NightWatch

Portal manual English

LivAssured

Contents

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***PLEASE NOTE**: Using the Portal is optional. Your NightWatch as a standalone device will function even when there is no Portal connection.*

1 The NightWatch Portal manual

It is not necessary to connect NightWatch to the internet for NightWatch to function correctly. Although, whenever NightWatch is connected to the internet during use, the data captured by NightWatch along with the alarms will be sent to the Portal. This data can be viewed via the portal.nightwatchepilepsy.com website.

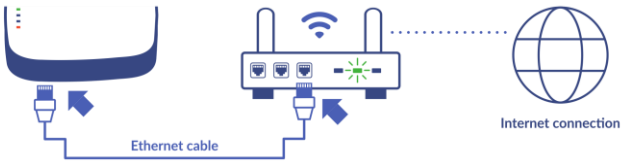
The Portal can provide insight into what happened while sleeping and helps to better understand why NightWatch did or did not give alarms. Furthermore, it can be used as input for a diary to track seizure frequency and to share this data together with your experiences with your neurologist. It is also helpful for troubleshooting.

The base station does not store any data internally. The base station will only send data to the Portal when it is recording and connected to the internet via a cabled internet connection.

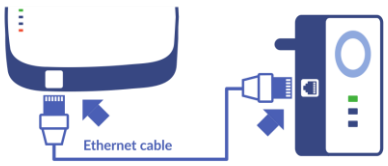
2 How to connect to the NightWatch Portal

1. A permanent wired connection from the NightWatch base station to an internet access point like a router needs to be established.

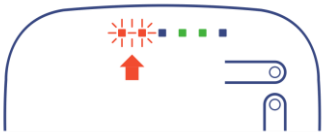
2. Find an internet access point (router) closest to the NightWatch base station and use an ethernet cable to connect both.



3. If the nearest access point is too far away for a cable connection, we recommend bridging the connection with a powerline adapter, WIFI repeater or mobile router.



4. Once NightWatch is connected to the internet, the second orange indicator LED on the base station will light up, confirming the internet connection. This second LED should emit the same amount of light as the first orange LED.



5. Once a recording has been made while NightWatch was connected to the internet, an account for the device will automatically be created. Following this step, you can access the Portal through the website.

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3 How to log in to the NightWatch Portal

As soon as NightWatch is successfully connected to the internet, the account for the device will automatically be created. No additional steps must be performed to create the account.

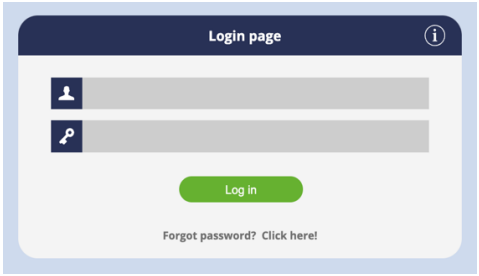
When visiting https://portal.nightwatchepilepsy.com you will need to fill out a username and password to login.

Username:
The username always consists of the last 4 digits of the MAC address of the base station (letters or numbers, without the colon). This unique address can be found on the label on the back of the base station.

Password:
When you log in for the first time, your password will be the same as your username (capital letters). After successfully logging in, you will be asked to create a new password.

Lost your password? If you added an email address to your account, you can reset your password via the login page. First enter your username and then click on the text 'Forgot Password? Click here!'. Now you need to fill in the email address that you added to your account. A small part of the related email address is already shown as a reminder. Please enter the full email address here.

Username:	Last 4 letters/numbers of the MAC address
Password:	Last 4 letters/numbers of the MAC address (Only when logging in the first time)



4 What's there to view?

4.1 Language

You can set your preferred language from the options in the top right corner of the screen.

4.2 'Reports page'

This page shows an overview of all the reports made in a specific month. Each line provides a summary of the report, including details such as the total number of seizures and technical alarms recorded. Notes can be added to a report by clicking on the grey pen under 'Note'. Clicking on a report of a certain date on the left will open the corresponding graphs.

All recordings made between 12 noon and 12 noon the following day are combined into one recording. If there is a break between two recordings, a flat line between these recordings will be shown.

Two symbols exist in the overview and in the graphs that represent the alarm types:

Technical Alarm

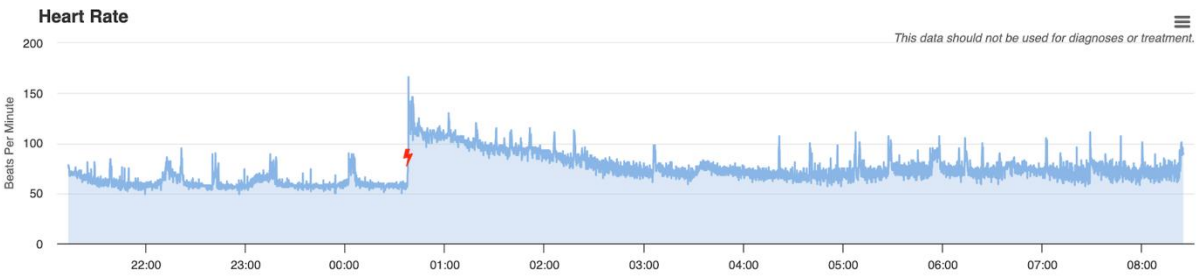
Epilepsy Alarm

When hovering over a graph or alarm with the cursor, the values at that point in time can be seen. It is also possible to zoom in on the graphs. Click and drag in the graph to zoom in.

