



NOTICE DELTA XP



Packing list

Items included in the order

- * Delta X sensor with female Hirose connector + bracket type mounting system/ 4 bolts for fixing the bracket to the sensor
- * Probe with male connector connection with cable X m* length
- *
- * X depends on the cable length ordered - 5m/10m/ 20m

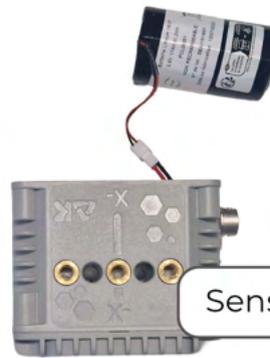
Sealed chamber of pressure measurement atmospheric



Female connector Hirose

Stainless steel measuring probe 316 L PASSIV2.

1 Battery type D / 3.6 v (with connector)



Sensor body



4 screws of the lid



Mounting bracket + 4 screws M6

The DELTA X-P sensor is delivered with a piezometric submerged level probe to monitor groundwater levels.

The probe body is passivated stainless steel 316L, the reinforced cable of 5ML has a waterproof connector, also equipped with an atmospheric stabilization sensor.



Pile 3,6 V - 17 Ah - Autonomy 1 to 7 years*	Case Protection IP66	Probe Use T -20°C à +60°C
Connection Bluetooth & Radio LPWAN	Outside T° measurement	Probe T-Drift < +/- 0.02% PE / °C
Measuring space from 10 mins to 24h	Probe Precision < +/- 0.3% PE	Probe Inox 316 L Passivated
Internal memory of 250,000 measures	Probe T° storage 0°C à +80°C	Probe Diameter 21,4 mm, length 175 mm

*depending on the selected measurement spacing, sensor exposure and data transfer mode (bluetooth, LPWAN, ...).

Download the app



Download the Feelbat app on your smart-phone store.



Accept all access requests to enjoy the application.



Register, then a confirmation email will be sent to you.

If you have a problem contact us at: (may appear in your spam)
SAV@feelbat.fr



Starting the sensor



Remove the DELTA X cover

 Be careful not to remove the lid where it is marked radio waves, do not open)

You will see the connected battery with the connection plug in the DELTA X, plug it in.



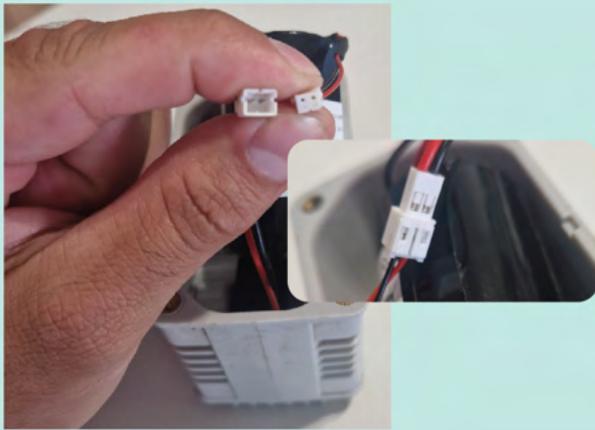
Replace the DELTA X cover and make sure that the O-ring joint is properly positioned to close the cover.

 Attention to the Y+ and Y- direction. Close the hood with attention to the decrypter



Close the lid.

 Use silicone grease to grease the joint with reassembly, and do not force screws because they are only there to hold the lid in its housing.



Attention to the direction of connection

The red and black wires are not aligned, your connection should be done as on the small picture.

Preamble

The sensor must not be exposed to freeze/thaw variation and charged/aggressive water

Prior to installation, plan to retrieve the following information:

- Length of drilling/laying piezometer tube made or to be made
- The length of the probe ordered is much greater than the length of the piezo tube
- Diameter of piezometric tube

A cover closure system is available to hold the cable and all enclosures on the piezometric tube.

This system is sold separately. If you are interested, please contact your local sales representative.

