



DynaPredict Solution Quick Start Guide

Dynallogger  Bluetooth Low Energy (BLE)

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Frequency range: 2.400,0 MHz to 2.483,5 MHz

Max RF output power: <20 dBm

Hereby, Dynamox Solucoes Criativas Ltda. declares that the radio equipment type DynaPredict is in compliance with Directive 2014/53/EU.

FCC ID 2AT3M010202

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Important: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

EU DECLARATION OF CONFORMITY

Radio Equipment

Product: Data Logger
Type: DynaPredict
Batch/serial number: TcA

Manufacturer

Name: Dynamox
Rod. SC-401, KM 01
Adress: Parque Tecnológico
Alfa, Ed. Celta
Florianópolis - SC
Country: Brasil

This declaration of conformity is issued under the sole responsibility of the manufacturer:

Object of the declaration: *Bluetooth data logger designed to monitor machine health by collecting temperature and vibration.*



The object of the declaration described above is in conformity with the following relevant Union harmonisation legislation(s):

Radio Equipment Directive (RED) 2014/53/EU

Conformity to the essential requirements of the legislation(s) have been demonstrated by using the following standards:

Health and Safety (Art. 3(1)(a)): EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

EMC (Art. 3(1)(b)): EN 301 489-1 V2.2.1
EN 301 489-17 V3.2.0
EN 62479:2010

Spectrum (Art. 3(2)): EN 300 328 V2.1.1 (2016-11)

Signed for and on behalf of *Dynamox Soluções Criativas Ltda.*

Place and date of issue: *Florianópolis, Basil, 01 november 2019*

Signature:

Name, function:

Alexandre Ferreira,
CTO

1. Introduction

The DynaPredict solution is composed of:

- **Dynalogger** , a data logger designed to monitor machine health by collecting temperature and vibration.
- **DynaPredcit App**, an application developed for Android® and iOS, whose function is to interact with Dynaloggers via Bluetooth.
- **Web Platform**, online platform with data history and diagnostic tools for data analysis.

In addition, a **Gateway** could be added to the solution in order to automate data collection and send measurements directly to the Web Platform.

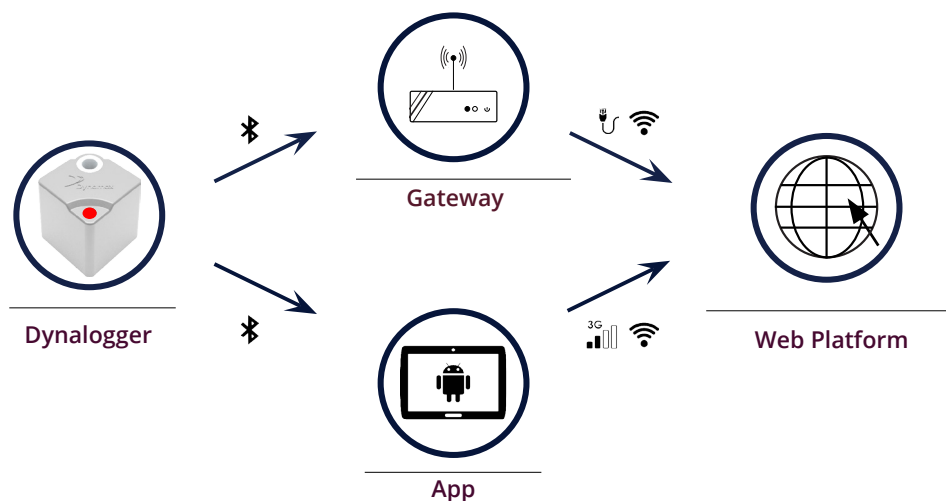


Figura 1 - Simplified Solution Operation

2. Operation

The flowchart in Figure 2 provides a summary of how the solution works.

