



Getting Started Guide

Amazon Monitron



Amazon Monitron: Getting Started Guide

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Getting started with Amazon Monitron

Welcome to the *Amazon Monitron Getting Started Guide*.

Amazon Monitron is an end-to-end system that automatically detects abnormal behavior in industrial machinery, enabling you to take proactive action on potential failures and reduce unplanned downtime. It includes sensor devices to capture vibration and temperature data, a gateway device to securely transfer data to the AWS Cloud, the Amazon Monitron service that analyzes the data for abnormal machine patterns using machine learning, and a companion mobile app to set up the devices and track potential failures in your machinery. Reliability managers can quickly deploy Amazon Monitron to easily track machine health of industrial equipment such as bearings, motors, gearboxes, and pumps without any development work or specialized training.

This guide explains the basic steps to get started with Amazon Monitron:

1. **Setting up a project**—This provides the framework for the rest of your team to monitor your equipment. It uses the Amazon Monitron console and will probably only need to be done occasionally, or even just once, depending on the number of projects you choose to have. All other tasks are done through the Amazon Monitron mobile app.
2. **Adding assets and installing devices**—All of these tasks are done using the mobile app. It's a major activity at the beginning of the project. You can add a few assets and install just a few devices at first, and then come back to it with additional assets later on.
3. **Understanding alerts**—This is the daily use of Amazon Monitron and is done using the mobile app. It consists of daily monitoring, as well as the tasks that have to be dealt with when Amazon Monitron discovers a possible machine abnormality.

For more detailed steps, refer to the [Amazon Monitron User Guide](#). To learn more about Amazon Monitron, you can visit the [Amazon Monitron product detail page](#).

Topics

- [Setting up a project](#)
- [Adding assets and installing devices](#)
- [Understanding warnings and alerts](#)

Setting up a project

The first step with Amazon Monitron is to set up your project in the Amazon Monitron console. A project is where your team sets up gateways, assets, and sensors in the Amazon Monitron mobile app.

Topics

- [Step 1: Create an account](#)
- [Step 2: Create a project](#)
- [Step 3: Create admin users](#)
- [Step 4: \(optional\) Add Amazon Monitron users to your project](#)
- [Step 5: Invite users to your project](#)

Step 1: Create an account

Sign up for an AWS account

If you do not have an AWS account, complete the following steps to create one.

To sign up for an AWS account

1. Open <https://portal.aws.amazon.com/billing/signup>.
2. Follow the online instructions.

Part of the sign-up procedure involves receiving a phone call and entering a verification code on the phone keypad.

When you sign up for an AWS account, an *AWS account root user* is created. The root user has access to all AWS services and resources in the account. As a security best practice, assign administrative access to a user, and use only the root user to perform [tasks that require root user access](#).

AWS sends you a confirmation email after the sign-up process is complete. At any time, you can view your current account activity and manage your account by going to <https://aws.amazon.com/> and choosing **My Account**.

Create a user with administrative access

After you sign up for an AWS account, secure your AWS account root user, enable AWS IAM Identity Center, and create an administrative user so that you don't use the root user for everyday tasks.

Secure your AWS account root user

1. Sign in to the [AWS Management Console](#) as the account owner by choosing **Root user** and entering your AWS account email address. On the next page, enter your password.

For help signing in by using root user, see [Signing in as the root user](#) in the *AWS Sign-In User Guide*.

2. Turn on multi-factor authentication (MFA) for your root user.

For instructions, see [Enable a virtual MFA device for your AWS account root user \(console\)](#) in the *IAM User Guide*.

Create a user with administrative access

1. Enable IAM Identity Center.

For instructions, see [Enabling AWS IAM Identity Center](#) in the *AWS IAM Identity Center User Guide*.

2. In IAM Identity Center, grant administrative access to a user.

For a tutorial about using the IAM Identity Center directory as your identity source, see [Configure user access with the default IAM Identity Center directory](#) in the *AWS IAM Identity Center User Guide*.

Sign in as the user with administrative access

- To sign in with your IAM Identity Center user, use the sign-in URL that was sent to your email address when you created the IAM Identity Center user.

For help signing in using an IAM Identity Center user, see [Signing in to the AWS access portal](#) in the *AWS Sign-In User Guide*.

Assign access to additional users

1. In IAM Identity Center, create a permission set that follows the best practice of applying least-privilege permissions.

For instructions, see [Create a permission set](#) in the *AWS IAM Identity Center User Guide*.

2. Assign users to a group, and then assign single sign-on access to the group.

For instructions, see [Add groups](#) in the *AWS IAM Identity Center User Guide*.

Important

Amazon Monitron supports all IAM Identity Center regions except opt-in and government regions. For a list of supported regions, see [Understanding SSO requirements](#).

Step 2: Create a project

Now that you've signed in to the AWS Management Console, you can use the Amazon Monitron console to create your project.

To create a project

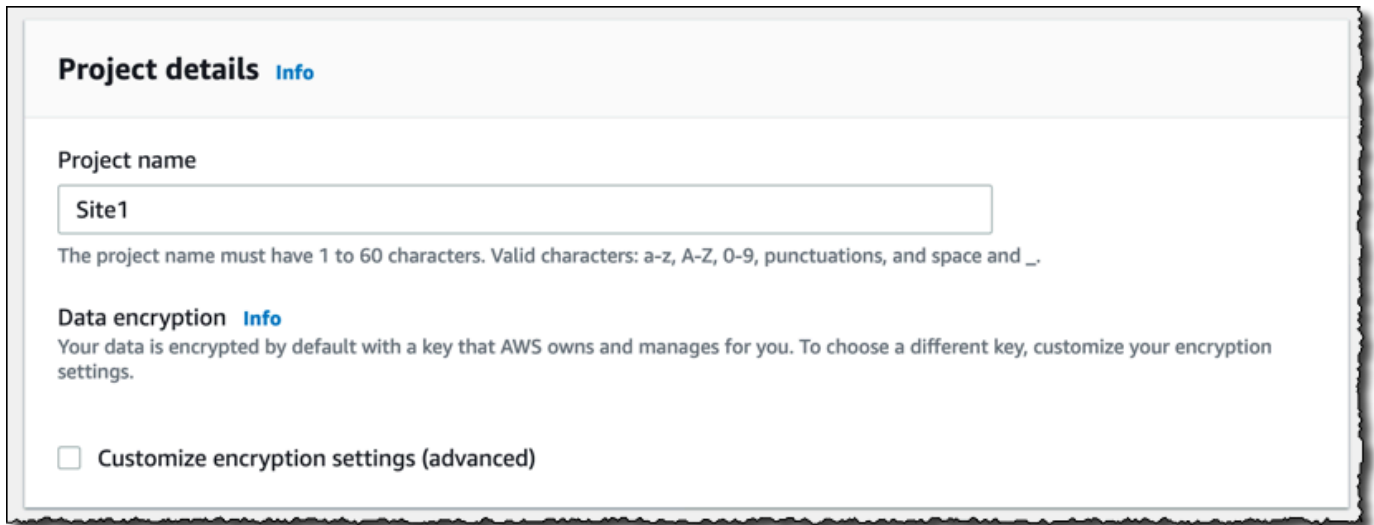
1. Choose the AWS Region that you want to use in the Region selector. Amazon Monitron is available only in the US East (N. Virginia), Europe (Ireland), and Asia Pacific (Sydney) Regions.
2. Open the Amazon Monitron console at <https://console.aws.amazon.com/monitron>.
3. Choose **Create project**.
4. Under **Project Details**, for **Project name**, enter a name for the project.
5. (Optional) Under **Data encryption**, you can check **Custom encryption settings (advanced)** if you have an AWS KMS key in AWS Key Management Service. Amazon Monitron encrypts all data at rest and in transit. If you don't provide your own CMK, your data is encrypted by a CMK that Amazon Monitron owns and manages.