Installation



Caution when handling not to pierce, bend or damage the cable

****NB**** Boxes marked "Do not open" must not be opened. Otherwise, the warranty will no longer apply.



01

Locate the piezometric tube in your area for probe installation and housing installation.



02

Open the cap and check the inner tube condition to ensure that no obstacles are present.

 If the tube is not fitted with a plug, be sure to install one.



03

Take a first measurement(1) to determine the current grade of the table. This measurement shall be performed using a manual piezometric probe.

 Attention, this first value will be to be entered in the application when activating data recording.

In the example below, installation is performed using a closure plug specific to piezometric tubes. This plug is not included in the pack. To simplify your installation and obtain this equipment, we invite you to contact your regional sales representative.



04

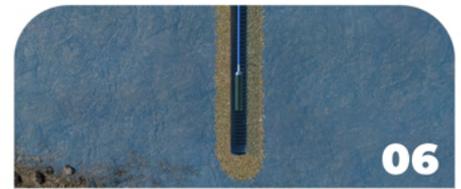
Prepare the equipment and unroll the cable, probe and Patm housing carefully to avoid damage to the sensor components.



05

Then, place part of the closing cover and gently insert the stainless steel probe inside the piezometric tube.

 Use the curved part of the cover to guide the cable without pinching or bending it.
This cable allows air to circulate, which compensates for variations in water height as a function of changes in atmospheric pressure.



06

Lower the stainless steel probe inside the piezometric tube until it reaches the bottom, then raise it 10 to 15 cm.

 It is important not to install the probe directly into the bottom of the tube. **

******From this stage, it is strongly recommended to stabilize and secure the entire instrumentation system. If the proposed closure system is not suitable, it will be necessary to provide another adaptable system.

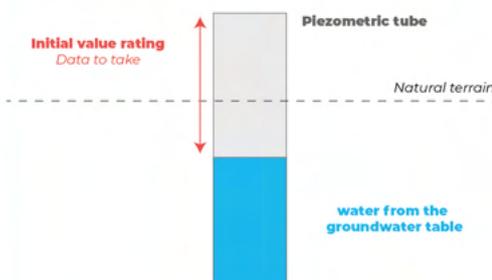


Technical details

1) This value will be called "initial value".

It corresponds to the rating indicated below, in red.

The initial value is taken during manual measurement (see step 3)





07

Secure the Delta X by screwing it to the mounting bracket, making sure that it is level.

 Remember to connect the battery and point the "Do not open" hood towards the sky.



08

To attach the entire system to the tube, use Rilsan collars. Insert them into the slots provided, position the system around the tube and tighten firmly (without damaging the tube or equipment).

Note: notches width: 2 mm x 9 mm



09

Roll the hose up without bending or pinching it, then place it on the appropriate part of the bracket.

NB: To keep the hose in place, you can use a Rilsan collar, without over-tightening it, to allow air to circulate inside.



10

Position the Patm (black case) on the stainless steel element, then attach it with 4 Rilsan.

NB: diameter of the holes 4.5 mm



11

Secure the assembly by screwing it to the threaded part of the Delta X housing, making sure that it is level.

 Ensure the correct foam is present between the stainless steel element and the Delta X housing (supplied with the cover closure system).



12

Connect the connector to the Delta X box, making sure that the rebuttal is correct and that no elements (earth, water, sand, etc.) obstruct the connectors before connection.



13

Turn clockwise, then lock the connection by listening to the "click" button.



14

Close the cover to prevent any obstruction of the piezometric tube, then connect to the mobile app to set the sensor.