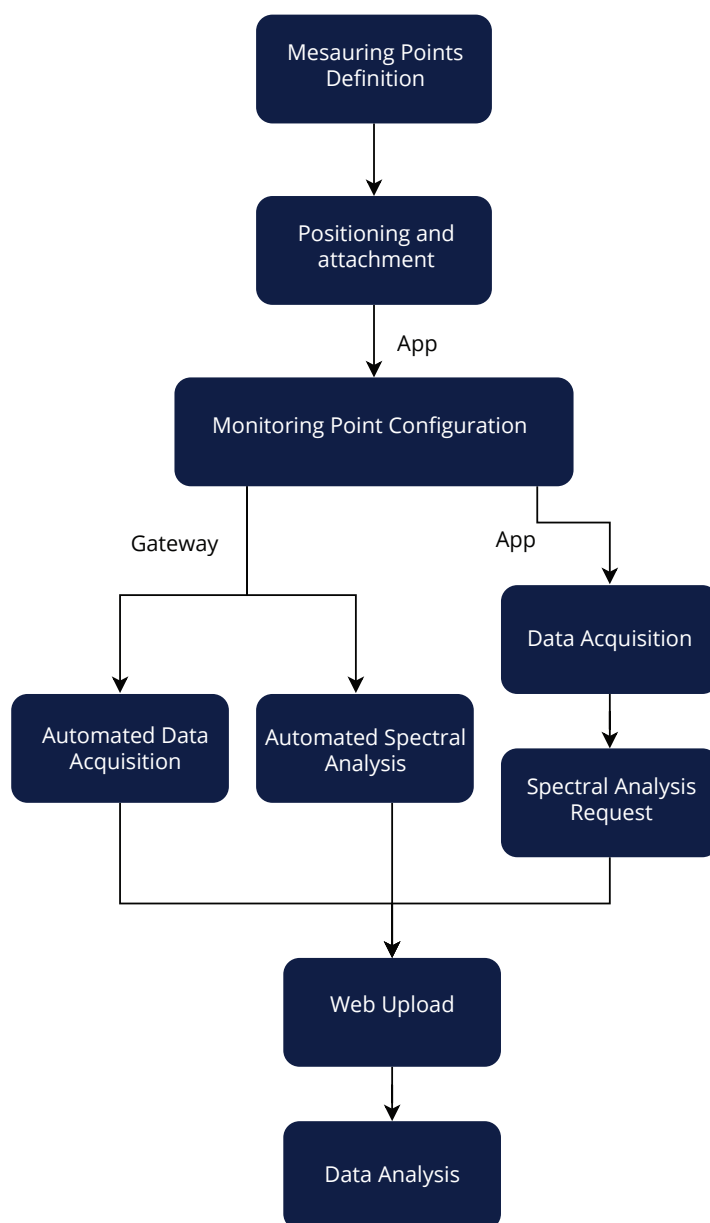


Figure 2 - Solution Operation

3. Position and attachment

The Dynaloggers must be positioned on the machine or equipment to be monitored.

It is important to position the device on exposed parts of the machine and it is recommended to avoid installation in regions of the housing that have localized resonance. In addition, Dynaloggers must be positioned on a non-rotating part of the machine.

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

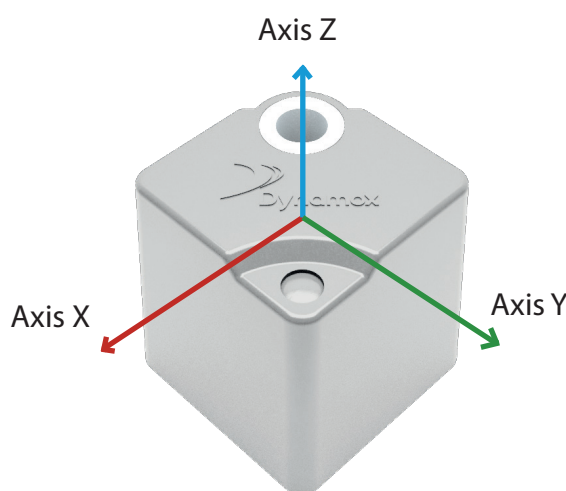


Figure 3 - Dynalogge Axes

Figure 3 above shows the orientation of the Dynalogger axes. This can also be seen on the label glued to each device.

In terms of attachment, the device can be:

- Epoxy glued: ideal for machines whose housing cannot be drilled;
- Screwed: Dynaloggers have a hole precisely for this type of attachment as shown in Figure 4. Each device goes with a screw and a spring washer.

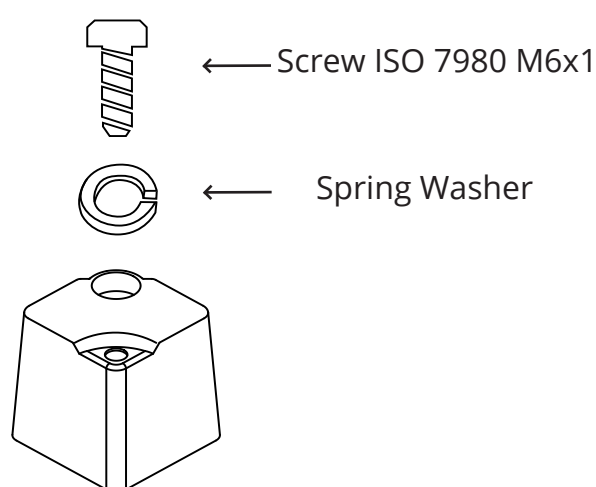


Figure 4 - Screwed Dynallogger

Note that different locations generate different measurements. So in order to obtain a reliable data history, it is recommended to keep Dynaloggers always installed in the same location.

4. App

In order to configure the devices, get instant readings of vibration and temperature, collect data and request spectral analysis, users must download DynaPredict App.