For more information about encryption for your project, see [KMS and Data Encryption in Amazon Monitron](#).

6. (Optional) To add a tag to the project, enter a key-value pair under **Tags** and then choose **Add tag**.

For more information about tags, see [Tags in Amazon Monitron](#).

7. Choose **Next** to create the project.



Project details [Info](#)

Project name

The project name must have 1 to 60 characters. Valid characters: a-z, A-Z, 0-9, punctuations, and space and _.

Data encryption [Info](#)

Your data is encrypted by default with a key that AWS owns and manages for you. To choose a different key, customize your encryption settings.

Customize encryption settings (advanced)

When you create your first project, the owner of the AWS account will get an email from *AWS Organizations*. No action needs to be taken based on this email.

Step 3: Create admin users

Give access to one or more people in your organization (such as reliability managers) as *admin users*. An *admin user* is a person who belongs to an Amazon Monitron project and who can add other users to the project.

When you add an admin user, Amazon Monitron creates an account for that user in AWS IAM Identity Center. IAM Identity Center is a service that helps you manage SSO access to AWS accounts and applications in your organization. Amazon Monitron uses IAM Identity Center to authenticate users for the Amazon Monitron mobile app.

If you haven't enabled IAM Identity Center in your AWS account, Amazon Monitron enables it for you when you create your first Amazon Monitron admin user. If you are already using IAM Identity Center in your account, then your IAM Identity Center users are shown in the Amazon Monitron console.

Complete the steps in this section to add yourself to your project as an admin user. Repeat them for each additional admin user that you want to create.

To create an admin user

Unless you already use IAM Identity Center in your AWS account, use Amazon Monitron to create admin users. If these users are already in IAM Identity Center, you can skip creating the users, and you are ready to assign the admin role to them.

1. Open the Amazon Monitron console at <https://console.aws.amazon.com/monitron>.
2. On the **Add project admin user** page, choose **Create user**.
3. In the **Create user** section, enter the admin user's email address and name.
4. Choose **Create user**.

Amazon Monitron creates a user in IAM Identity Center. IAM Identity Center sends the user an email that contains a link to activate the account. The link is valid for up to seven days. Within this time, each user must open the email and accept the invitation.

To assign the admin role to the admin users

1. On the **Add project admin user** page, select the checkbox for each admin user that you created.
2. Choose **Add**.

You can add admin users to your project even if those people have not yet accepted the invitations to their IAM Identity Center accounts.

Step 4: (optional) Add Amazon Monitron users to your project

In addition to admin users, you can also add users who lack admin permissions. For example, these users might be technicians who only use the Amazon Monitron mobile app to monitor assets, acknowledge notifications and enter closure codes.

For users who are not admin users:

- You use IAM Identity Center, not Amazon Monitron, to create their user accounts.
- You use the Amazon Monitron mobile app to add the users to projects, not the Amazon Monitron console.

The following steps are not required if all of your users are admin users.

To add users to IAM Identity Center

If your users already have accounts in IAM Identity Center in your AWS account, you can skip these steps. You are ready to add the users to your project in the mobile app. Otherwise, add your users to IAM Identity Center by completing the following steps.

1. Open the AWS IAM Identity Center console at <https://console.aws.amazon.com/singlesignon/>.
2. In the IAM Identity Center console, choose **Users**.
3. Repeat the following steps for each user that will access your project in the Amazon Monitron mobile app.
 - a. On the **Users** page choose **Add user**.
 - b. In the **User details** section, provide the username and contact information. Leave **Password** set to **Send an email to the user with password setup instructions**.

Add user

1 — 2

Details Groups

User details

Username* smartinez
This username will be required to sign in to the user portal. This cannot be changed later.

Password Send an email to the user with password setup instructions. [Learn more](#)
 Generate a one-time password that you can share with the user. [Learn more](#)

Email address* smartinez@example.com

Confirm email address* smartinez@example.com

First name* Sofia

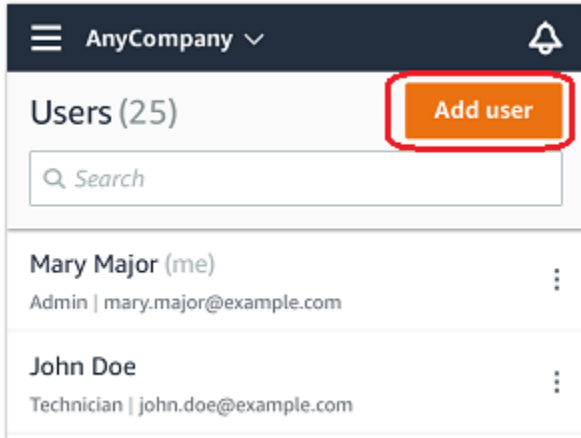
Last name* Martínez

Display name* smartinez

- c. Choose **Next: Groups**.
- d. Choose **Add user**. IAM Identity Center sends the user an email that contains a link to activate the IAM Identity Center user. The link is valid for up to seven days. Each user must open the email and accept the invitation before accessing your project in the Amazon Monitron mobile app.

To add a user using the mobile app

1. Log into the Amazon Monitron mobile app on your smartphone.
2. Navigate to the project or site that you want to add a user to, and then to the **Users** list.
3. Choose **Add user**.



4. Enter a user name.

Amazon Monitron searches the user directory for the user.