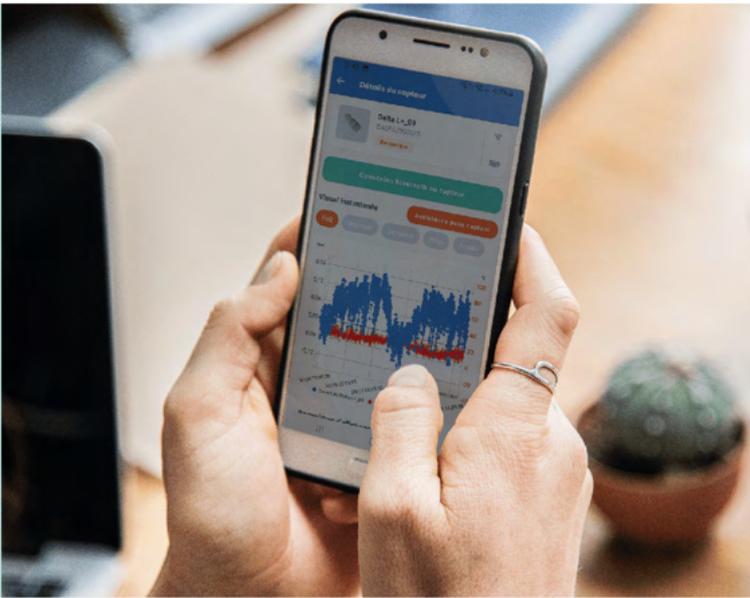


Connecting the cable to the Delta X

Turn clockwise and lock the plug – you must feel a "click".

Make sure that there is no obstructing element before connecting the connector (moisture, water drop, earth...)

Application



Web & mobile application

Feelbat offers a mobile application that allows you to track the movements of your cracks in a simple and fast way.

Before you start, you must create your account via the app for it to work

[access the web app](#)

Configuration

01 Click on « add a sensor »

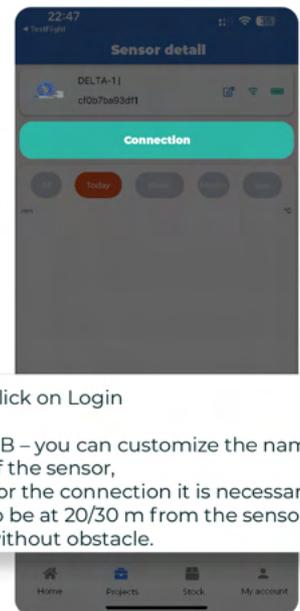
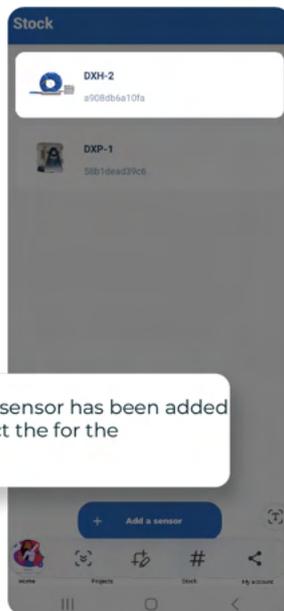
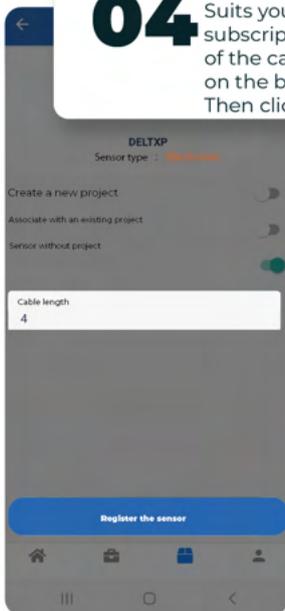
02 Choose the sensor electronic DELTA X-P

03 Select the sensor

NB: the reference/serial number is written in the battery compartment on a fixed and "flying" label. This label allows you to identify your sensor.

04

Choose the option that Suits you according to your subscription, the length of the cable will be informed on the box. Then click on save»



