**Manuals+** — User Manuals Simplified.


# WEGscan 100 Condition Monitoring Sensors Installation Guide



**Quick Installation Guide**
**WEGscan 100**

Contents



## SAFETY INSTRUCTIONS

This simplified guide contains the necessary information for the correct installation and use of the WEGscan 100(smart monitoring device for asset characteristics). The full manual and more detailed information, consult the manualon QR Code in APPENDIX.
In this guide, the term “Smart Sensor” refers to the WEGscan 100 device.

**NOTE!**
Follow the installation instructions described in Chapter 3 INSTALLATION. Read the whole guide before installing or operating the WEGscan 100.

**DANGER!**
Only qualified people familiar with the WEGscan 100 should plan or execute the installation, operation and maintenance of this device. Such personnel must follow the safety instructions described in this guide and/ or defined by local regulations.
For safety reasons, keep a safe distance away from the sensor and asset during the operation (at least 20 cm), allowing only authorized workers to come close. Failure to comply with the safety instructions may lead to death and/or damages to the device.

The user is responsible for the correct classification of the installation area and the characteristics of the environment.
Improper application jeopardizes the product and installation safety and can result in serious personal and material damage.

**ATTENTION!**

Special conditions for safe use:
The “X” next to the number of some certificates, informed in the sensor marking, indicates that it requires special conditions for installation, use and/or maintenance of the device, which are described in the certificate.
Failure to comply with these requirements jeopardizes the safety of the product and installation.
For your reference, the item Certifications and Regulations presents the list of certificates.

### 1.1 CONTENT AND STORAGE

**NOTE!**

Standard items provided for installation.
When factory installed on the asset, other fasteners can be used.


All damage complaints must be promptly submitted to the sender before installation.

**NOTE!**

It is recommended to store the WEGscan 100 at a maximum temperature of 30 °C (86 °F) and not exposed to direct sunlight.

### 1.2 DISPOSAL AND RECYCLING

Having the environment in mind, WEG develops and supplies products that contribute to reducing the environmental impacts along their life cycle. The user’s participation in the waste sorting and recycling of the battery and electrical and electronic equipment is also important to minimize their potential impact on the environment and human health.
The proper disposal of the sensor, observing the applicable laws, is very important for your safety and also of the environment, in addition to helping save resources.

**ATTENTION!**

The battery of the WEGscan 100 is replaceable. At the end of its useful life, the battery is collected as a used electro-electronic device. For information on the return or collection for the proper disposal and recycling, contact WEG or send the sensor and/or battery to one of our authorized service centers.
Sensors and batteries must be disposed of separately at an appropriate collection point and not placed in the conventional waste stream. They cannot be disposed of in incinerators and city landfills either.
Sensors and batteries must be disposed of in compliance with the local regulations. Batteries must be recycled by qualified professionals only.

**NOTE!**

This symbol indicates that:

- The product cannot be disposed of in a municipal waste collection point.
- It should undergo a waste sorting process of electrical and electronic equipment and batteries.
- The whole device and its package are made of materials that can be recycled and should be sent to specialized waste sorting companies at the end of their useful life.
- The horizontal bar below the crossed-out wheeled bin indicates the device was placed on the market after August 13, 2005.

## CERTIFICATIONS AND REGULATIONS

2.1 ANATEL APPROVAL

ANATEL
Agência Nacional de Telecomunicações
13320-22-07908

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

**2.2 FCC CERTIFICATION**

**FCC ID: 2BDMZ -WEGSCAN100**

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.

Changes or modifications not expressly approved by WEG Drivers & Controls – Automação LTDA 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 A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a comercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**2.3 ISED CERTIFICATION**

**IC: 31830-WEGSCAN100**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

**2.4 SIMPLIFIED EU DECLARATION OF CONFORMITY**

Hereby, WEG Drivers & Controls – Automação LTDA declares that the radio equipment type WEGscan 100 is in complice with Directive 2014/53/EU.

The full texto of the EU declaration of conformity is available at the following internet address: **https://www.weg.net/catalog/weg/BR/pt/Digital-Solutions/Dispositivos-para-Conectividade-e-Monitoramento/Sensoresde-Monitoramento-de-Condi%C3%A7%C3%A3o/WEGscan/WEGscan-100/SENSOR-IOT-WEGSCAN-100-1MFM/p/16437262**.