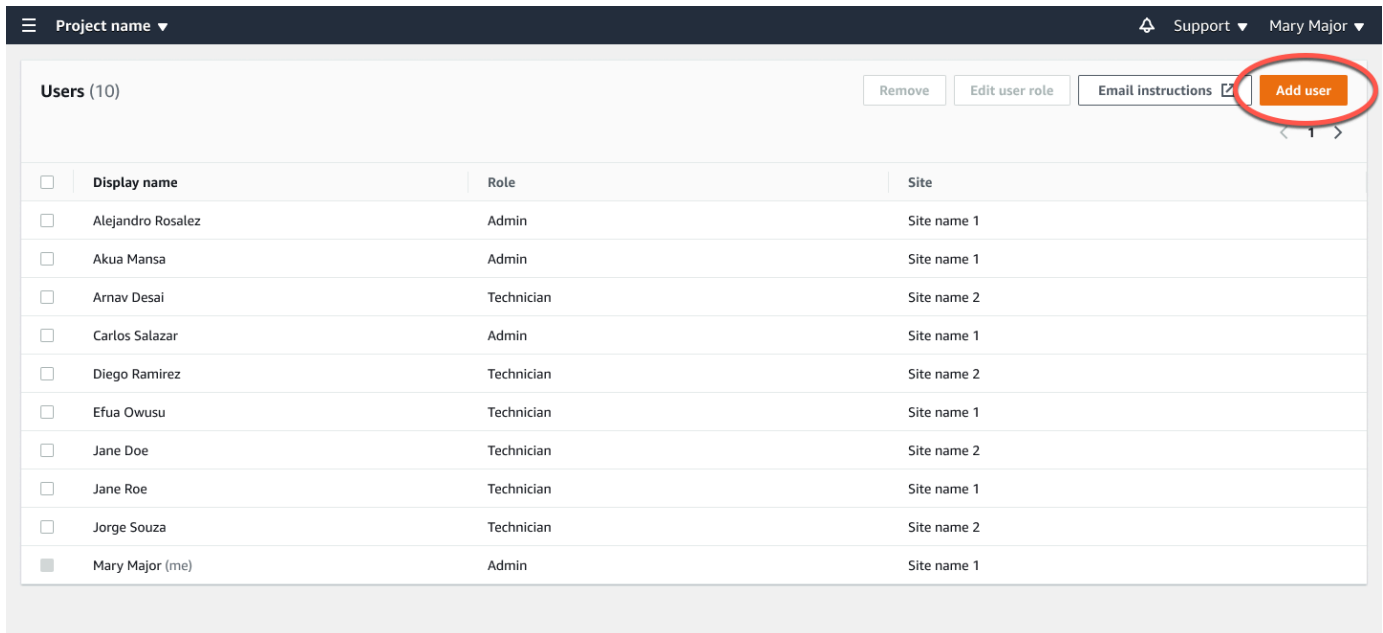
5. Choose the user from the list.
6. Choose the role that you want to assign the user: **Admin**, **Technician**, or **Viewer**.
7. Choose **Add**.

The new user appears on the **Users** list.

8. Send the new user an email invitation with a link for accessing the project and downloading the Amazon Monitron mobile app. For more information, see [Sending an email invitation](#).

How to add a user using the web app

1. Select **Users** from the navigation pane.
2. Choose **Add user**.



The screenshot shows the 'Users (10)' management interface. At the top right, there are buttons for 'Remove', 'Edit user role', 'Email instructions', and 'Add user'. The 'Add user' button is circled in red. Below the buttons is a table with the following data:

<input type="checkbox"/>	Display name	Role	Site
<input type="checkbox"/>	Alejandro Rosalez	Admin	Site name 1
<input type="checkbox"/>	Akua Mansa	Admin	Site name 1
<input type="checkbox"/>	Arnav Desai	Technician	Site name 2
<input type="checkbox"/>	Carlos Salazar	Admin	Site name 1
<input type="checkbox"/>	Diego Ramirez	Technician	Site name 2
<input type="checkbox"/>	Efua Owusu	Technician	Site name 1
<input type="checkbox"/>	Jane Doe	Technician	Site name 2
<input type="checkbox"/>	Jane Roe	Technician	Site name 1
<input type="checkbox"/>	Jorge Souza	Technician	Site name 2
<input checked="" type="checkbox"/>	Mary Major (me)	Admin	Site name 1

3. Enter a user name.

Amazon Monitron searches the user directory for the user.

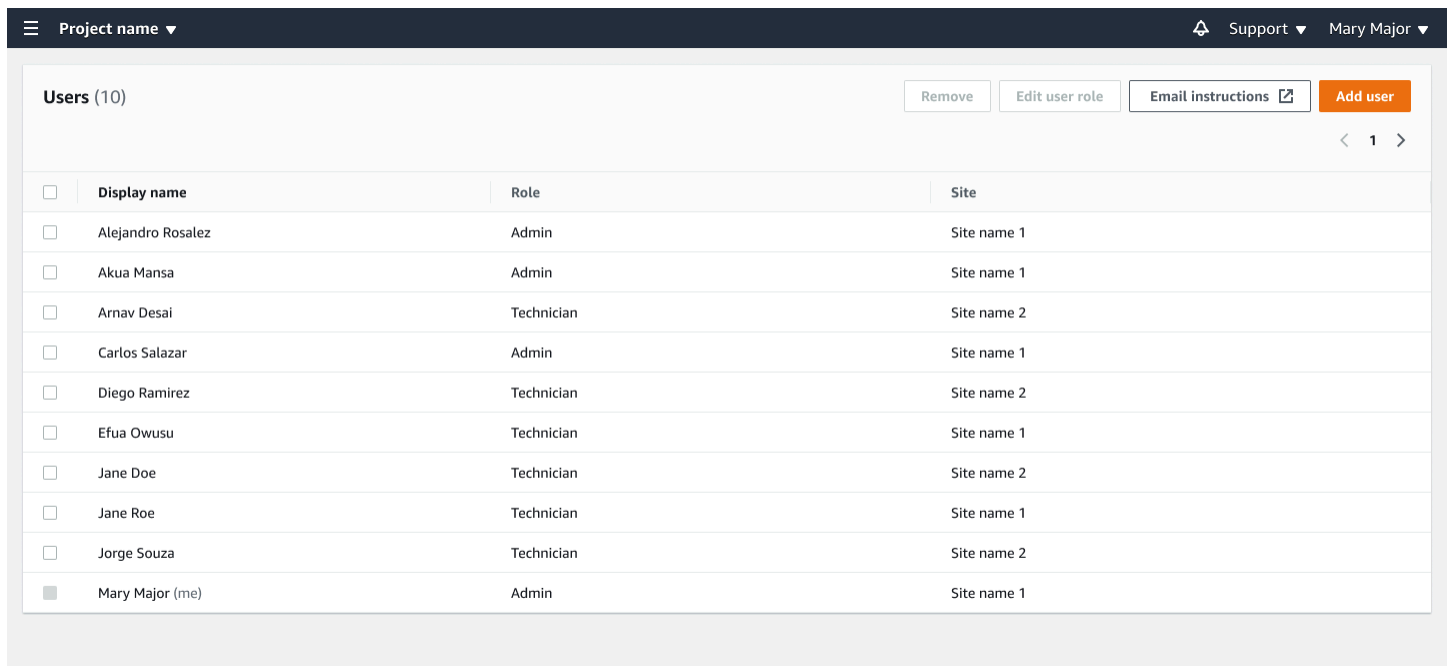
4. Choose the user from the list.

