Dynamox

USER MANUAL

DynaPortable



Dynamox_s.a | Dynamox | Dynamox.net

Table of contents

1 First steps 3

2 Product description 5

3 Pre-installation 6

3.1 Creating a hierarchical structure 7

3.2 Dynamox App 8

4 Installation 9

4.1 Positioning recommendations 10

4.2 Technical drawing 10

5 Starting the operation 11

5.1 Association and collection using the Dynamox App 11

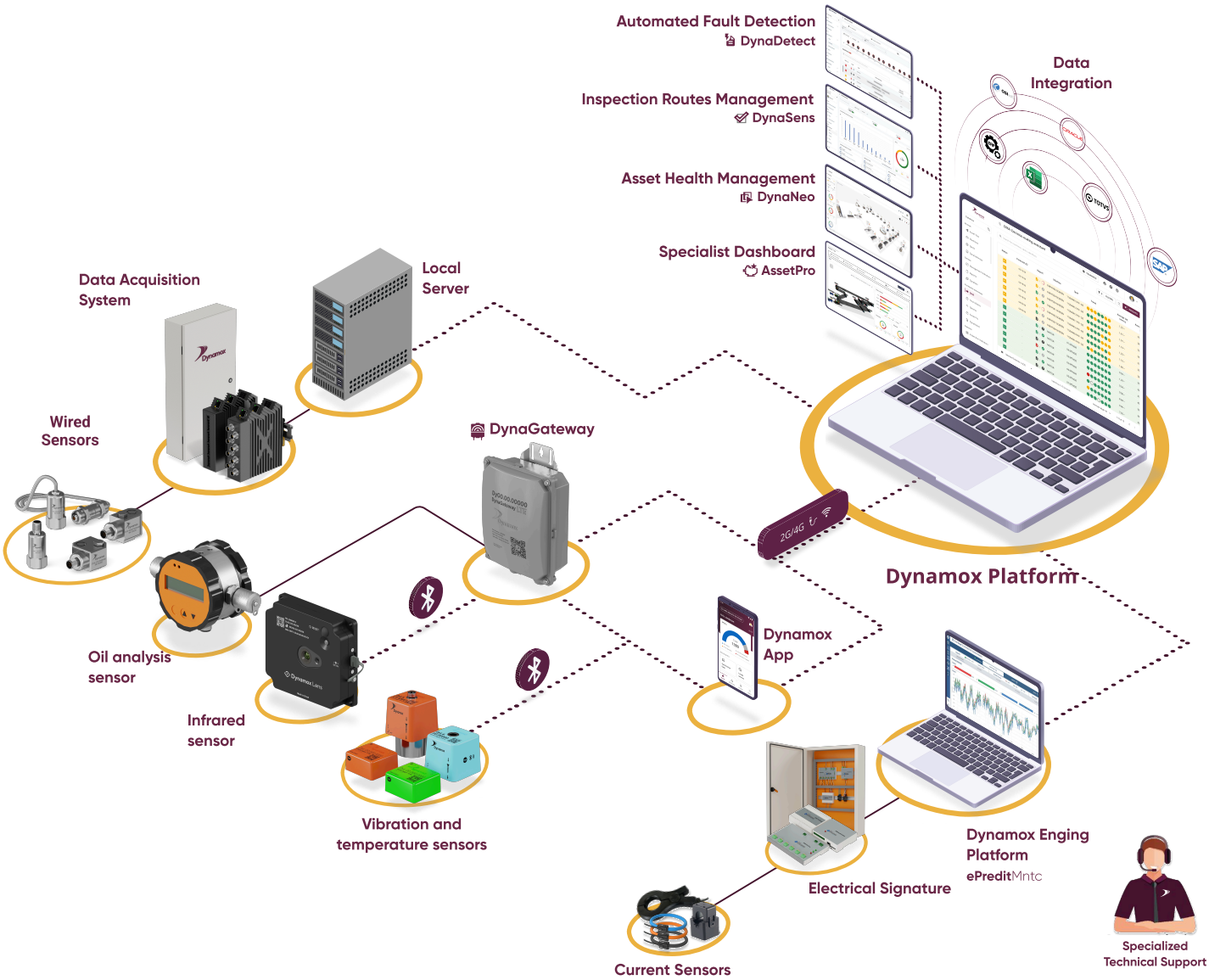
5.2 Association and collection on routes (DynaSens) 14

6 Additional resources 20

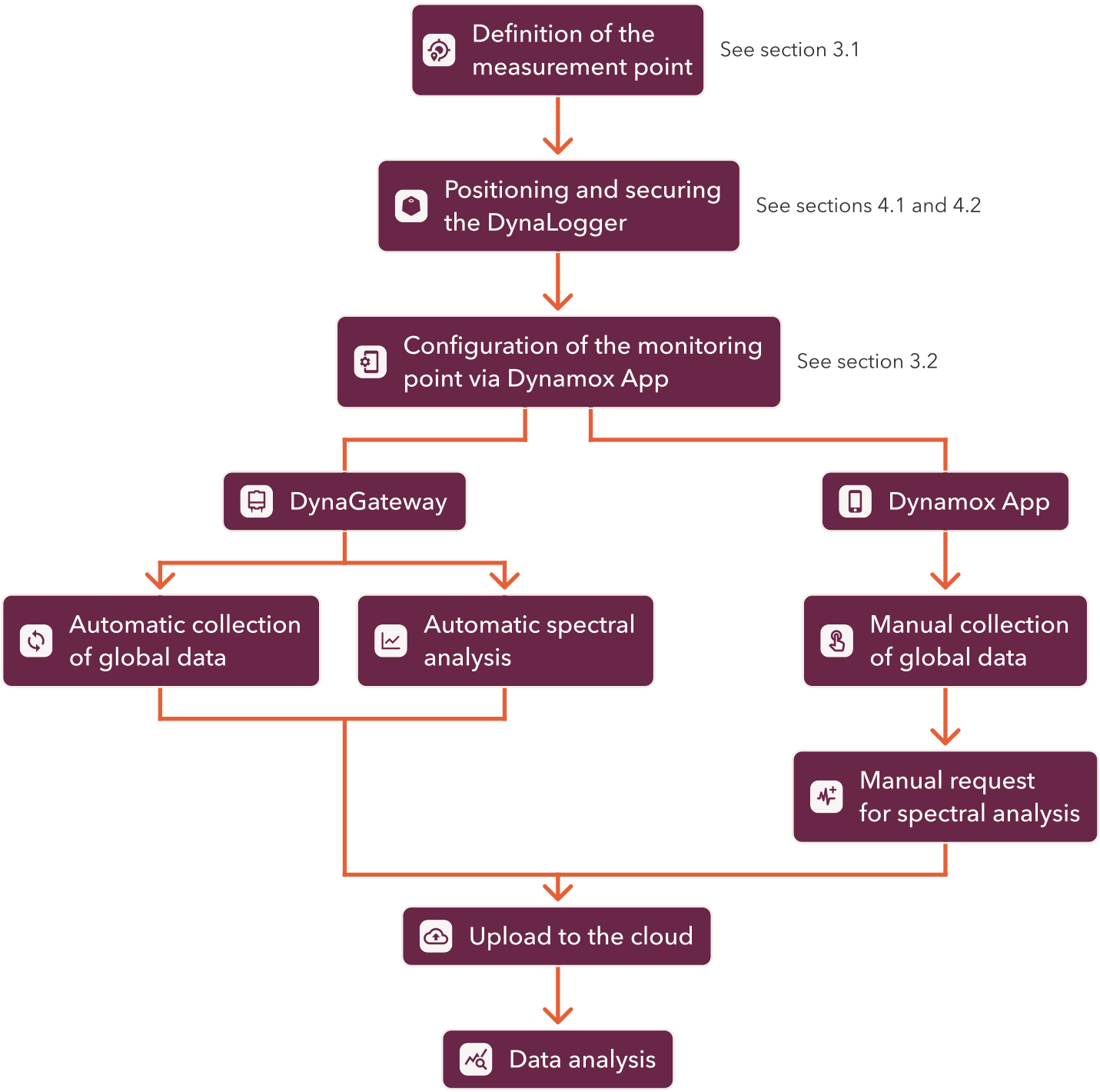
1 First steps

Dynamox solution is composed of:

- Wireless vibration and temperature sensors with internal memory for data storage;
- Mobile application for data collection, action, and analysis on the shop floor;
- DynaGateway, an automatic data-collection gateway for the sensors, can be deployed to automate the entire data acquisition workflow.
- Web platform featuring historical data, alerts, automated detection, report generation, and integrations.