When clicking the link shown above the graph, it will launch in a new browser window. In this window, you will remain logged in without being automatically logged out after a short period. Additionally, this window is designed to automatically refresh every 5 minutes, ensuring that any new data is updated in real time as you monitor the graphs live during recording.

Blue graph: Heart rate

The blue graph shows the PPG (photoplethysmography) signal translated to beats per minute (BPM), representing a calculated heart rate in BPM. It also shows icons for alarms and descriptions of the alarm conditions.



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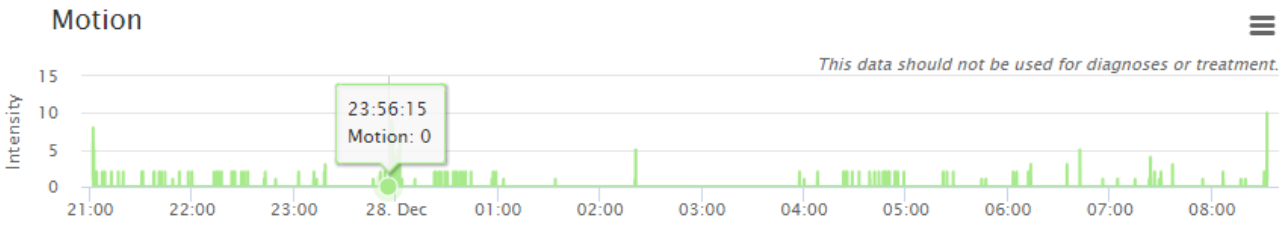
***CAUTION**:* The PPG sensor in NightWatch is not intended to perform as a heart rate monitor for cardiovascular purposes. The PPG data is solely used to identify epileptic seizures and fits this purpose. Do not use this data to conclude the wearer's cardiovascular health. If you suspect something is wrong, then deliberate with your healthcare provider.

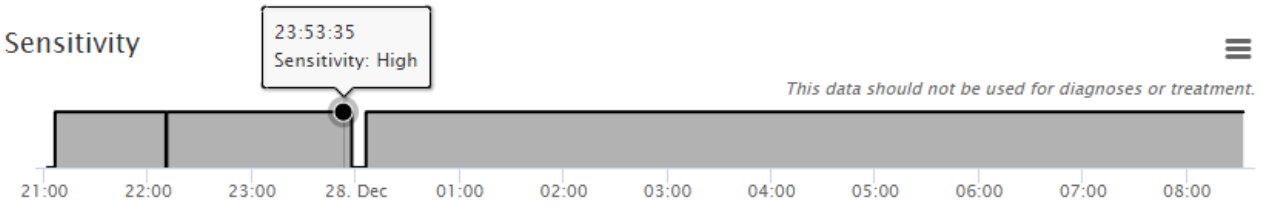
Green Graph: Motion Signal.

The green graph shows the intensity of motions detected. The intensity of the motion graph is measured by shaking movements and the speed of these movements, shown on a 0 to 15 scale. When the movements are subtle, the graph will reach a low value close to 0. This could mean someone is turning over in bed. When movements are intense, the graph will reach values closer to 15. This could mean shaking movements are detected.



Black and Grey Graph: Sensitivity state

The sensitivity graph shows if NightWatch is operating in a 'low sensitivity' mode or in a 'high sensitivity' mode.



The high and low sensitivity states are designed to reduce false alarms for when someone leaves the bed during the night or while waking up. The sensitivity settings of NightWatch cannot be changed.

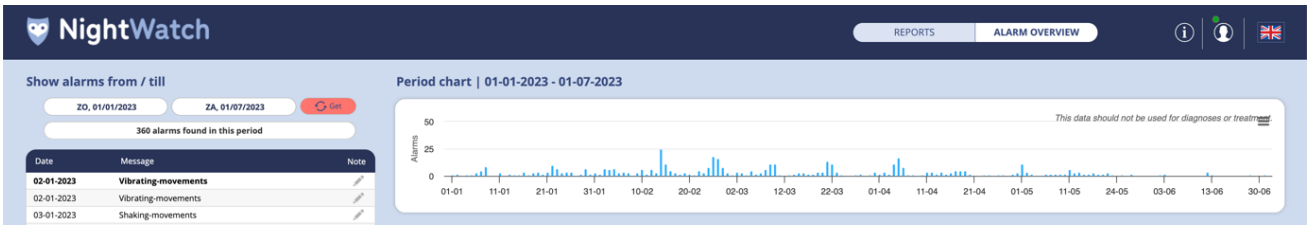
Sensitivity mode	State enabled	Seizure detection mode	Indicator LED on system
Low sensitivity	The NightWatch wearer is not in a horizontal position or has not been motionless for two consecutive minutes.	NightWatch will only alarm for epileptic seizures after detecting wild shaking movements or a low heart rate.	Green LED blinking
High sensitivity	The NightWatch wearer is in a horizontal position and has been motionless for two consecutive minutes.	All seizure detection algorithms are active, while NightWatch operates in 'high sensitivity' mode.	Green LED continuously on

Low sensitivity:
When the low-sensitivity mode is active, the system shows a green blinking LED. When NightWatch operates in low sensitivity, it will only alarm for epileptic seizures after detecting wild shaking movements or a low heart rate.
The sensitivity settings of NightWatch cannot be changed. If seizures are missed because of long periods of low sensitivity, please contact LivAssured.