05

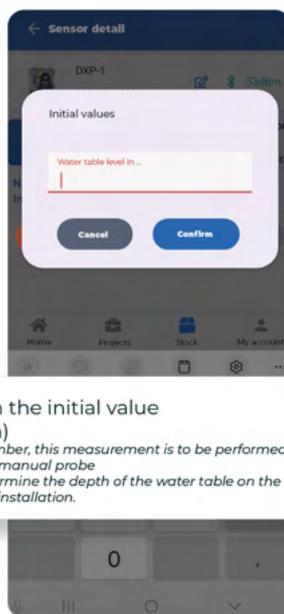
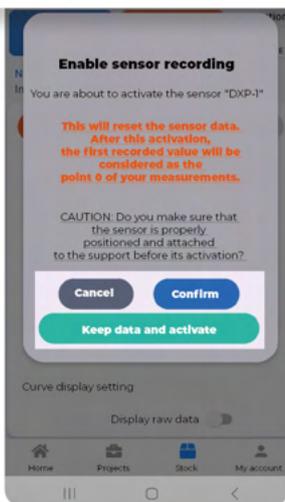
Your sensor has been added Select the for the set.

06

Click on Login
NB – you can customize the name of the sensor, For the connection it is necessary to be at 20/30 m from the sensor without obstacle.

04

If you click on "confirm" all data will be deleted.
If you click on "Keep data and enable", the data previously stored in the sensor, and not reset, will be displayed again.

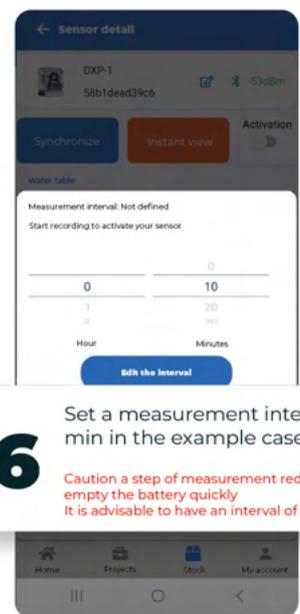


05

Fill in the initial value (in m)
Remember, this measurement is to be performed with a manual probe to determine the depth of the water table on the day of installation.

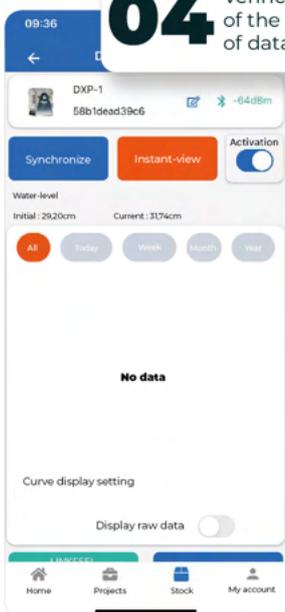
06

Set a measurement interval (10 min in the example case)
Caution a step of measurement reduces fear to empty the battery quickly It is advisable to have an interval of 6 hours or



04

Verification of activation of the registration of data.



05

Example after a certain number of data recorded and Synced via bluetooth.



If necessary,
contact the
to sav@feelbat.fr

Recording via linkfeel

Subscription by a LINKFEEL token commits the sensor for one year to send data to the cloud.

The sensor activated with a LINKFEEL token will only be able to send data if the sensor is in an area covered by the SIGFOX LPWAN network.

To have an indication on the sigfox network coverage, scan the QR code.

To ensure network quality, it is strongly recommended to use a network test button available in our range.

The map remains an indication on the presence of network.



Please also check that your tokens are credited to your account.

01 Open the mobile app then select "my account" in the bottom right.

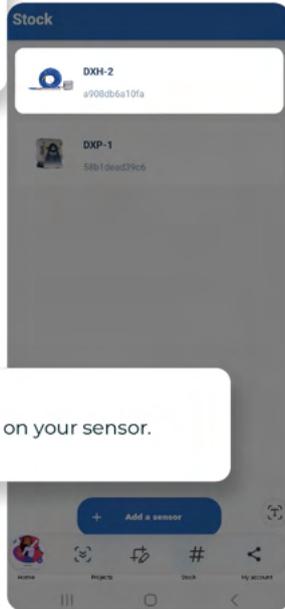
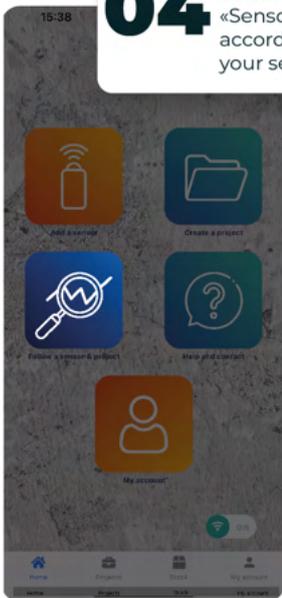
02 You can see your active token count or validate your purchase code to get other tokens