The flowchart below outlines a basic step-by-step scheme for using and operating the complete solution:



2 Product description

DynaPortable is designed to collect vibration data, enabling asset analysis.

On the top of each DynaPortable, you'll find key product-user interaction information. These details are used during installation and configuration processes:

- **PN (Part Number):** product model identification code;
- **Model Identification:** HF+s PO;
- **DyL:** DynaLogger serial number, used to connect to the Dynamox Platform.



Each DynaPortable features an LED that indicates the device's operational status. The LED blinks every 5 seconds, signaling that the sensor is functioning normally.

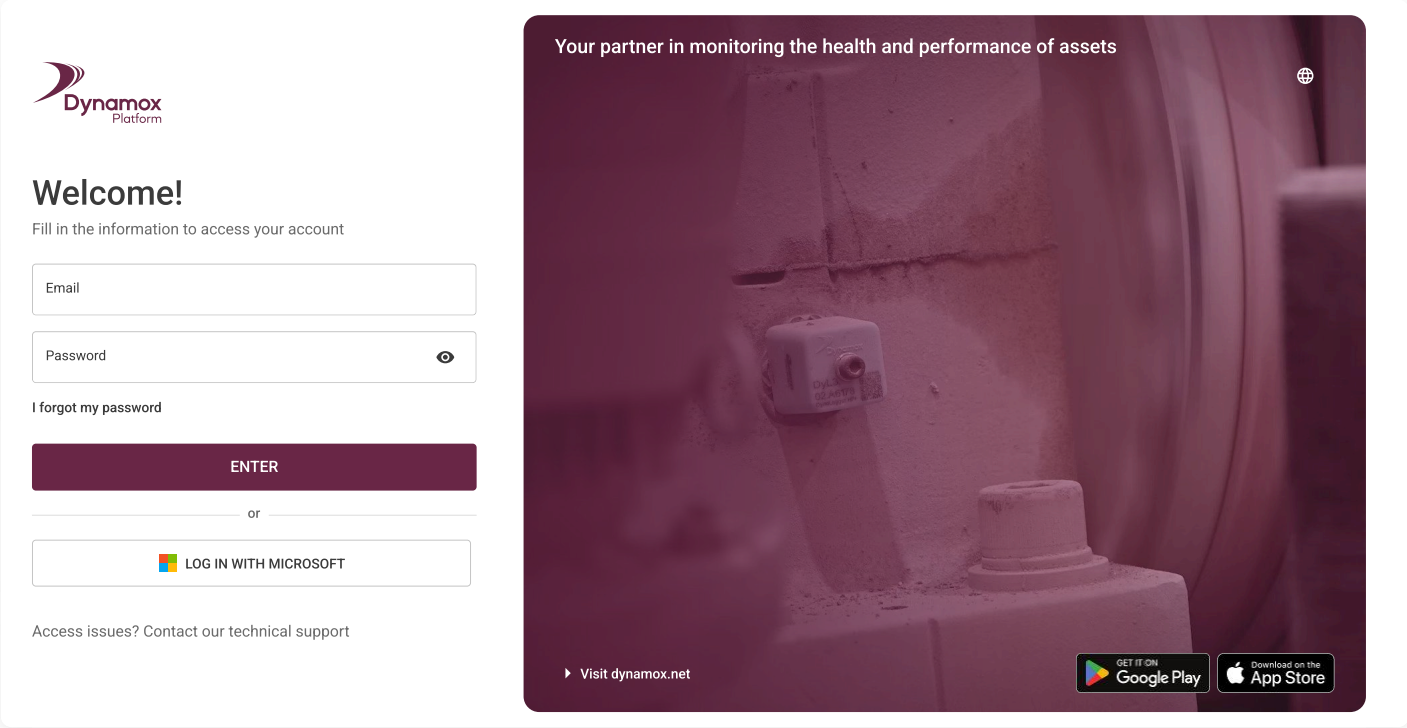


3 Pre-installation

To create the hierarchical structure for sensor installation and access the full history of vibration measurements collected, users have access to a comprehensive web platform.

If you have already purchased our products and do not yet have login credentials, please contact us via email at **support@dynamox.net** or by phone at **+55 48 3024-5858**, and we will provide your access details.

Once you have your credentials, you can access Dynamox Platform and view data from all registered sensors. Simply visit **https://dyp.dynamox.solutions** and log in using your credentials.



To learn more about the platform's features and functionality, refer to the **Web Platform Manual - July 2024**.

3.1 Creating a hierarchical structure

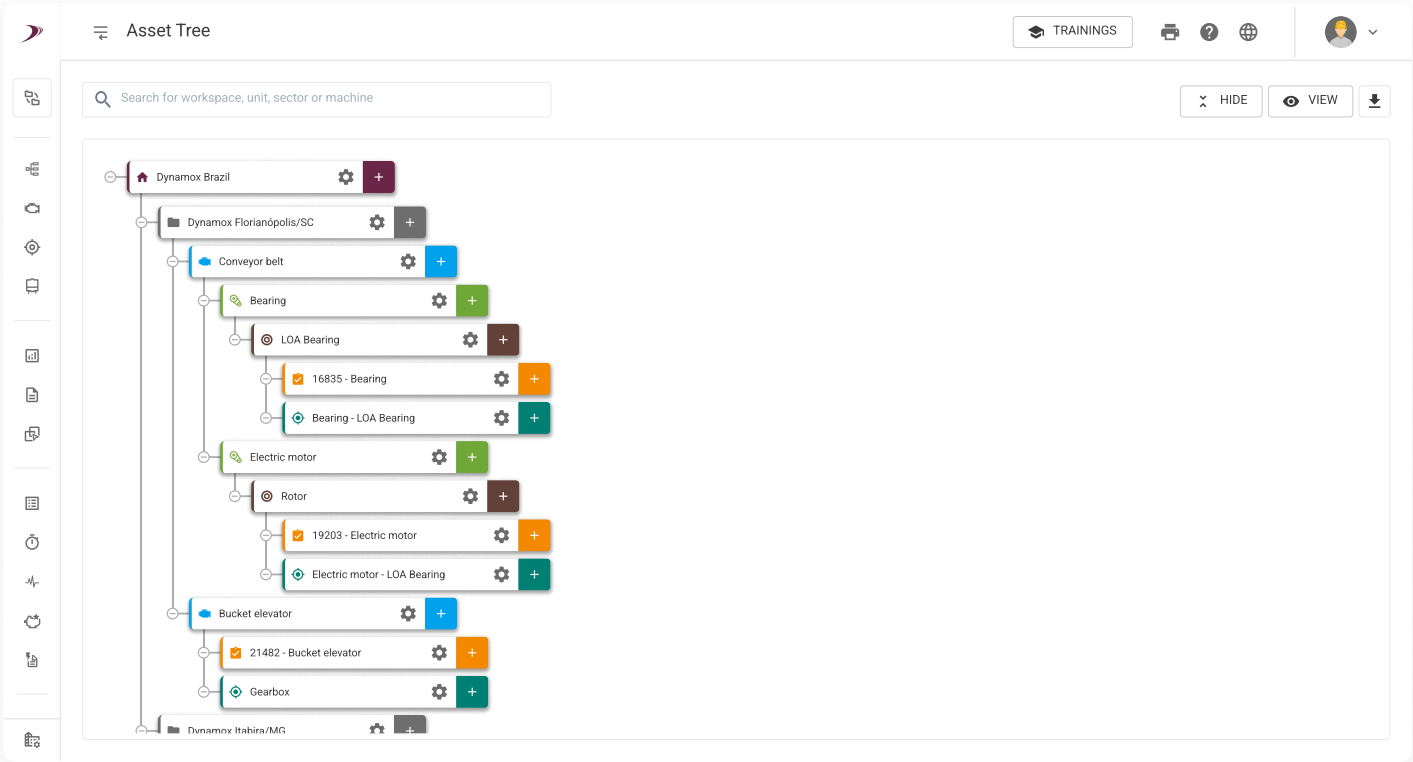
Before positioning the sensors in the field, it is recommended to ensure that the asset tree (hierarchical structure) has been properly created, with monitoring points standardized and ready to receive the sensor to be associated.