5. Choose the role that you want to assign the user: **Admin**, **Technician**, or **Read only**.

6. Choose **Add**.

The new user appears on the **Users** list.

7. Send the new user an email invitation with a link for accessing the project and downloading the Amazon Monitron mobile app. For more information, see [Sending an email invitation](#).



The screenshot shows the 'Users (10)' section of the Amazon Monitron console. At the top right, there are buttons for 'Remove', 'Edit user role', 'Email instructions' (with an external link icon), and 'Add user'. Below these is a table with the following data:

<input type="checkbox"/>	Display name	Role	Site
<input type="checkbox"/>	Alejandro Rosalez	Admin	Site name 1
<input type="checkbox"/>	Akua Mansa	Admin	Site name 1
<input type="checkbox"/>	Arnav Desai	Technician	Site name 2
<input type="checkbox"/>	Carlos Salazar	Admin	Site name 1
<input type="checkbox"/>	Diego Ramirez	Technician	Site name 2
<input type="checkbox"/>	Efua Owusu	Technician	Site name 1
<input type="checkbox"/>	Jane Doe	Technician	Site name 2
<input type="checkbox"/>	Jane Roe	Technician	Site name 1
<input type="checkbox"/>	Jorge Souza	Technician	Site name 2
<input checked="" type="checkbox"/>	Mary Major (me)	Admin	Site name 1

Step 5: Invite users to your project

Invite the users you've added to your Amazon Monitron project.

1. Open the Amazon Monitron console at <https://console.aws.amazon.com/monitron>.
2. In the navigation pane, choose **Projects**.
3. On the **Projects** page, choose your project name to open its details page.
4. Repeat the following steps for each user that you want to invite.
 - a. Under **How it works**, choose **Email instructions**.

Your email client opens a draft that contains an invitation to your Amazon Monitron project. It contains both a link to download the Amazon Monitron mobile app from the Google Play Store and a link to open the project.

- b. Email this message to the user.

Adding assets and installing devices

Once you've created a project, you or reliability managers and technicians from your team can use the Amazon Monitron mobile app to add gateways, create assets and pair sensors to them, and start monitoring your equipment. Only smartphones using Android 8.0+ or iOS 14+ with Near Field Communication (NFC) and Bluetooth are supported by Amazon Monitron.

Your IT manager or reliability manager will generate an email describing how to log in for the first time and connect to your project and send this to you. Once you've logged in for the first time, you can follow the steps to add gateways and install devices.

Topics

- [Step 1: Add a Gateway](#)
- [Step 2: Adding Assets](#)
- [Step 3: Attach Sensors](#)

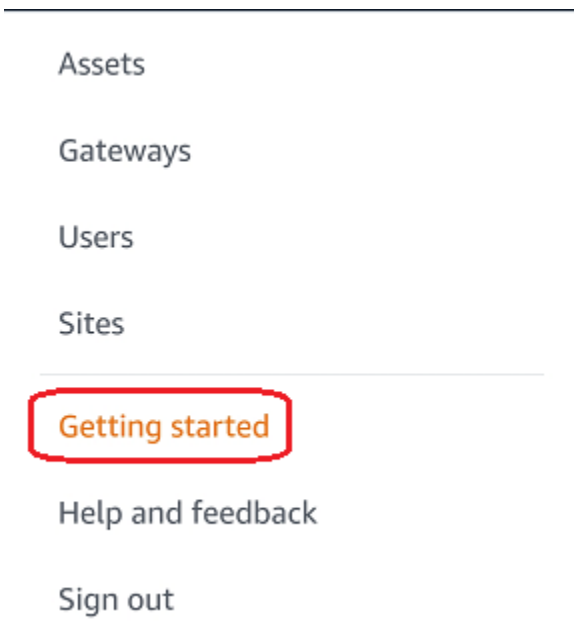
Step 1: Add a Gateway

In Amazon Monitron, sensors collect data from machines and pass it to gateways, which transmit the data to the AWS Cloud and thus to Amazon Monitron for analysis. These gateways are usually mounted on the wall of a factory within 20 to 30 meters from the sensor and connect to the AWS Cloud using the local Wi-Fi network.

Before adding a gateway, make sure that Bluetooth is turned on for your smartphone.

To add a Wi-Fi gateway

1. Choose the menu icon (☰), and then choose **Getting Started**.



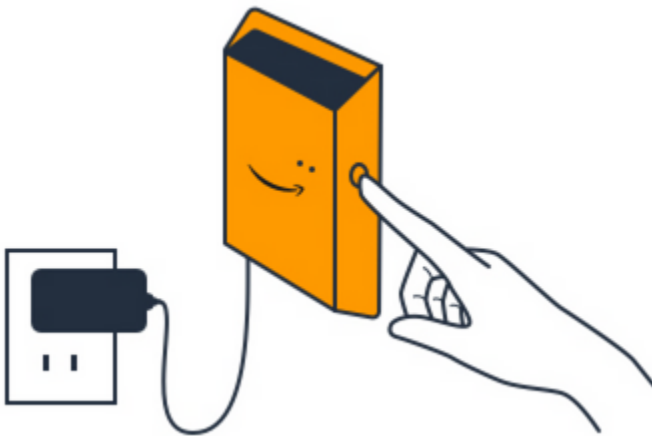
2. Choose **Add gateway**.



3. In your factory, position your gateway in the location that works best for communicating with your sensors.

The best place to mount your gateway is higher than the sensors and no more than 20 to 30 meters away. For more information about locating gateways, see [Where to Install Your Gateway](#) in the *Amazon Monitron User Guide*.

4. Plug the gateway in and make sure that the LED lights on the top alternatively blink yellow and blue.



5. Push the button on the side of the gateway to put it into commissioning mode. The lights will start blinking rapidly.
6. In the mobile app, choose **Next**.
7. Choose **Add gateway**.