This can be easily done by searching for “dynapredict” in the Google Play store and installing the app.

On the initial screen, shown in Figure 5, login credentials will be requested. If you do not have credentials yet, please contact Dynamox.

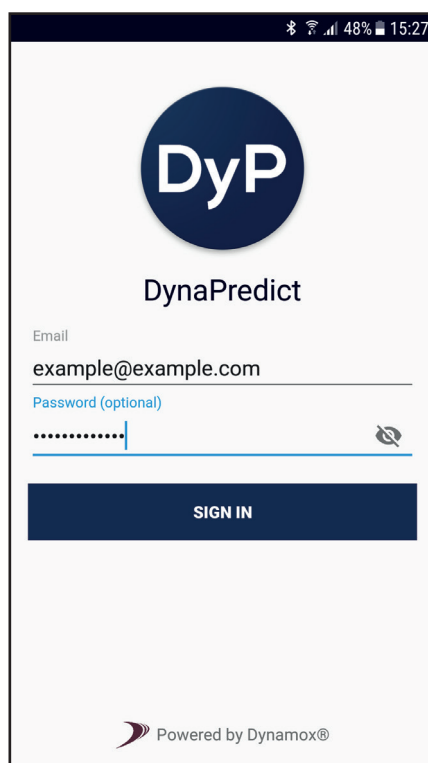


Figure 5 - App Login

To learn more about the App and its features, please read the "DynaPredict App" manual.

5. Web Platform

In order to access data history, fault diagnosis tools and many other features, users can access DynaPredict Web Platform (<https://dyp.dynamox.solutions>).

The same credentials will be requested (Figure 6).

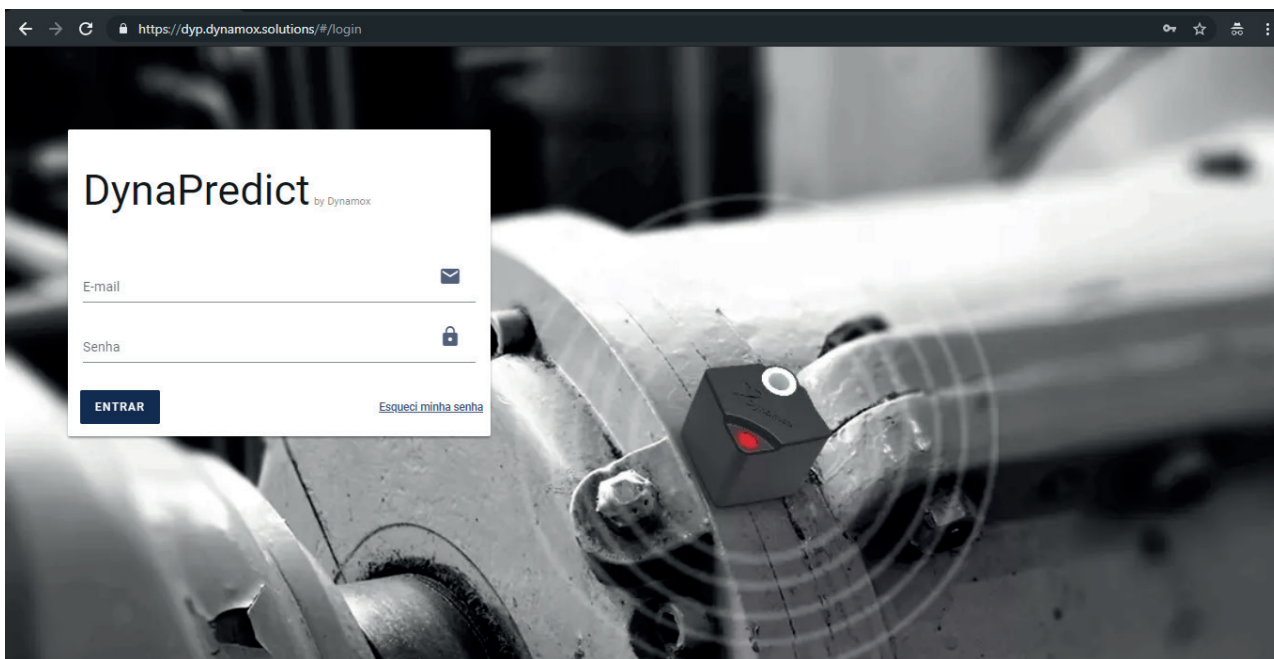


Figure 6 - Web Platform Login

To learn more about the Web Platform and its features, please read the "DynaPredict Web Platform" manual.

6. Gateway

It is an alternative to the App for collecting data stored in Dynaloggers. Gateways are able to automatically collect data from Dynaloggers within their Bluetooth range and send it directly to the Web Platform, in addition to allowing spectral analysis scheduling.

To learn more about how it works, please read the “Gateway” manual.



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