For full details and guidance on how to structure the asset tree, refer to the section **Creating the asset tree** in the Web Platform Manual - July 2024. This helps streamline fieldwork and ensures that monitoring points are registered in the correct structure.

The asset tree structure should be defined by the client and, preferably, follow the standard already used by the company in ERP systems (such as SAP).

After creating the asset tree via Dynamox Platform, the user should ideally register the monitoring point (called a Spot) within the tree structure before going to the field to physically install the sensors.

The figure below shows an example of an asset tree:



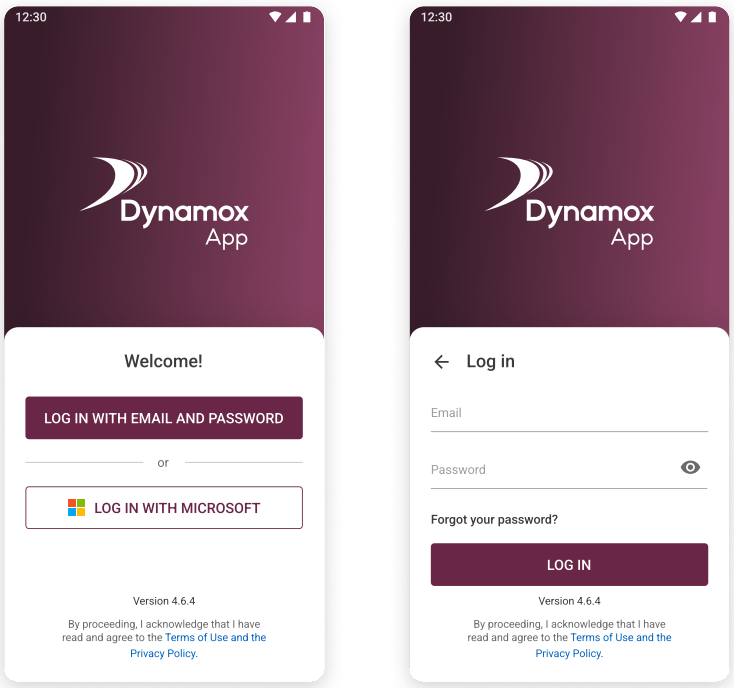
Once these procedures are completed, the user can proceed to the field to physically install the sensors on the machines and components registered in the asset tree. In the **Spot creation and configuration** section, you'll find details on how to create each Spot within Dynamox Platform. In the **User management** section, you'll find information on creating and assigning permissions to different users.

3.2 Dynamox App

To configure sensors, Spots, and machines, you must download the **Dynamox App**. The app requires Bluetooth technology and is available for download on Android (version 8.1 or higher) via the Google Play Store, and on iOS (version 14.0 or higher) via the App Store. It is compatible with smartphones and tablets.

You can also download the Android version via a computer by accessing the Google Play Store. To do this, log in with your Google account (the same one registered on your Android device's Play Store).

Once installed, you'll be able to interact with the sensors and configure them. Simply log in using your access credentials – the same ones used on Dynamox Platform.



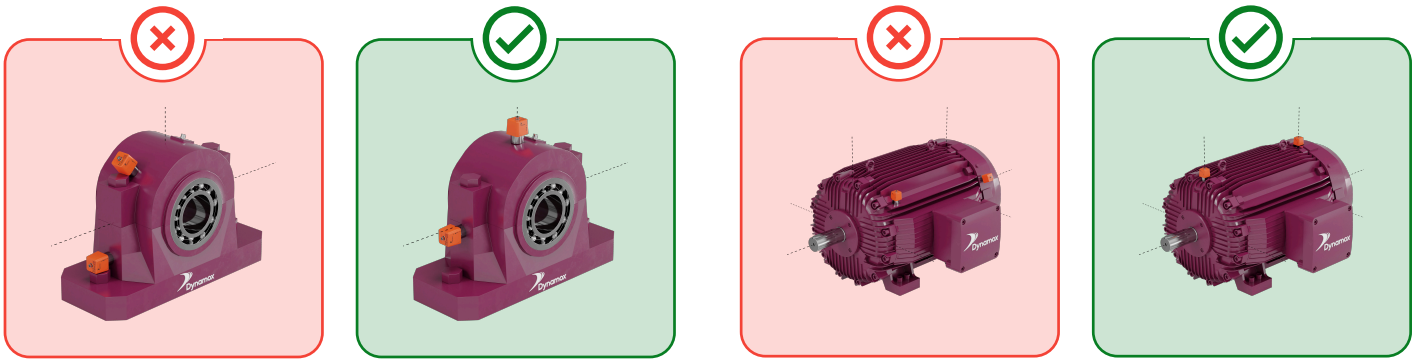
To learn more about the app's functionality and features, refer to the **Dynamox App Manual**↗.

4 Installation

Before physically installing the DynaPortable on the machines, consult the product's technical specifications via the link: **https://support.dynamox.net/en#datasheets-section**↗. This allows you to identify usage restrictions, especially in classified zones (explosive atmospheres).

Regarding vibration measurements, they should be taken on rigid parts of the machinery. Avoid installing sensors on fins or fuselage areas, as these may exhibit resonances, attenuate signals, and dissipate heat.

Additionally, the device should preferably be positioned on a non-rotating part of the machine and be centered relative to critical components, such as bearings.



Define the critical points of the assets that will be part of the route and monitored for positioning the DynaPortable sensor. It is recommended to attach steel pads at the monitoring points to make them easier to locate and further simplify the mounting process.

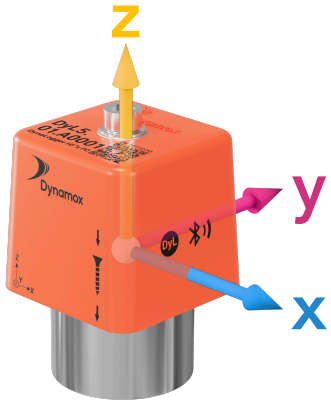
> ⓘ Using the DynaPortable outside the temperature range specified in the datasheet voids the product warranty and may lead to partial loss of magnetism in the base.

For guidance on installation locations for common types of machinery, refer to the **Applications and good monitoring practices articles**↗ section on the Dynamox Support website: **https://support.dynamox.net/**↗.

4.1 Positioning recommendations

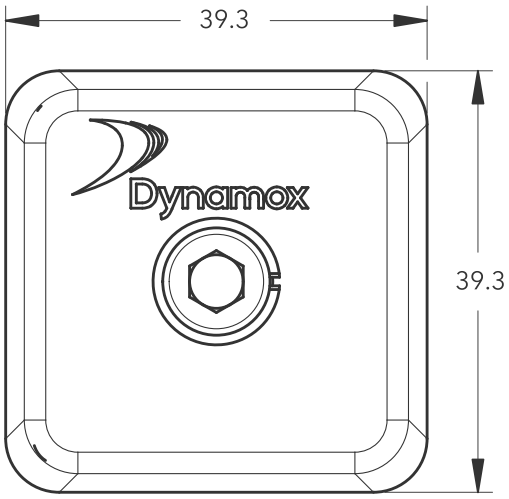
Since the DynaLogger performs readings on three orthogonal axes, it can be installed in any angular direction. However, it is recommended that one of its axes (X, Y, Z) be aligned with the machine's shaft direction.

The image on the side shows the axis orientation of the DynaPortable. This orientation is also marked on the body of each device. Proper positioning should consider both the axis orientation and the actual installation direction on the machine.