03 The purchase code is either present in an envelope when ordering received by mail. You just need to enter the code.

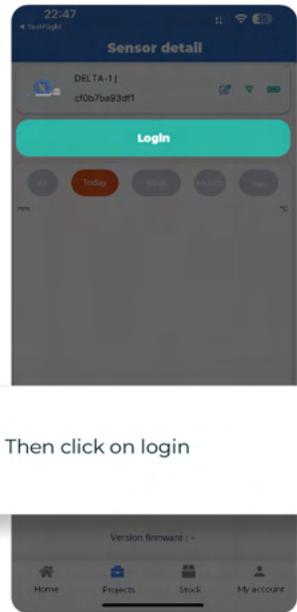


Without a LINKFEEL token, you will not be able to receive the data remotely.

04 Select followed by «Sensor & project» or stock according to the location of your sensor.



05 Click on your sensor.

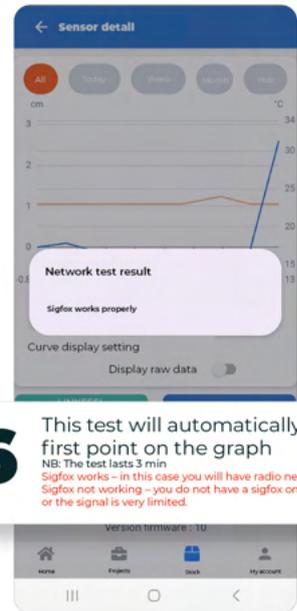


06 Then click on login

04 Check that the data activation is active. Click on «Linkfeel activation».



05 Confirm the good presence of the sigfox network by performing a network test. Click on «test the sigfox network».



06 This test will automatically generate a first point on the graph
NB: The test lasts 3 min
Sigfox works – in this case you will have radio network
Sigfox not working – you do not have a sigfox on site or the signal is very limited.



Notes :

The sigfox test by the sensor can only be performed if the sensor has a valid linkfeel token and data recording is enabled.