Amazon Monitron searches for the gateway, which can take a few moments. When it finds it, the gateway appears in the gateway list.

If it can't find the gateway, see [Setting Up Gateways](#) in the *Amazon Monitron User Guide* for possible solutions.

8. When you see the new gateway in the list, choose it.

It can take a few moments for Amazon Monitron to connect to the new gateway.



9. After it connects to the gateway, Amazon Monitron scans for Wi-Fi networks. Choose the Wi-Fi network that you want to use.
10. Enter your Wi-Fi password, and then choose **Connect**.

It can take a few minutes for the gateway to be commissioned.

To add an Ethernet gateway

1. If Bluetooth isn't already turned on for your smartphone, turn it on.
2. Position your gateway in the location that works best for communicating with your sensors.

The best place to mount your gateway is higher than the sensors and no more than 20 to 30 meters away.

3. Plug in the gateway and make sure the network light (yellow) and the Bluetooth light (blue) on the front of your gateway are blinking alternatively.
4. Push the **Config** button on the gateway to put it into commissioning mode. the Bluetooth and network LED lights will start flashing rapidly.



5. Open the mobile app on your smartphone.
6. On the **Getting started** page or the **Gateways** page, choose **Add gateway**.

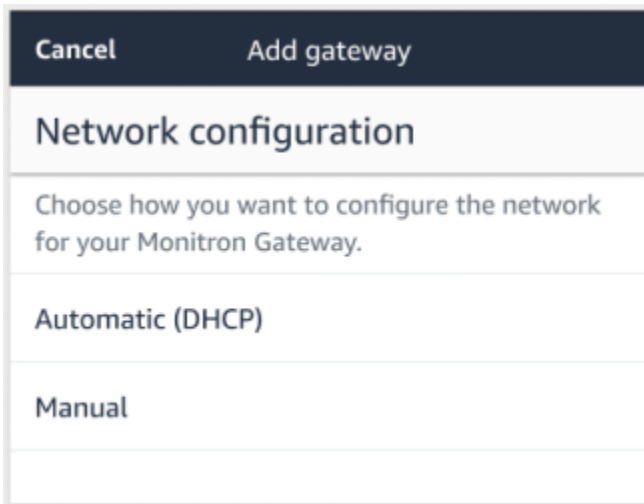
Amazon Monitron scans for the gateway. This can take a few moments. when Amazon Monitron finds the gateway, it displays it in the gateway list.

7. Choose the gateway.

It can take a few moments for Amazon Monitron to connect to the new gateway.



8. After it connects to the gateway, Amazon Monitron will provide two options for you to configure the network connection for your gateway.



9. Choose your network configuration.

It can take a few minutes for the gateway to be commissioned and to connect to the network.

- a. If you choose automatic (DHCP), Amazon Monitron will automatically configure the network to connect the gateway.
- b. If you choose **manual**, enter your IP address, subnet mask, router, preferred DNS server, and alternate DNS server (optional) information. then choose **connect**.

Configure network

IP Address

Subnet mask

Router

Preferred DNS server

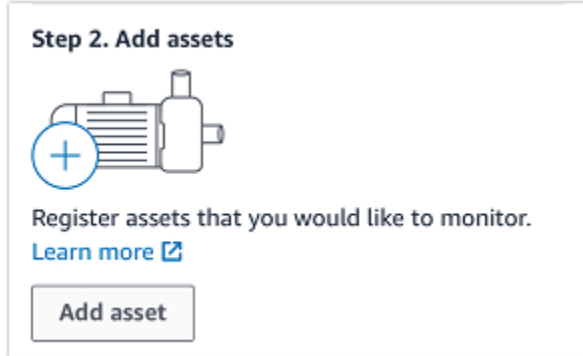
Alternate DNS server - *optional*

Step 2: Adding Assets

In Amazon Monitron, the machines you monitor are known as *assets*. Assets are usually individual machines, but they can also be specific sections of equipment. Assets are paired to sensors, which directly monitor temperature and vibration to check for potential failures.

To add an asset

1. On the **Getting Started** page, choose **Add asset**.



2. For **Asset name**, enter a name for the asset that you want to create.
3. For **Machine class**, choose the machine class of the asset.


Asset machine class is based on ISO 20816 Standards. For more information about machine classes, see [Assets](#).

Note

Asset machine class is based on ISO 20816 Standards. Amazon Monitron administrators can also create custom machine asset classes for all positions within a project. For more information about machine classes and customizing them, see [Assets](#).

Cancel	Add asset	Add
---------------	------------------	------------

Asset name
Name for the asset to be monitored.

Asset name 1 

Maximum 60 characters.

Machine class
Machine class for the asset based on ISO 20816 standards.

Class I ▼

4. Choose **Add**.

When you've added your first asset, it's displayed on the **Assets list** page.

Step 3: Attach Sensors

Assets are paired to sensors, which directly monitor an asset's health. You place each sensor on the asset in a position that you want to monitor. You can place one or more sensors on each asset. Each sensor takes vibration and temperature measurements at the position to which it is paired and sends it to the AWS Cloud for analysis of machine health using the gateway.

Where to Place Sensors

When placing a sensor, choose a location where it can accurately detect the machine's temperature or vibration.

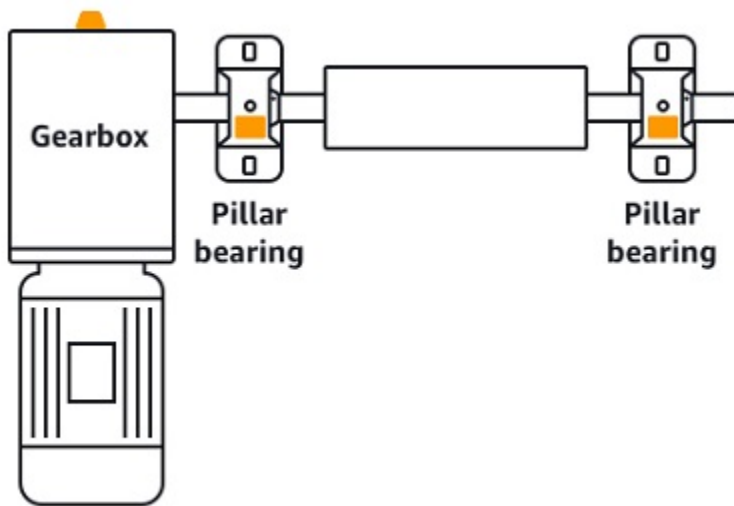
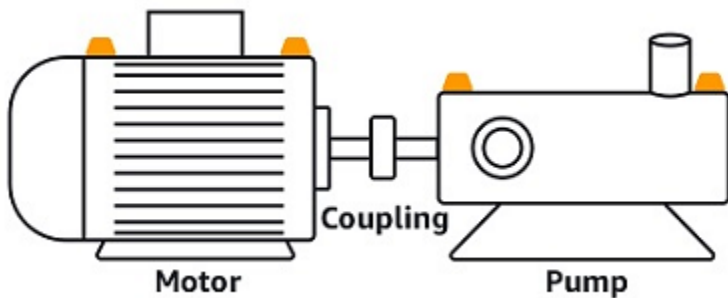
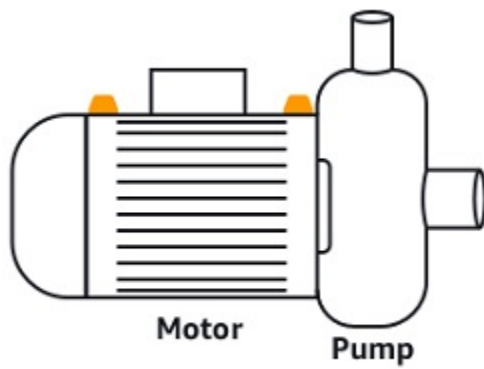
To achieve the greatest accuracy:

- Mount the sensor directly onto the housing of the target component.
- Minimize the length of the vibration transmission path, the distance between the source of vibration and sensor.
- Avoid mounting the sensor in a location that can oscillate due to natural frequencies, such as sheet metal covers.

Vibration will attenuate up to 30-36"/75-90 cm) from the source. Attributes of the vibration transmission path length that can reduce the transmission path length include:

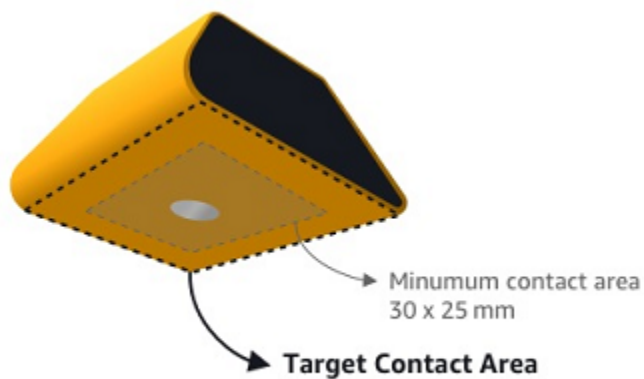
- The number of mounting surfaces, causing signal reflection
- Materials such as rubber and plastic that can absorb vibration

The following examples show where to place sensors. For more information and examples, see [Where to Place Your Sensors](#) in the *Amazon Monitron User Guide*.



How to Place Sensors

When you've decided where to place a sensor on an asset, make sure that a minimum of one-third of the sensor base is fixed to the asset. The sensors can pick up vibration and temperature measurements across the entire base of the sensor, but it's important to have the asset target area centered as much as possible on the sensor as shown in the following image.



Attach the sensor with an industrial adhesive. We recommend a cyanoacrylate-type epoxy. For additional information about attaching the sensor to your asset, see [How to Place the Sensors](#) in the *Amazon Monitron User's Guide*.

⚠ Warning

Amazon Monitron sensors can be attached to the equipment using industrial adhesive. We suggest you check the surface before selecting the adhesive. For surfaces up to 5 mm roughness/gaps, you can select an adhesive that fills the gap, such as LOCTITE® 3090. For flat surfaces (<0.1mm roughness), you can select a more generic adhesive, such as LOCTITE® 454. Always check and follow the processing guidelines outlined by the adhesive vendor.

For more information about safely using the adhesive, see [Loctite 454 Technical Information](#) or [Loctite 3090 Technical Information](#), as appropriate.

To attach the Amazon Monitron sensor

1. Apply a thin layer of the adhesive on the bottom of the sensor, maximizing the contact area.
2. Hold the sensor to the mounting location on the machine part, pressing firmly for the length of time specified by the adhesive instructions.

Step 4: Pairing Sensors to an Asset

Each sensor that you pair to an asset has a designated position and is set to monitor a specific part of the asset. For example, a sensor set up to monitor bearings on a conveyor belt might have the position of Left bearing 1 with a position type of Bearing.

Amazon Monitron uses Near Field Communications (NFC), a short-range (4 cm or less) wireless technology for communication between two electronic devices. To use Amazon Monitron, you need an iOS or Android 8.0+ smartphone with NFC installed natively.

Important

The equipment that you want to monitor must be in a healthy state before you pair it to a sensor. Amazon Monitron must establish a baseline for the equipment based on its normal state so that it can later determine abnormalities.

To pair a sensor with an asset

1. Attach your sensor in the correct position, as described in [Step 3: Attach Sensors](#). You can also attach the sensor after pairing it to the asset in this step 4.
2. Make sure that the NFC feature on your smartphone is on and functioning.
3. From the **Assets** list, choose the asset that you just created.
4. Choose **Pair sensor**.
5. For **Position name**, provide a name for the sensor position.
6. Choose the **Type of position** that best fits the location that you're going to monitor:
 - Bearing
 - Compressor
 - Fan
 - Gearbox
 - Motor
 - Pump
 - Other

Note

After you pair the sensor, you can't change the position type.

7. Hold your phone close to the sensor to register it. A progress bar shows when registration is complete.



It can take a few moments for the sensor to be commissioned. If you have trouble pairing the sensor, see [Pairing Your Sensor](#) for more information.

Tip

If your smartphone fails to detect the sensor, try holding it so that the NFC antenna is close to the sensor. For iPhone models, the antenna is located at the top edge of the device. For Android models, the antenna location varies. The following resources might help you locate the NFC antenna on an Android device:

- [NFC detection area \(Samsung\)](#)
- [Pixel phone hardware diagram](#)

On the **Assets** page, the sensor is now paired to the asset and is identified by its position.

Understanding warnings and alerts

Note

This section focuses on using the Amazon Monitron mobile app. To learn about the Amazon Monitron web app, see [Understanding sensor measurements](#) in the *Amazon Monitron User Guide*.

After a sensor is paired to an asset, Amazon Monitron starts monitoring the asset's condition. When it detects an abnormal machine condition, it sends you a notification (



)

and changes the asset state. The alert notification is generated using a combination of machine learning and ISO 20816 standards for machine vibration.

To monitor the data and respond to alerts about abnormalities, you use the Amazon Monitron mobile app.