High sensitivity:
The system will show a continuous green LED when the high-sensitivity mode is active. When NightWatch operates in high sensitivity, all seizure detection algorithms are active. The sensitivity of NightWatch will only decrease to 'low' when the wearer transitions to an upright position or when a seizure alarm is triggered. An upright position indicates that the arm module is positioned at an angle greater than 45 degrees, such as when the wearer has risen from bed or is raising their hands in the air.

4.3 'Alarm overview' page

On this page you can make an overview of all seizure alarms registered during a certain period that you can choose. The period is selected at the top left. This can be used to compare the number of seizure alarms between different periods.



The left column shows all alarms registered within the selected period. These alarms can be clicked, after which the graph for that day will open.

4.4 'Settings' page

On the settings page you can change the settings for your NightWatch Portal account:

- Change the time zone in which NightWatch Portal displays your data.
- Change your password.
- Change your e-mail.
- Delete all your historic recordings.

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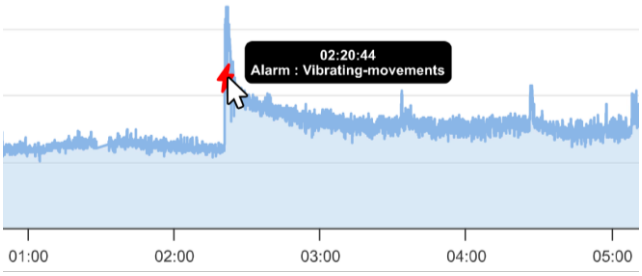
5 Alarms of NightWatch in the Portal

The epilepsy alarms and technical alarms raised by your NightWatch are visible on the blue heart rate graphs. Epilepsy alarms are depicted with the red epilepsy alarm symbol (lightning bolt) and technical alarms are depicted with the orange technical alarm symbol (bell). When hovering over the alarm symbol, a description is given of the alarm reason.



NightWatch could have raised an epilepsy alarm based on the following reasons:

Epilepsy alarm	Description
Rhythmic movements	Rhythmic movements have been detected that possibly correspond with epileptic activity
Vibrating movements	Vibrating/muscle tension movements have been detected that possibly correspond with epileptic activity
Shaking movements	Wild shaking movements have been detected that possibly correspond with epileptic activity
Heart rate increase	The average tracked heart rate has risen over time, possibly corresponding with epileptic activity
High heart rate	The tracked heart rate has significantly increased in comparison to the moments before, possibly corresponding with epileptic activity.
Low heart rate	The tracked heart rate is low, possibly corresponding with epileptic activity

*The algorithms or heart rate thresholds that trigger an alarm cannot be modified.

***PLEASE NOTE**: The Portal displays all alarms which include epilepsy alarms which were false alarms.*

***CAUTION**: NEVER diagnose or treat yourself based on the readings of NightWatch. ALWAYS consult with your physician.*

The Portal also shows when a technical alarm occurred:

Technical alarm	Description
Unable to detect heart rate	The arm module was unable to reliably detect a heart rate for a few minutes. Check if the arm module is placed correctly and that the wearer is not lying on top of it.
Arm module Connection lost	The base station lost connection with the arm module. Most probably the arm module is out of range or switched OFF.
Arm module battery low	The battery of the arm module is almost empty. Recharge the arm module.
Arm module switched off	The arm module was switched OFF while resting on the charger. Please switch ON the arm module.
Accelerometer error	The movement sensor of the arm module is defect.

6 Does NightWatch Portal respect my privacy?

If your NightWatch remains connected to the internet during use, it automatically sends recordings to the NightWatch Portal. This data contains information about heart rate, movements and alarms. The data contains no information about the identity of the wearer and is stored encrypted and anonymously. NightWatch Portal does not ask to enter personal data like your name or address, only an email address is needed to be able to retrieve a lost password. You can always ask our customer support to remove your data, or you can remove your own historic recordings at the settings page of the Portal.

7 Technical information

NightWatch collects 5 minutes of recorded data and tries to send this in one data package (.xml message) to our Portal server. Data about alarms will be send to the portal in an extra message as soon as they occur. When NightWatch is placed back on the charger, it will send one status message to the Portal server.

NightWatch exclusively transmits data and does not require inbound data reception, yet it relies on retrieving accurate time (UTC) from a designated time server. Below, you will find details regarding the IP server, port, and time server utilized by NightWatch for data transmission.

Server: ipsrv.nightwatch.nl
Port: 443
Timeserver: ipsrv.nightwatch.nl

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