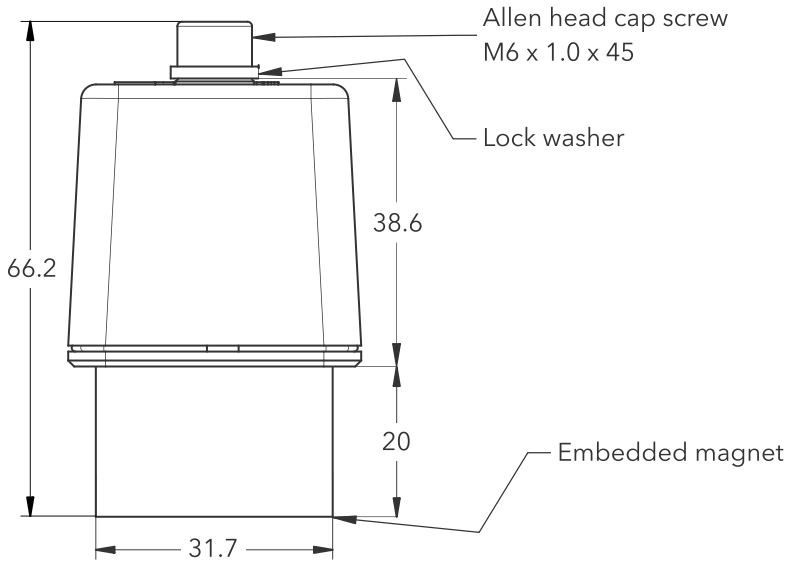


4.2 Technical drawing

Below is the technical drawing for reference regarding dimensions and details.



Dimensions in millimeters

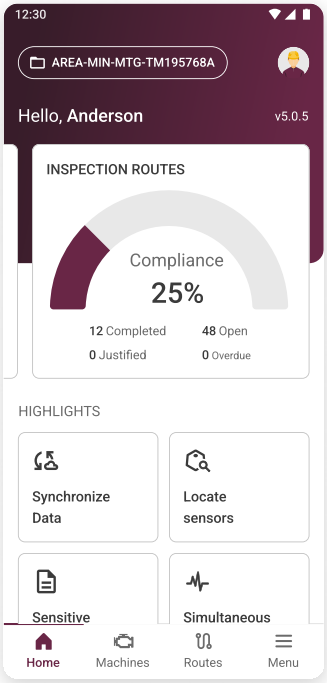


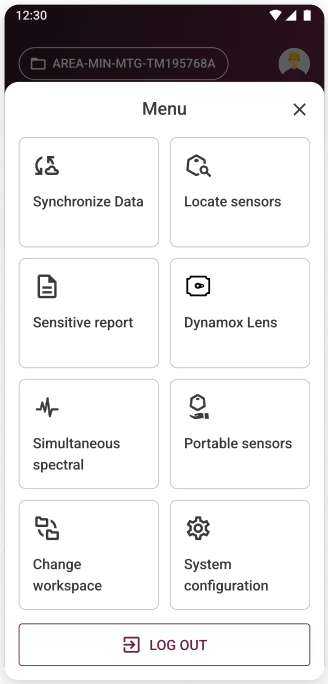
5 Starting the operation

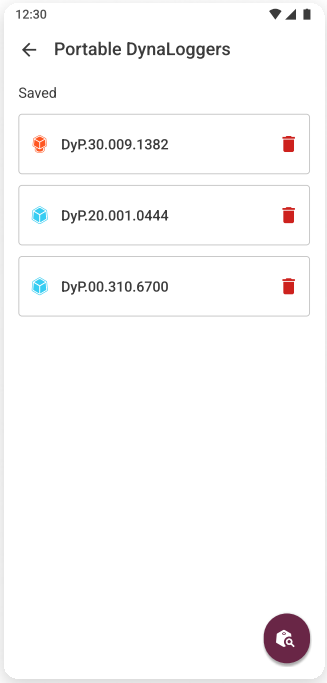
5.1 Association and collection using the Dynamox App

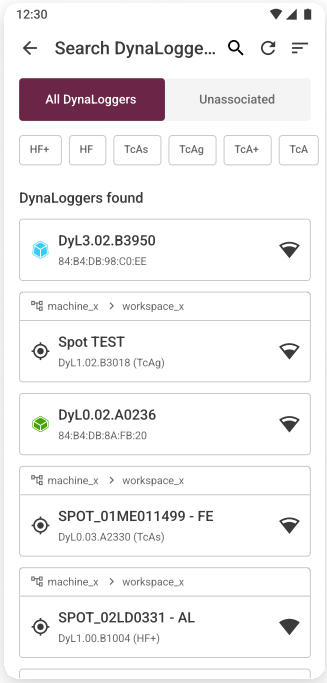
To associate a DynaPortable with the Spot previously created in the asset tree (section 3.1) and enable monitoring data collection, follow the steps below.

1. **Register the portable sensor:** First, open the app menu (located on the bottom navigation bar) and access **Portable Sensors** to scan and identify the available portable sensors by Bluetooth signal strength. When you select your portable sensor, this information will remain stored in your user login until the session expires.

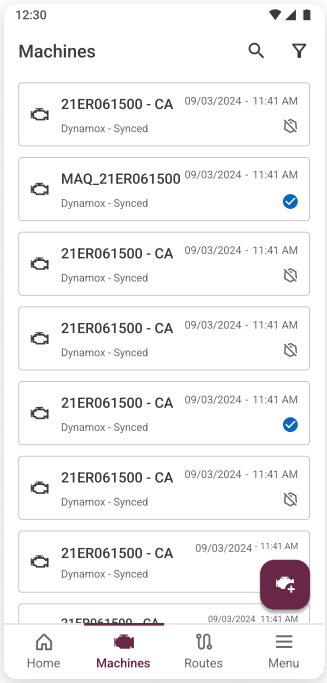


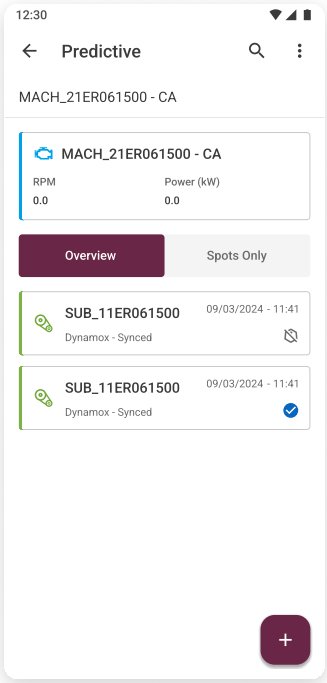




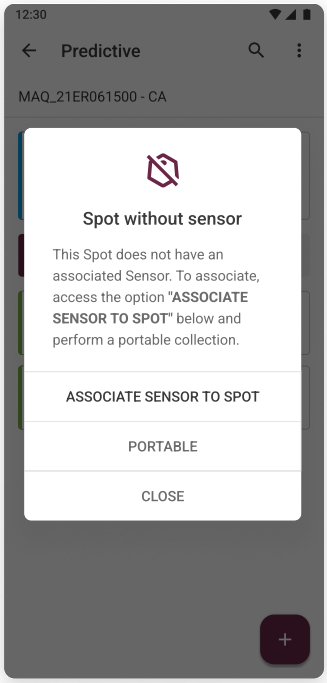


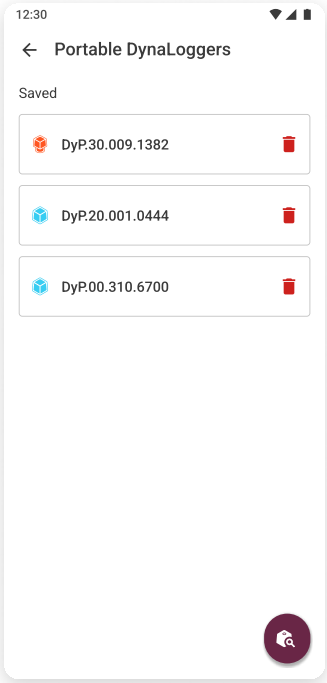
2. **Choose a Spot without an associated sensor:** After selecting the portable sensor, go to **Machines** in the bottom navigation bar. A list of predictive maintenance machines will appear. Select a machine and then choose a Spot without an associated sensor to connect the DynaPortable to it. Click on the non-sensorized Spot icon.