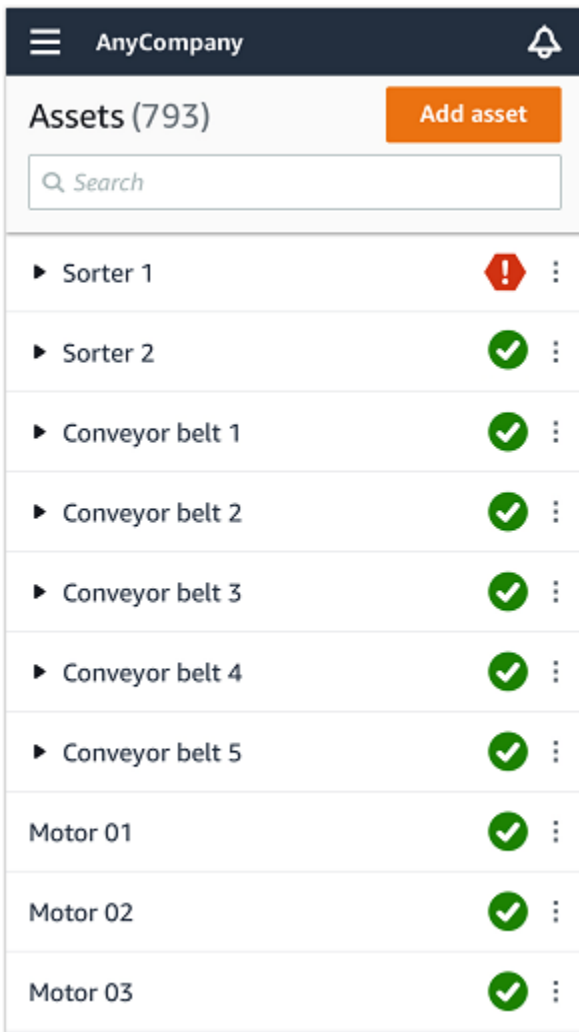
Your administrator will send you an email with information about how to log in for the first time and connect to your project.

Topics

- [Step 1: Understanding asset health](#)
- [Step 2: Viewing asset conditions](#)
- [Step 3: Viewing and acknowledging a machine abnormality](#)
- [Step 4: Resolving a machine abnormality](#)
- [Step 5: Muting and unmuting alerts](#)



Step 1: Understanding asset health


To monitor assets using the Amazon Monitron mobile app, start with the **Assets** list. This list is displayed when you open the mobile app.




Each asset in your project or site is listed in the **Assets** list.

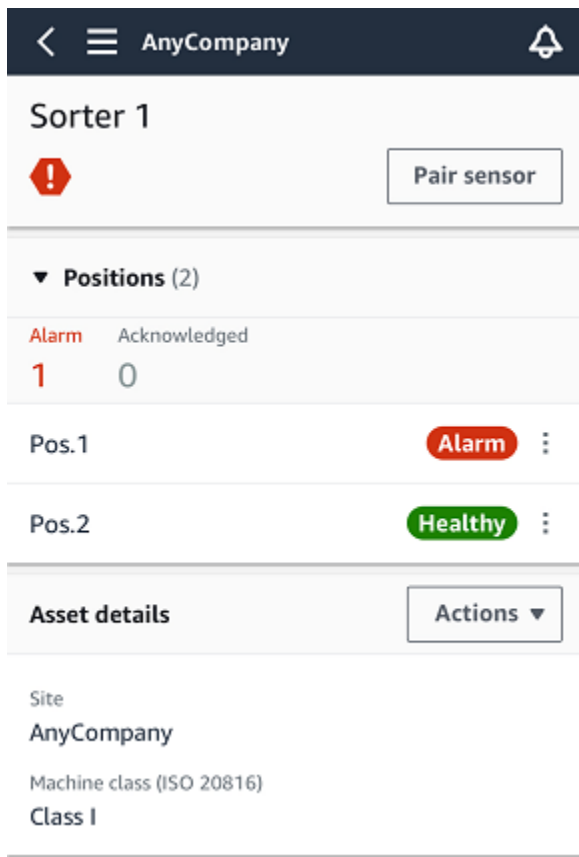
On the **Assets** list page, each asset shows an icon indicating its health. The following table describes these icons.

Icon	Health state
	<p>Healthy state: The status of all sensor positions on the asset is healthy.</p>
	<p>Warning state: A warning has been triggered for one of the positions of this asset, indicating that</p>





Icon	Health state
	<p>Amazon Monitron has detected early signs of potential failure. Amazon Monitron identifies warning conditions by analyzing equipment vibration and temperature, using a combination of machine learning and ISO vibration standards.</p>
	<p>Alarm state: Once an asset has been placed in a warning state, Amazon Monitron will continue to monitor it. Again, Amazon Monitron is using a combination of machine learning and vibration ISO standards. If the condition of the asset gets significantly worse, Amazon Monitron will escalate by sending an Alarm notification when it detects that the equipment condition has significantly worsened. We recommend investigating the issue at the earliest opportunity. An equipment failure might occur if the issue isn't addressed.</p>

Icon	Health state
	<p>Maintenance state: One of the asset's sensors is in the maintenance state. The alarm state of the asset has been acknowledged by a technician, but not yet addressed.</p>
<p>No sensor</p>	<p>No sensor: At least one position on the asset doesn't have a sensor paired to it.</p>

When you choose an asset, the app displays the health status of each underlying sensor position.



The following table describes the position status indicators.

Status	State
	<p>The position is healthy: All measured values are within their normal range.</p>
	<p>A warning has been triggered for this position indicating early signs of a potential failure condition. We recommend that you monitor the equipment closely and initiate an investigation during an upcoming planned maintenance.</p>
	<p>An alarm has been triggered for this position, indicating that the machine vibration or temperature is out of the normal range at this position. We recommend investigating the issue at the earliest opportunity. An equipment failure might occur if the issue isn't addressed.</p>
	<p>The alarm state of the position has been acknowledged by a technician, but not yet addressed.</p>
<p>No sensor</p>	<p>The position doesn't have a sensor paired to it.</p>

When an issue is raised for an individual position, the status changes for that position and for the asset as a whole.

Step 2: Viewing asset conditions

Viewing assets is more than simply understanding the icons that show the asset and position health status. It is often useful to see the data collected by the sensors yourself.

To view sensor data in the Amazon Monitron mobile app

1. In the **Assets** list, choose the asset you want to view.
2. Choose the position with the data that you want to view.
3. Under the **Vibration and Temperature** tabs, choose the chart of recent sensor data and the level of detail that you want to see.

You can choose separate versions for different time periods (1 day, 1 week, 2 weeks, 1 month, and so on).