## INSTALLATION

**DANGER!**

Risk of electric shock. Do not touch electrically energized parts or devices.

Before beginning the device installation, disconnect the asset power supply.

The temperature of the asset surface may be high and cause burns and injuries. Before beginning the sensor installation, wait for the necessary time for the asset to cool down. Use proper instruments to measure the asset temperature.

**DANGER!**

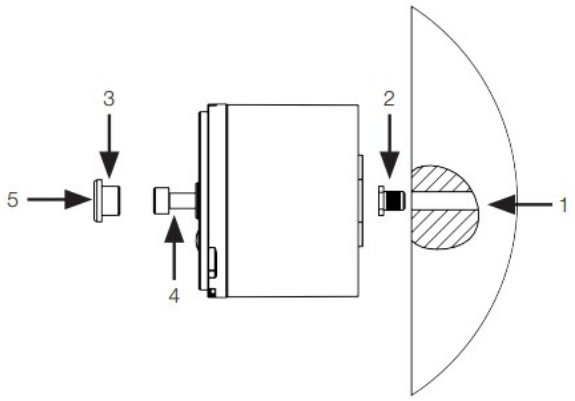
The sensor is supplied in a plastic housing that may store electrostatic charge.

The sensor must be maintained so that electrostatic charges will be avoided. Therefore, the sensors must be cleaned carefully (with a damp cloth, for example) in order to avoid the generation of electrostatic discharges.

**3.1 SENSOR INSTALLATION**

1. Drill the hole in the base with a Ø5.9 mm drill

2. Insert the knurled bushing into the hole
3. Remove the sensor cap
4. Screw the M4 screw into the bushing
5. Put the cap back in place




**3.2 INSTALLING THE CONFIGURATION AND OPERATION APPLICATION**

The WEGscan application is available in the iOS™ and Android™ platforms.
It can be downloaded at the App Store and Google Play Store by searching for WEGscan or through QR Code:

Download on the App Store

https://itunes.apple.com/ae/app/weg-motor-scan/id1275021564?mt=8

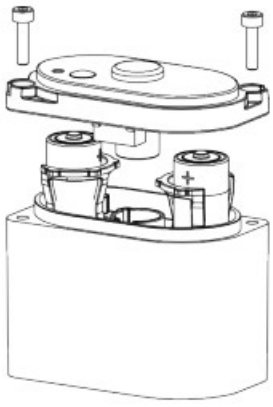
GET IT ON Google Play

https://play.google.com/store/apps/details?id=net.weg.iot.app

The steps to activate, configure and nstall the sensor can be viewed on the sensor application and/or in the full manual.

**3.3 CHANGING THE BATTERIES**

The sensor is powered by batteries that must be replaced at the end of their charge, as shown below.



1. Remove the side screws.
2. Remove the top cover.
3. Remove the used batteries and dispose of them in an appropriate place.
4. Insert the new batteries with the polarity in the correct position (see specification in the technical specifications table at the end of this document).
5. Make sure the individual battery pushers are correctly positioned inside the housing.
6. Install the top cover.
7. Tighten the screws with a torque of 0.6 Nm.

**3.4 INTERFACE**


he sensor has a pushbutton (B) and an LED (L) that operate according to the table below:

| **Status** | **Pushbutton** | **LED** | **Result** |
|---|---|---|---|
| Sensor off and not configured | Press the button for 10 seconds | The LED flashes quickly 4 times | Sensor on and not configured |
| Sensor on and not configured | | The LED flashes once per second | If not configured within 24 hours, the sensor will automatically turn off to save battery |
| | Single click (fast). The sensor speeds up its ability to connect to the smartphone or gateway for 10 seconds | The LED flashes quickly for 10 seconds indicating the quick connection option | |
| Sensor on and configured | | The LED flashes once every 10 seconds | The sensor performs measurements as configured by the user |
| | Single click (fast). The sensor speeds up its ability to connect to the smartphone or gateway for 10 seconds | The LED flashes quickly for 10 seconds indicating the quick connection option | If there is no connection with the sensor for 10 seconds, the sensor performs a global measurement routine according to the configuration made by the user. |
| | | The LED flashes three times every second | The sensor is connected to the smartphone or gateway |
| Sensor connected configured or not configured | Press the button for 10 seconds | The LED flashes continuously for 10 seconds and flashes quickly 4 times at the end of the process. After the procedure, the LED will remain off | The sensor was turned off. This way the sensor no longer performs its routines. User-defined settings are preserved in memory |