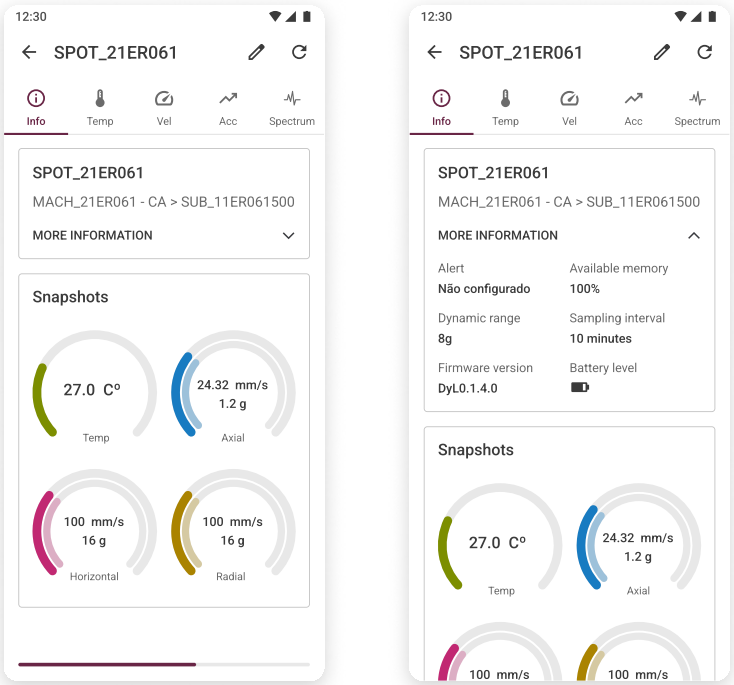


3. **Connect the sensor to the machine in the app:** After selecting the indicated icon, a window with options will appear. Select **Portable**, and you will see the list of portable sensors found during the scan. Choose your DynaPortable by its serial number and tap it.



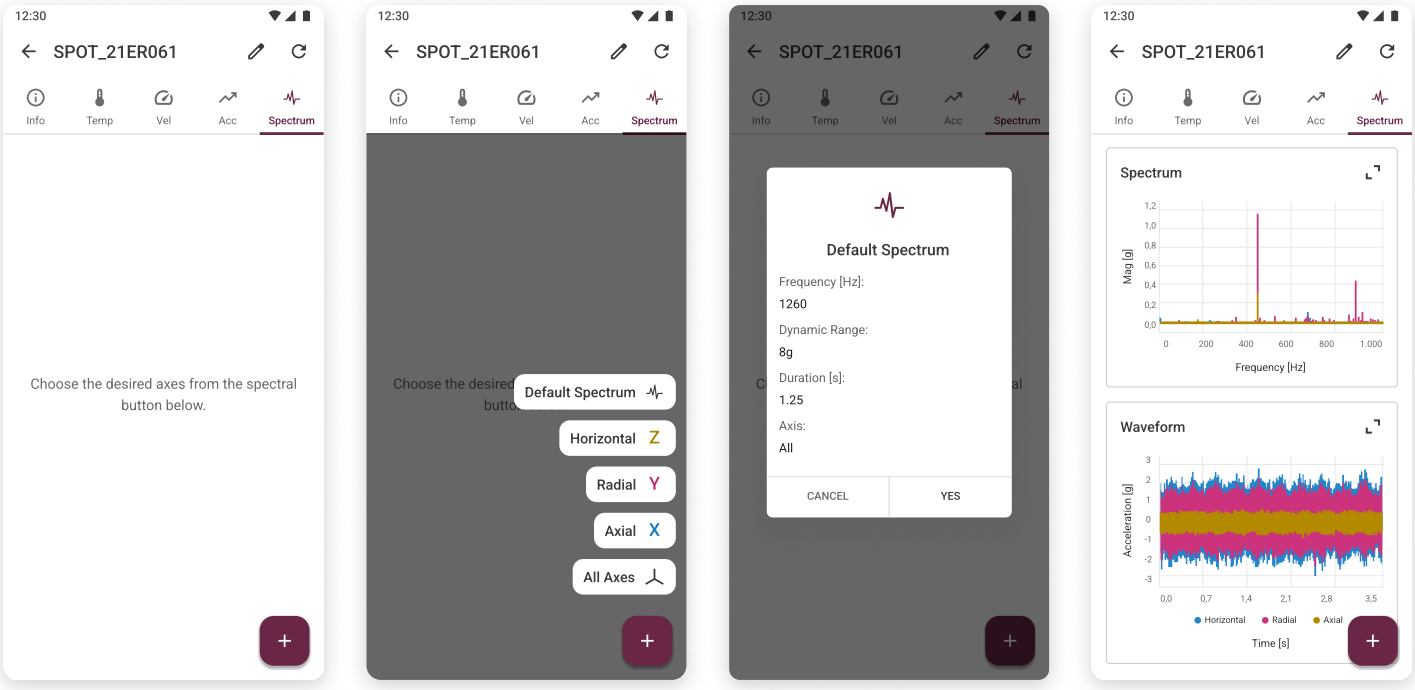


4. **Data collection (Snapshots):** In this fourth step, after selecting a portable sensor from the list, the app will connect to it. The DynaPortable will then collect the data.



5. **Spectral collection:** In the fifth and final step, after completing all the association steps, follow the guidelines below to perform a spectral collection with the DynaPortable: First, access the **Spectral** tab and tap the floating + button. Then, select the desired type of spectral analysis. In this case, we will perform the Standard Spectral analysis, predefined during Spot Creation, with preset values for maximum frequency, duration, and axes.

   Next, confirm the action and wait for the upload without moving away from the sensor. After the collection is complete, a preview of the generated charts will be displayed. To view all the data in the Dynamox Platform, synchronization must be performed.

