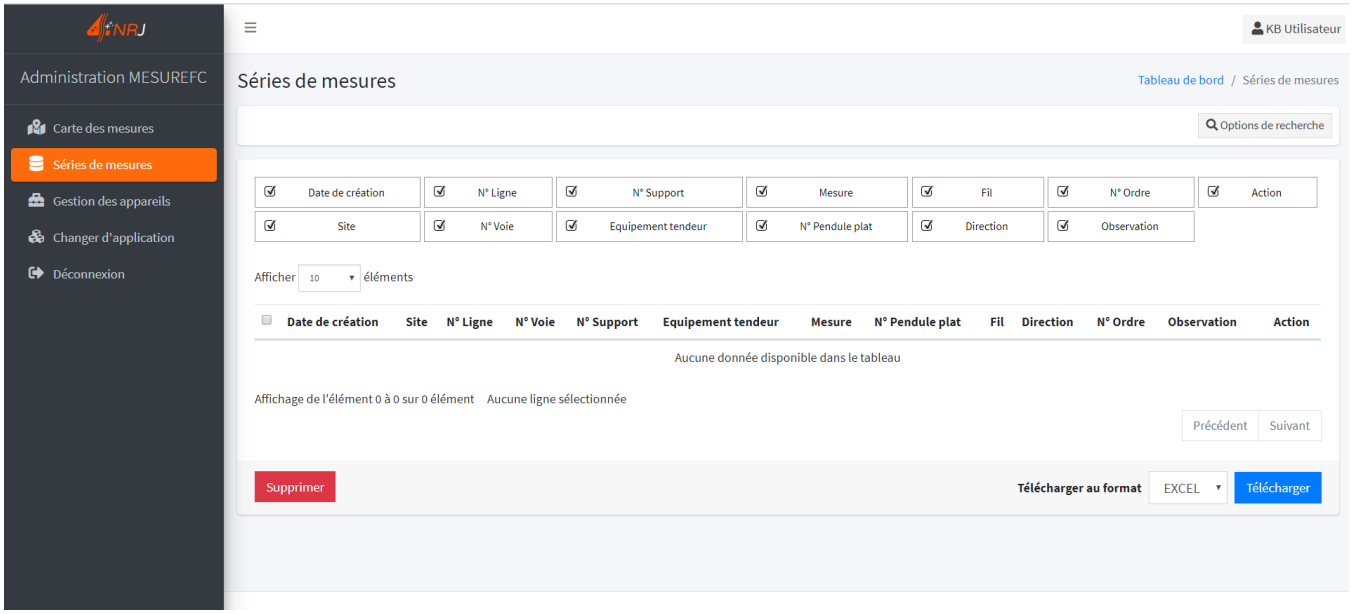
If you do not have an account, please contact 4NRJ.

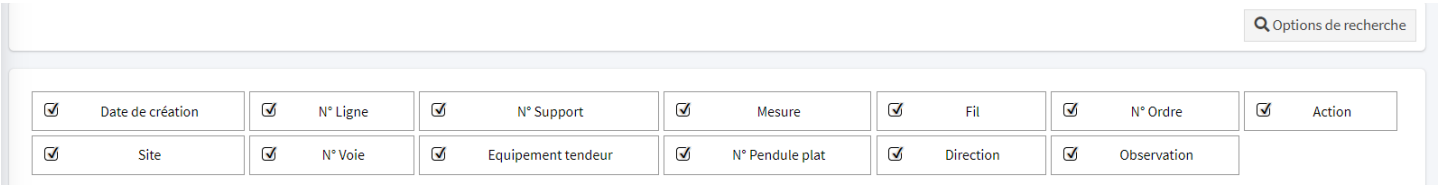
Telephone: +33 (0)2 54 42 05 12
E-mail: contact@4nrj.com

You have the option to view the measurements you have made on the map.



You can also access the list of your measurements and sort them according to your search criteria.





Appendix D - MESUREFC customer inspection procedure

In order to prevent wear and tear on the MEASURE FC as much as possible, a multi-stage inspection of the individual elements of the MEASURE FC has been implemented.
This inspection must be carried out every year by the customer.

1 - Etat général du MESUREFC

TION 1 QUESTION 2 QUESTION 3 QUESTION 4

Mousqueton de sécurité

Vérifier la présence et le bon fonctionnement du mousqueton de sécurité.

TION 1 QUESTION 2 QUESTION 3 QUESTION 4

Etiquette constructeur

Vérifier la bonne lisibilité de l'étiquette constructeur.

2 - Contrôle de la connexion et de la batterie du MESUREFC

3 - Contrôle de la calibration du MESUREFC

Appendix E - Managing 4NRJ products using QR Codes

It is now possible to track the validity of all the tools managed by QR code.

All you have to do is log in to your account on the 4nrjc.comwebsite.

If you don't have one, send a request to contact@4nrj.com.

To add tools to your account, send the serial numbers of your devices and the account to which you want to link them to contact@4nrj.com.

By logging in to your account, you can view the validity status and certificates of conformity of your equipment and carry out customer checks.

There are two types of account: supervisor and controller.

Supervisor account

The supervisor account can manage several controller accounts and the tools associated with each controller.

- To create a controller account (attached to the supervisor account) click on "Rights management", then on "User management" and on the "Add a user" button.

- Fill in the various fields and press "Save".

Inspector account

The inspector account can only access the tool list assigned to it.

Notes

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4NRJ
WWW.4NRJ.COM

Keep up to date with the latest manual updates by flashing the QR Code.
Or you can access it via the link: https://4nrj.com/ensmesurefc-en.pdf