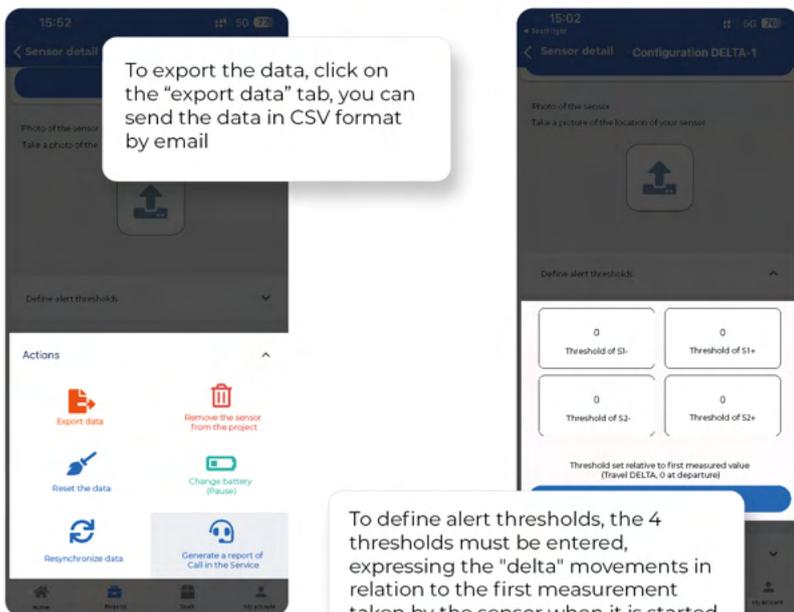
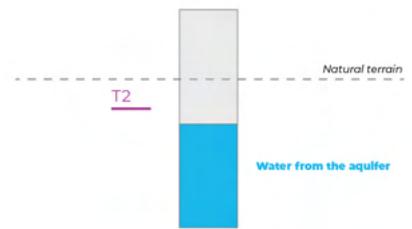
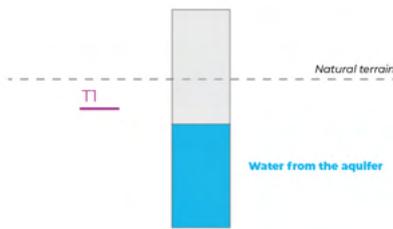
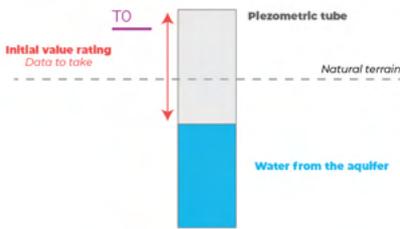
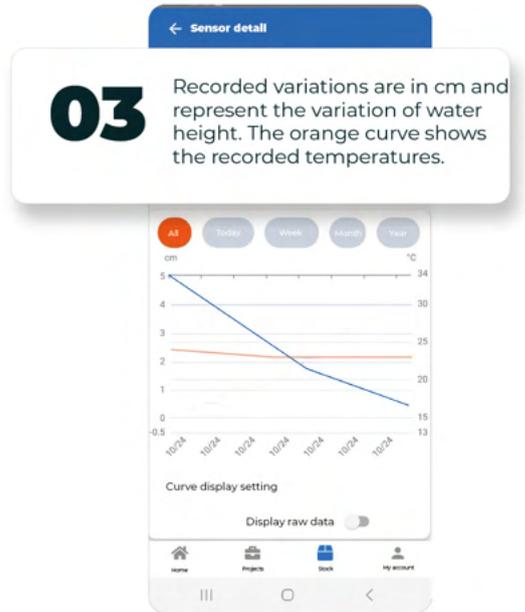
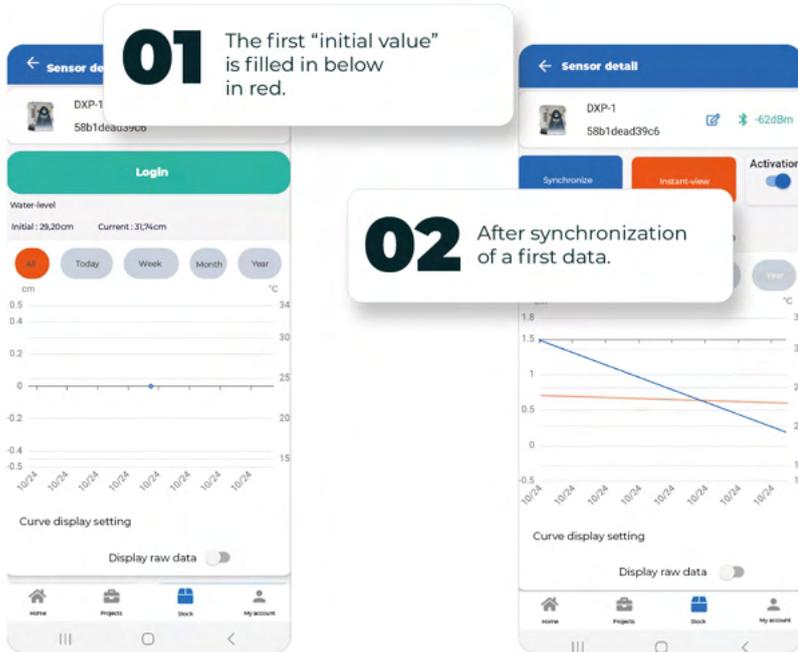
The first linkfeel activation must be performed by being connected to the sensor in bluetooth
When extending or renewing, it is possible to perform this manipulation remotely from the feelmonitoring platform

Link reminder: <https://monitoring.feelbat.eu/login> - this link allows analysis from your computer

NB: all changes of measurement intervals, synchronization, reset ... are to be achieved from the mobile application by being connected via bluetooth to the sensor.