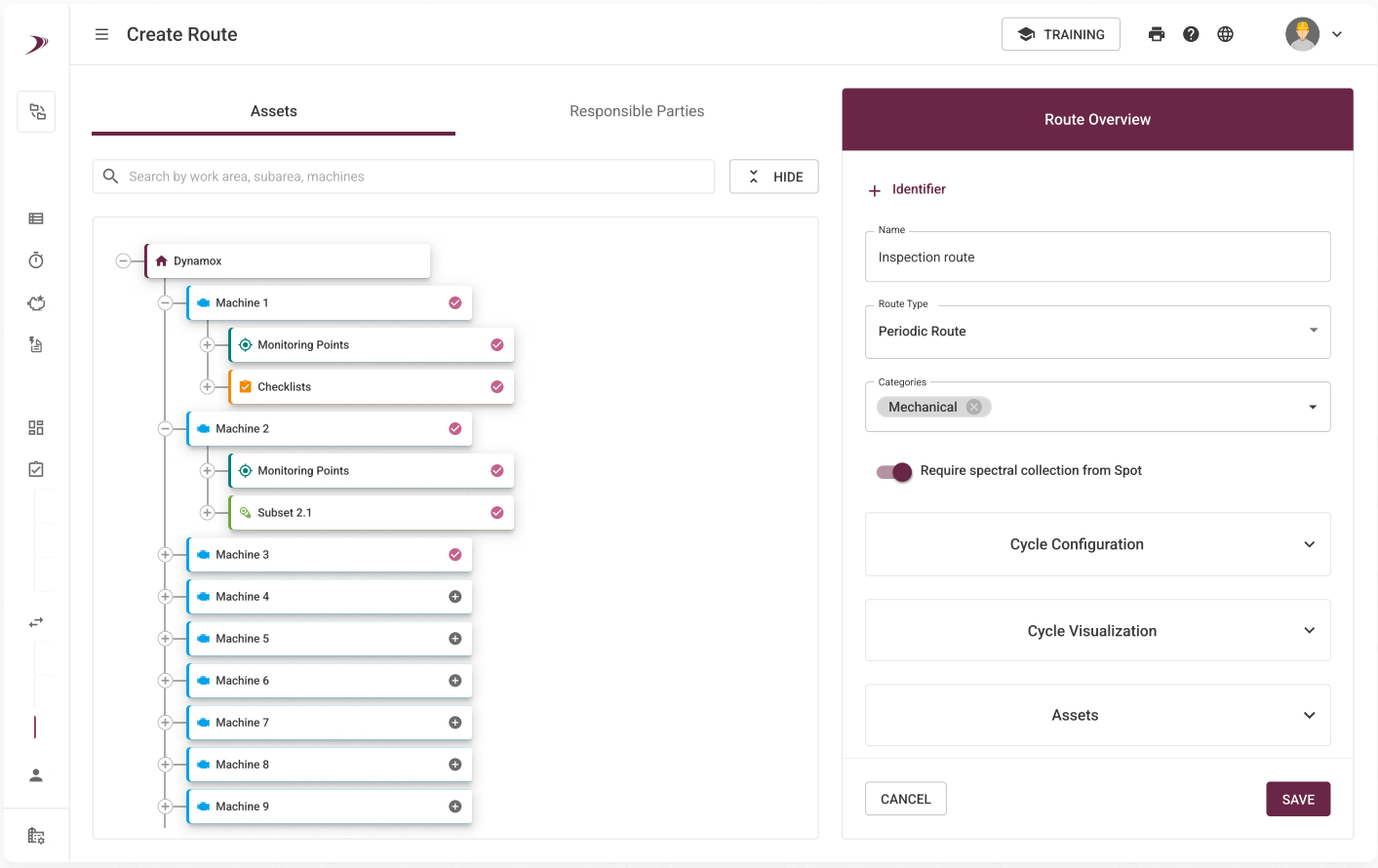


5.2 Association and collection on routes (DynaSens)

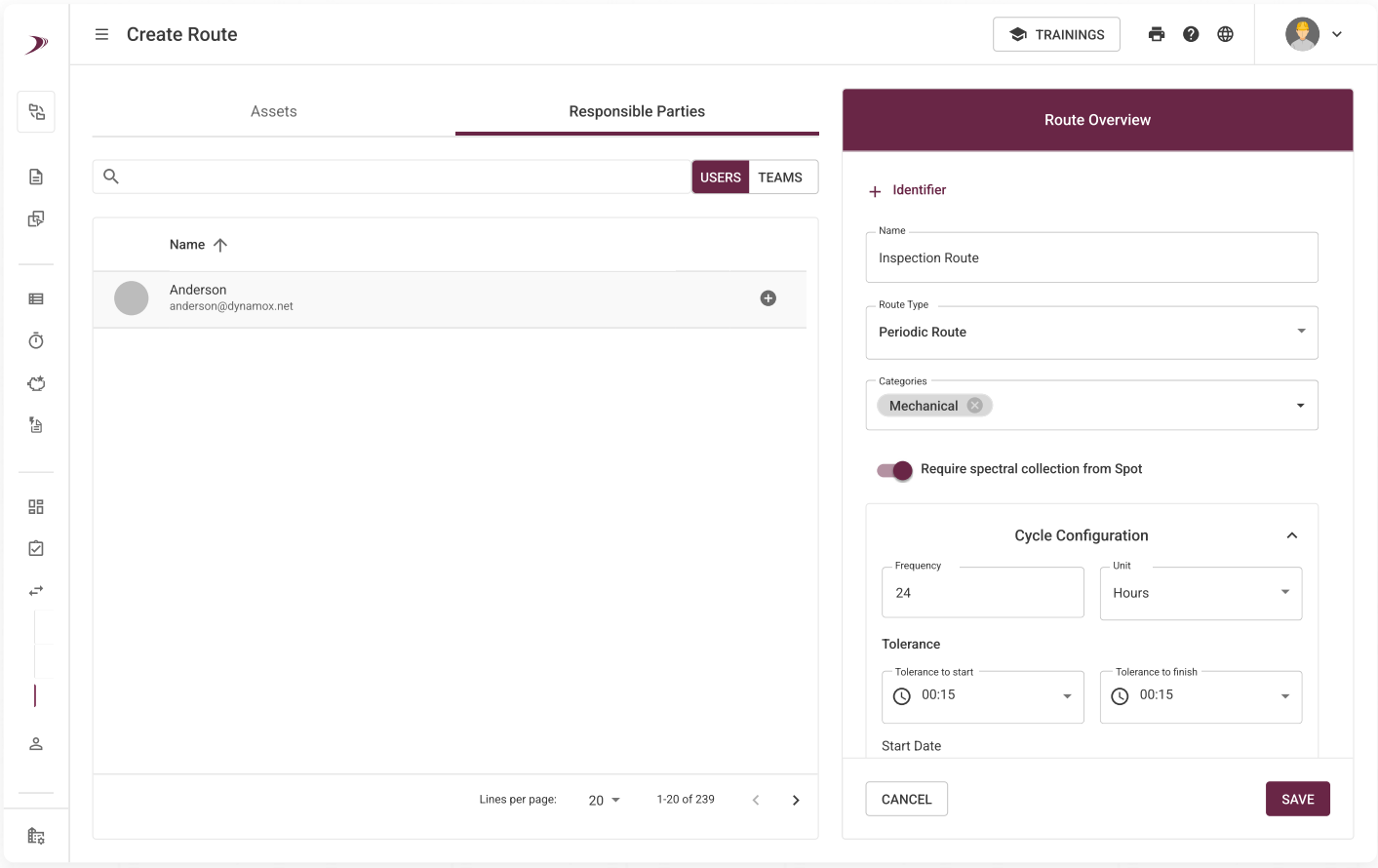
If the DynaSens module is activated for your account, the DynaPortable can be used in scheduled routes by following the steps below.

1. **Route creation:** With the asset tree already created, you can also set up the routes that will be carried out to collect data using the DynaPortable. This structures the workflow and identifies the machines that must be inspected, helping organize the routine of this activity. These routes are also created in the Dynamox Platform, within the DynaSens module.

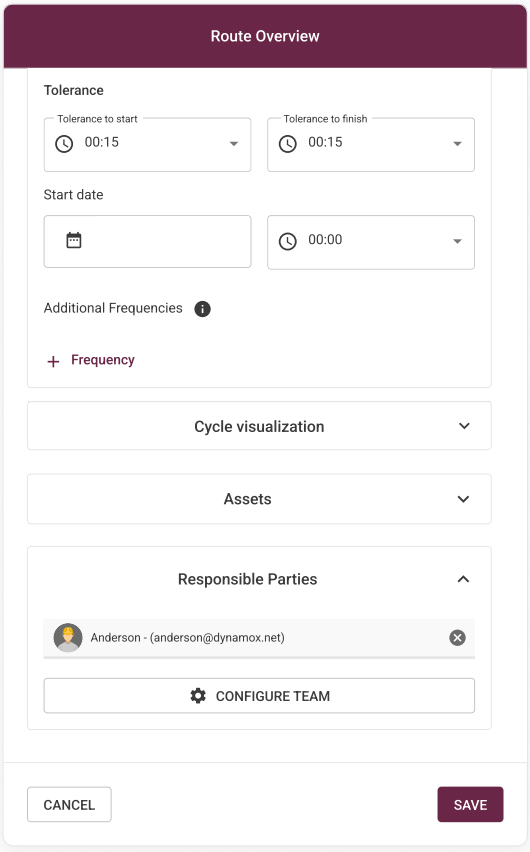
   First, you must create the route name and enter its details: the frequency with which it will be performed, as well as the tolerance and start date. In addition, the machines included in the route and that must be monitored should be added using the ⊕ icon. A machine that has already been selected for the route will display a ✓ icon beside it.