**3.5 PLATFORM**

The exploration of data, measurements and health of assets monitored by the WEGscan 100 is performed using the WEG Motion Fleet Management (MFM) digital solution, available at mfm.wnology.io.

**WARRANTY**

WEG Digital & Systems, provides warranty against defects in workmanship and materials for the WEGscan 100 for a period of 12 months, with the exception of batteries that have a 3-month warranty, from the date of the invoice issued by the factory or distributor/dealer. The full text of the warranty is available on **www.weg.net**.

## TECHNICAL DATA

| | |
|---|---|
| Housing material | Polycarbonate |
| Encapsulation | Epoxy |
| Mass | 277 g |
| Dimensions | 56 x 62 x 34 mm (Height x Width x Depth) |
| Protection rating | IP67 |
| Electronics temperature | -40 to 80 °C (-40 to 176 °F)<br>-40 a 80 °C |
| Air relative humidity | Up to 95% non-condensing |
| Compliance | ANATEL Brazil ANATEL Brasil |
| **Battery** | |
| Material | Primary cell of Lithium Thionyl Chloride (Li-SOCl2) |
| Rated capacity Capacidad | 1,65 Ah (2x) |
| Rated voltage | 3.6 V |
| Life expectancy | 3 years (Environment 25 °C – 24 acquisitions per day) 3 años (ambiente 25 °C – 24 adquisiciones al día)<br>3 anos (Ambiente 25 °C – 24 aquisições ao dia) |
| Lithium metal content | Approximately 1.2 g |
| Suggested batteries | Saft – LS17330 |
| | Xeno – XLP-055F |

| | |
|---|---|
| **RF Module** | |
| Frequency range | 2400 – 2483 MHz |
| Range (maximum) | Smartphone |
| | ~25 m (Depending on the presence of barriers in the environment) |
| | Gateway CASSIA X2000 |
| | ~100 m (Depending on the presence of barriers in the environment) |
| Bluetooth® 2.4 GHz | BLE version 5.1 |
| **Memory** | |
| **Time between Global Measurements (minutes)** | **Data Storage in the Offline Sensor (days)** |
| 5 | 5 |
| 10 | 10 |
| 15 | 15 |
| 30 | 30 |
| 60 | |
| **Measurements** | |
| Advanced measurements | According to the subscription to the MFM platform Conforme suscripción en la plataforma MFM Conforme assinatura na plataforma MFM |
| Surface temperature | -40 to 135 °C in ventilated applications or -40 to 100 °C in non- ventilated applications. |
| Vibration | Max. spectrum frequency: 13.3 kHz Max number of spectrum lines: 12.288 Frec. Máxima del espectro: 13,3 kHz |

**APPENDIX A**

Product website

**https://www.weg.net/catalog/weg/BR/pt/Digital-Solutions/Dispositivos-para-Conectividade-e-Monitoramento/Sensores-de-Monitoramento-de-Condi%C3%A7%C3%A3o/WEGscan/WEGscan-100/SENSOR-IOT-WEGSCAN-100-1-MFM/p/16437262″ SENSOR IOT WEGSCAN 100-1-MFM | WEGscan 100 | WEGscan | Sensores de Monitoramento de Condição | Dispositivos para Conectividade e Monitoramento | Digital Solutions | WEG – Produtos**

## Documents / Resources

| | |
|---|---|
|  | weg WEGscan 100 Condition Monitoring Sensors [pdf] Installation Guide 2BDMZ-WEGSCAN100, 2BDMZWEGSCAN100, wegscan100, WEGscan 100 Condition Monitoring Sensors, WEGscan 100, Condition Monitoring Sensors, Monitoring Sensors, Sensors |

## References

- User Manual

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