Good to know

The curve shown represents the pattern of variation of the sheet relative to the initial point (VI filled in with manual piezzo probe)



Following your subscription on the mobile app



To receive threshold alerts, simply integrate the sensor into a project and receive the corresponding emails.

Alerts are sent when the sensor is synced via Bluetooth or by activating the Linkfeel token for real-time alerts.

Good to know



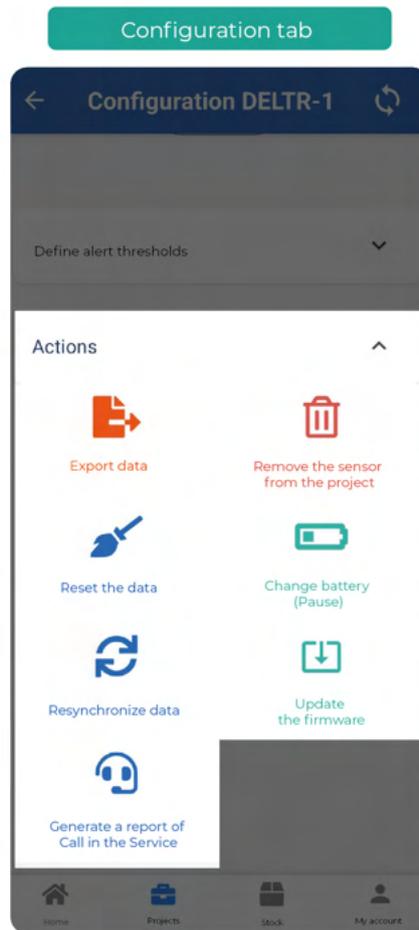
If you want to remove a sensor from the project, it is necessary to save your sensor data in your personal database or with a CSV report beforehand. Be careful, you must stop recording data before performing the sensor removal steps.



The reset button allows to empty the memory of the sensor, we advise it before launching a sensor on a new project.



This button will report a problem with your sensor. A report is generated to help the technical support team analyze and resolve the issue quickly.



The battery change button allows to pause the sensor and ensure correct calculation to estimate the durability of the sensors with a new battery.



Once the sensor is removed from the project, it is placed in the "stock" area. To remove it from the application and make it available, click "remove sensor"



This button allows you to install the latest software version of your sensor. Make sure you are connected to the sensor via bluetooth in order to perform the update. It is possible to update the firmware offline.

Solutions to expand your network and retrieve data from your sensors



Test button

The tester button is the ideal tool for situations where the exact location of the construction site remains to be determined or to choose the precise location of your sensors.

By activating this button, you have the possibility to test the Sigfox coverage, thus ensuring the proper functioning of your monitoring device.



Repeater

The repeater amplifies sensor signals in areas where the Sigfox network is weak, managing up to 15 sensors and 140 messages/day.

Its battery life varies from 1 to 7 years depending on usage. Comes with a one year subscription (renewable), and a simple setup to start. Suitable for indoor or outdoor use (temperature from -20°C to +60°C)



SIGFOX Microstation

It extends the Sigfox network coverage in indoor or underserved areas, running on 220V and requiring an internet connection via Ethernet or 3G/4G (optional).

An IP65 waterproof cover is recommended for outdoor installations or in harsh conditions. 3G/4G USB flash drives are optional, without the SIM card provided.

If you have any questions, please contact us
SAV@feelbat.fr

Uninstall



First of all, please make sure you have all the necessary data and disable Recording data on the mobile application, connecting via bluetooth to the sensor.

Do not pull the cable to remove the probe when disassembling it, in order to avoid any risk of damage.

Be careful to choose to keep or delete your data, when disabling the registration



01

Open the cover and disconnect the probe from the Delta X sensor.
Be careful to maintain the system during disassembly.



02

Unscrew the Patm and Delta X elements carefully to avoid bending or damaging the cable.



03

Pull the probe out of the cable.
Be sure to wrap the cable as you go.