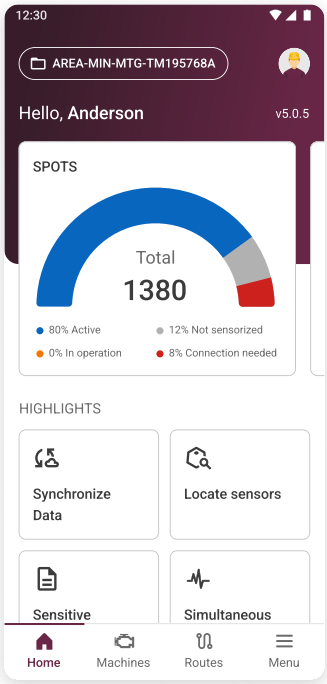
The final configuration required in the Route Overview is adding the users. That is, the people who will carry out the route. To be added to a route, the user must hold one of the following roles within the platform: Electrical Inspector, Mechanical Inspector, or Lubrication Technician. Click the ⊕ icon to add users.

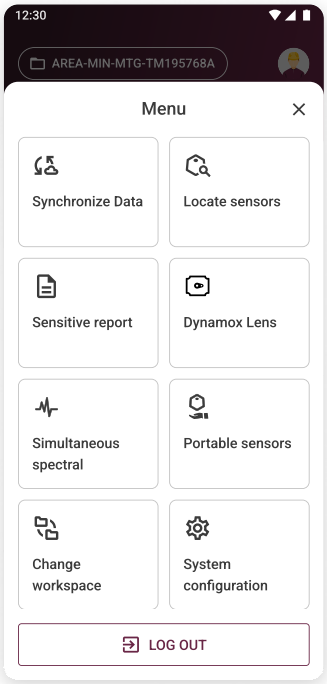


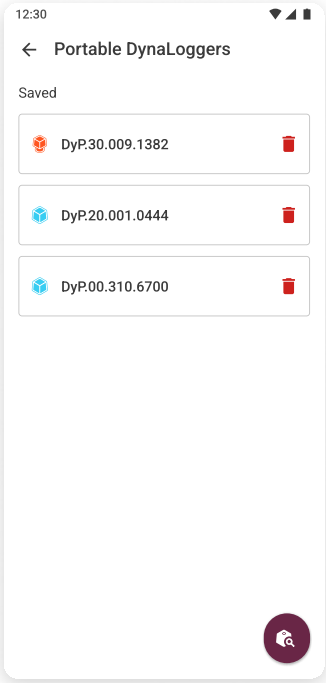
Once all the required information has been entered, simply save the configuration and the route will be created. From there, proceed to the app, where you can associate the sensor and perform data collection throughout the route.



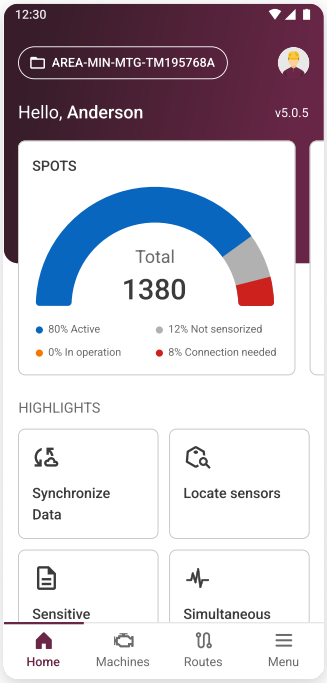
2. **Association:** To associate the DynaPortable with the app, ensure Bluetooth is enabled, then open the menu and access **Portable Sensors** to choose the sensor that will be used by identifying its serial number.



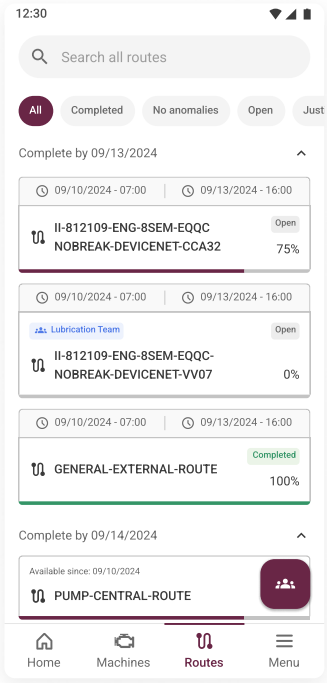


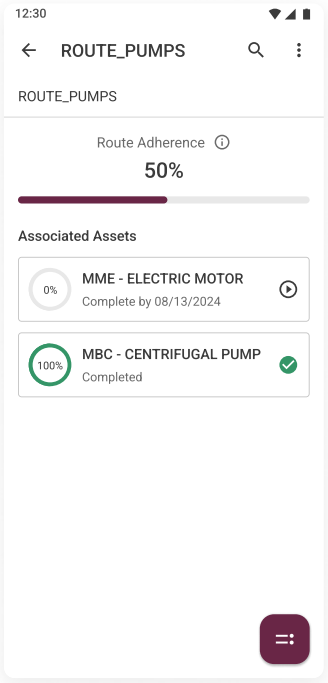


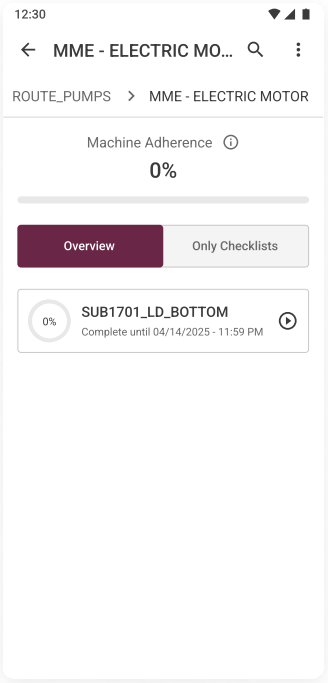
After that, return to the home screen and select **Routes** from the bottom navigation bar of the app.

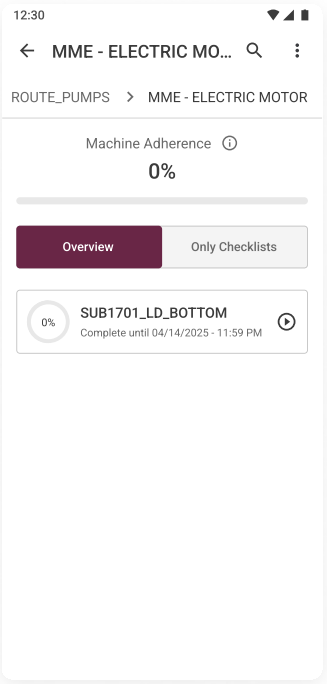


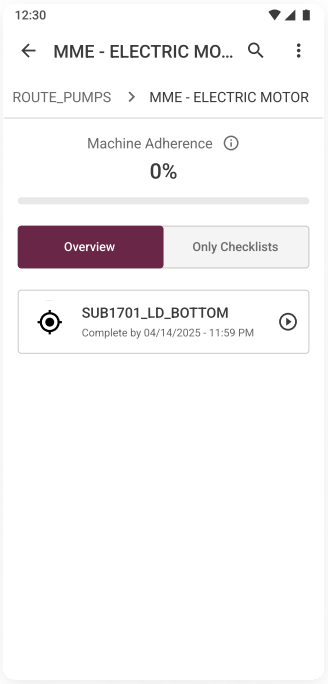
Next, you must identify in the app the route currently being performed, the machine, the subset, the component, and finally the exact Spot where the DynaPortable sensor will be positioned for data collection.



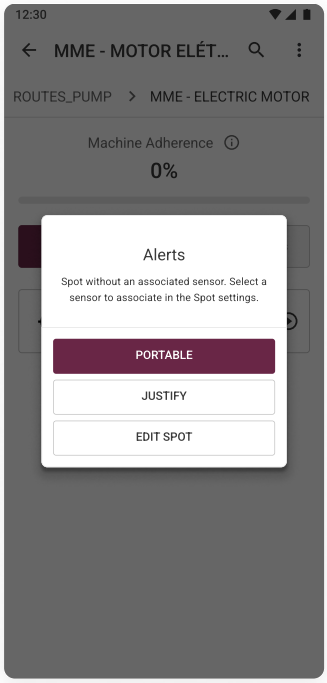


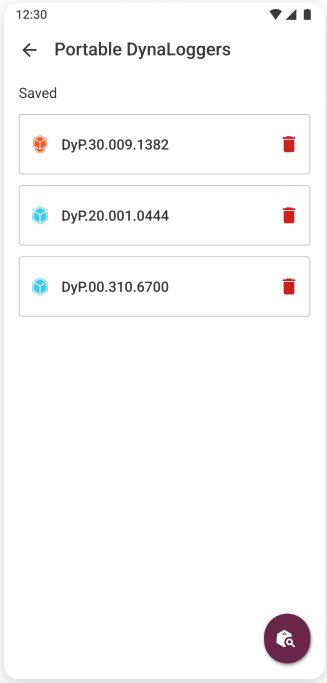




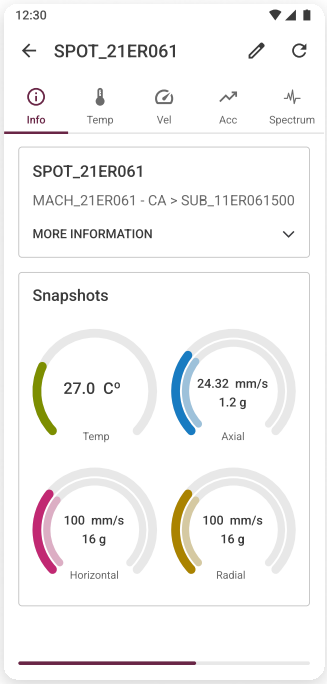


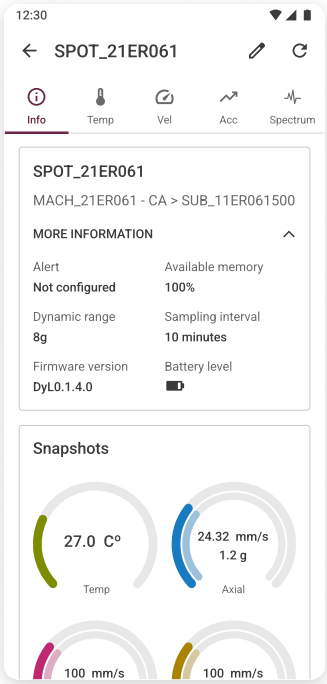
After selecting the Spot, a window will appear where you must choose the **Portable** option to search for the DynaPortable sensor. Then, simply select the device and wait for it to load.



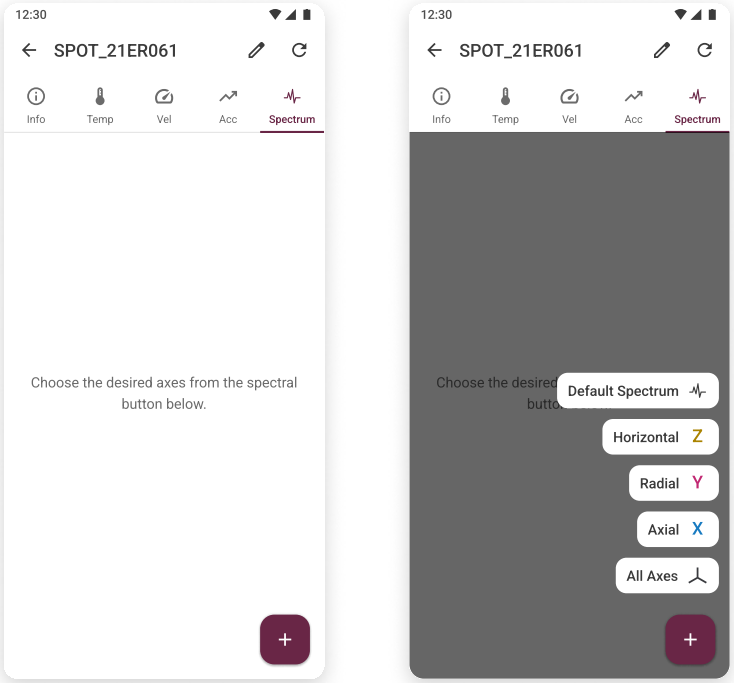


Finally, a screen displaying the Snapshots will appear, containing the data collected by the sensor at the moment of acquisition. To complete this route, the next step is to proceed to the **Spectral** tab.



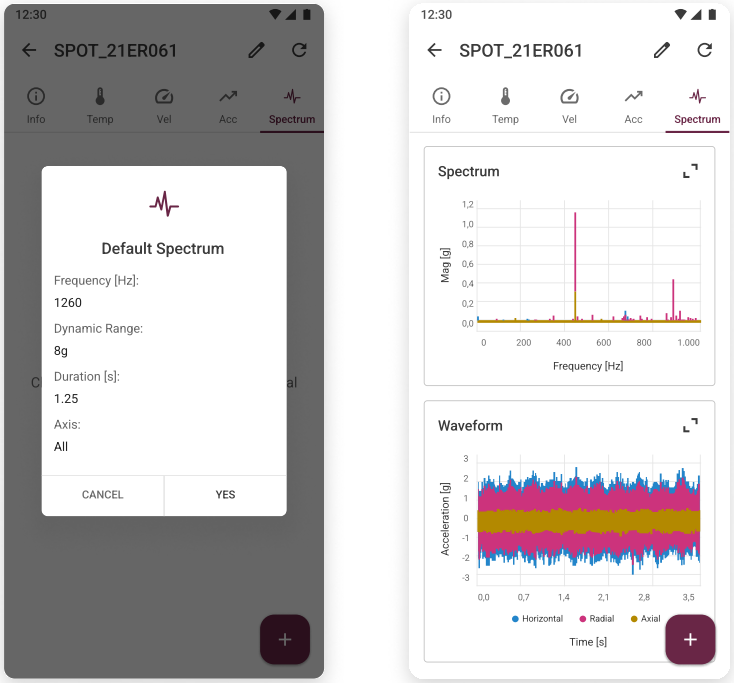


3. **Spectral collection during the route:** To complete the sensor collection during the route, it is also necessary to perform spectral collection. After viewing the Snapshots, switch to the **Spectral** tab. Next, tap the floating + button and select the type of spectral analysis. For the Standard Spectral analysis, the maximum frequency, duration, and axis values will follow those configured during Spot creation.



Then, confirm the action and wait for the upload without moving away from the sensor. Once the collection is complete, a preview of the generated charts will be displayed.

To transfer all collected data to the Dynamox Platform and view it, simply return to the home screen and tap **Sync data**, located in the Highlights section.



6 Additional resources

To keep your devices updated with the latest features, Dynamox provides automatic updates for DynaPortable via Dynamox App.

INMETRO Certification
(explosive atmospheres zone 0 and zone 20):
Model: HF+s PO
Certificate number: NCC 23.0025 X
Marking: Ex ma IIB T6 Ga / Ex ta IIIC T 85 °C Da - IP66/IP68/IP69
Specific conditions for safe use: care must be taken regarding the risk of electrostatic discharge. Clean only with a damp cloth.

This equipment has no right to protection against harmful interference and cannot cause interference in properly authorized systems.

This product is not suitable for use in residential environments, as it may cause electromagnetic interference that requires the user to take necessary measures to minimize such interference.

For more information, visit the Anatel website:
www.gov.br/anatel/pt-br

ANATEL FC CE

© 2025, Dynamox® is a registered trademark. All rights reserved.

The contents of this publication are presented for information purposes only. Every care has been taken to ensure the validity of the information contained in this publication, but no liability can be assumed for any loss or damage whether direct, indirect or arising from the use of the information contained herein. We reserve the right to modify or improve the specifications of our products at any time without prior notice.

Manual DynaPortable - Version 4 - February 2025 - en - Public Document

CERTIFIED ISO 9001 BUREAU VERITAS
CERTIFIED ISO 27001 BUREAU VERITAS
CERTIFIED ISO 27017 BUREAU VERITAS
CERTIFIED ISO 27018 BUREAU VERITAS
CERTIFIED ISO 27701 BUREAU VERITAS

Get in touch:
www.dynamox.net/contact-us