04

Store the equipment carefully to avoid bending and damage.



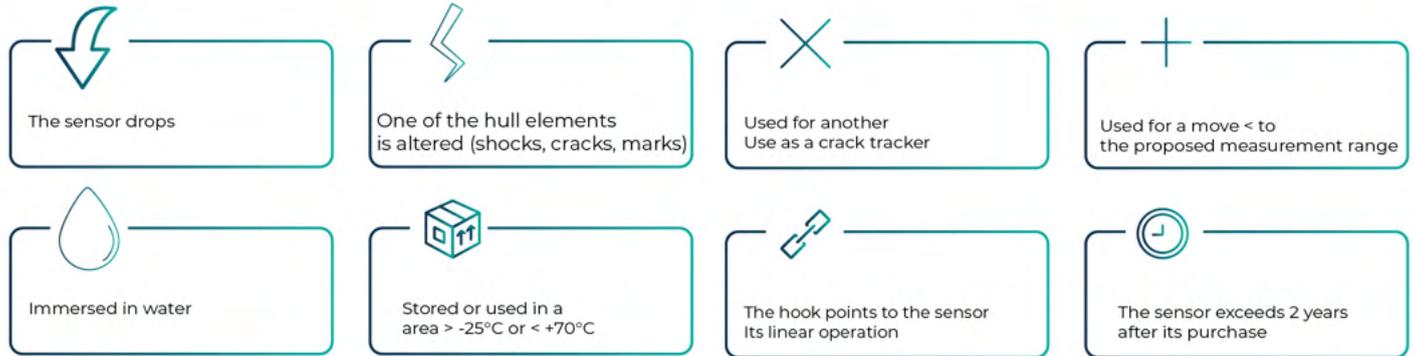
05

Remove your mounting bracket.

Guarantee

FEELBAT products are covered by the legal warranty of conformity, which covers the defects of conformity in respect of the contract of sale, which appear within two years from the delivery of the product, and by the warranty of hidden defects, which covers defects not apparent at the time of sale that render the product unsuitable for its use or which greatly diminish this use.

As such, the guarantee does not apply in the following cases:



FAQ

I am unable to create an account:

01

Check that you have used the correct email address

Do not have space before or after your email address

02

Check your SPAM to validate your email address.

03

Re-initiate an account creation request.

I can't add my Linkfeel tokens:

01

Make sure you have purchased Linkfeel tokens (on your invoice or available in your account)

02

Make sure you haven't used all of your purchased tokens

03

Log out and log back in.

The sensor does not connect via Bluetooth to the app:

01

Make sure that Bluetooth is enabled on your phone.

02

Make sure you are within 30 meters of your sensor with eye contact.

03

Make sure the sensor logo is in front of you.

04

Make sure the batteries are connected.

05

Remove the sensor and then reconnect the sensor.

06

Close the app, disconnect the bluetooth, reconnect it, reopen the app and try to connect again on the sensor

I can't add an electronic sensor or if you have missing features.

01

Check that you have the correct subscription for the task you would like to perform.

02

Log out and log back in.

03

Check if the sensor is not connected to another account

04

Have you requested access to the sensor owners

The sensor is blocking during data retrieval:

01

Check that the battery is not defective, misengaged or weak.

02

Make sure you are in an area with mobile network.

03

Make sure that you are the only user to be logged into your Feelbat account

04

Did you plug the battery in properly?

05

Zoom in, click «Connect to sensor» to attempt a bluetooth reconnection with your sensor.

The sensor is activated with a LINKFEEL token, but does not send data:

01

Check that the battery is properly connected.

02

Check that the battery is not empty.
(via a multimeter or try it on another sensor)

03

Check that the sensor is in an area covered by SIGFOX.

01

Did you test the radio network with a tester upstream of your installation?

02

Did you test the network with the installed sensor and via the app?

03

If using a repeater or microstation box, have you set the device according to the FEELBAT instructions?



If you crack you **FEELBAT**

Discover our video tutorials

See the help videos


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