Step 3: Viewing and acknowledging a machine abnormality

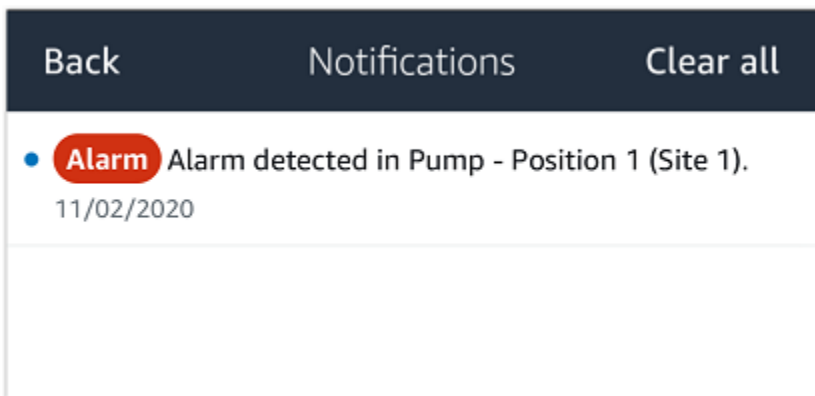
The longer Amazon Monitron monitors a position, the more it fine-tunes its baseline and increases its accuracy.

When an **Alarm** or a **Warning** is triggered, Amazon Monitron sends a notification to the mobile app that is displayed as an icon in the upper right of your screen (



).



Choosing the notification icon opens the **Notifications** page, which lists all pending notifications.




When you receive a notification, you must view and acknowledge it. This doesn't fix the issue with the asset, it just lets Amazon Monitron know that you are aware of it.

























To view and acknowledge an abnormality

1. On the **Assets** list, choose the asset with the alarm.

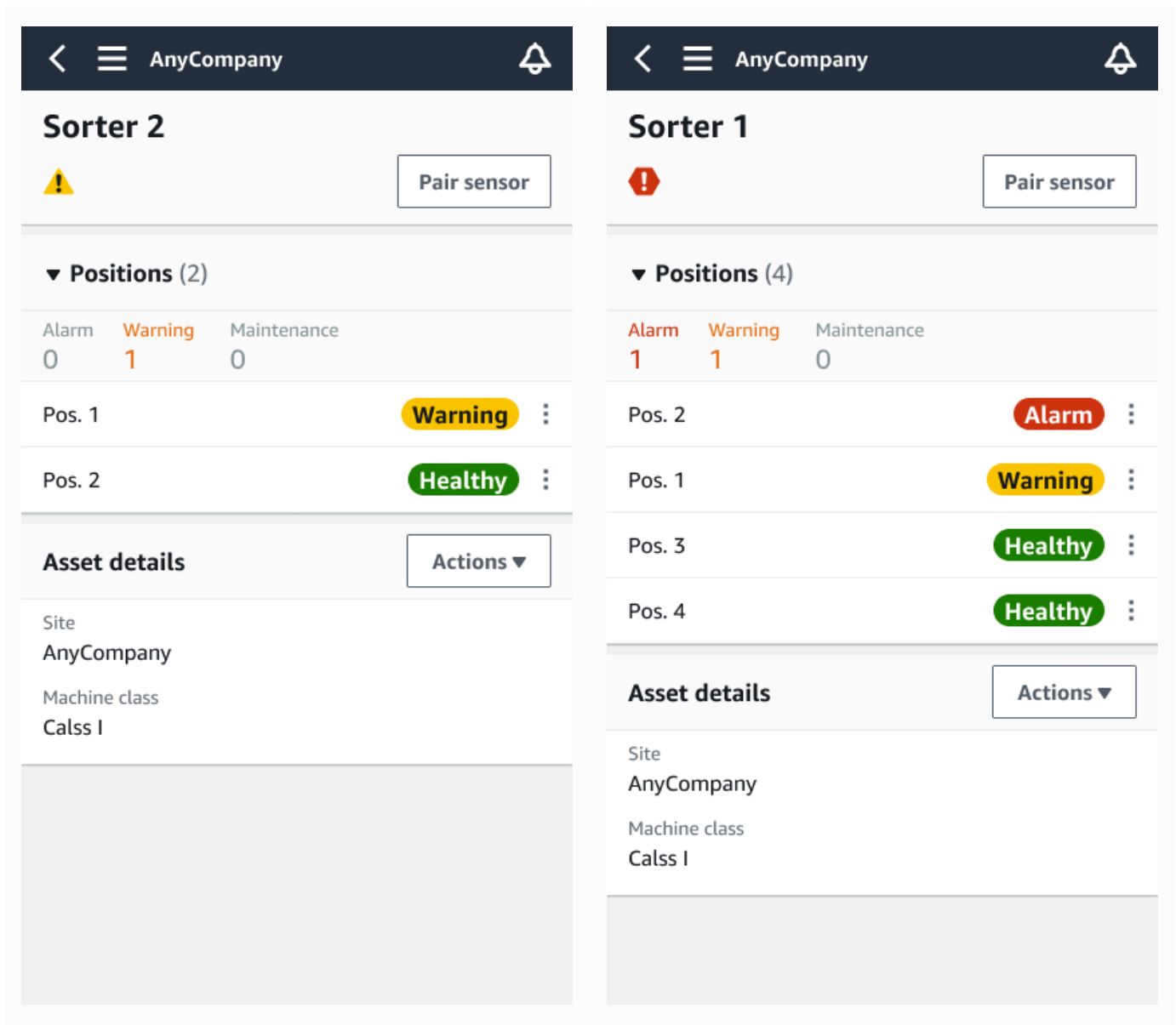
 **AnyCompany** 

Assets (578)



▶ Sorter 1		
▶ Sorter 2		
▶ Conveyor 1		
▶ Conveyor 2		
▶ Conveyor 3		
▶ Conveyor 4		
▶ Conveyor 5		
Motor 1		
Motor 2		
Motor 3		
Motor 4		
Motor 5		

2. Choose the position with the alarm to view the issue.



3. To confirm that you are aware of the issue, choose **Acknowledge**.

Note that the text on the following screens also indicates whether the alert notification was triggered based on the equipment's vibration or temperature, or by the vibration ISO thresholds or machine learning models. This information can be used by technicians to investigate and fix the issue. After an abnormality has been acknowledged and repaired, resolve the issue in the mobile app.

9:41 📶 🔋

☰ Project name ▾ 🔔

Pump main - W44

Alarm

Acknowledge

Alarm

- ISO vibration threshold detected
- Total vibration ML detected
- Temperature ML detected

May 22, 2023, 12:34 PM

Vibration ² | Temperature ¹ | Sensor details

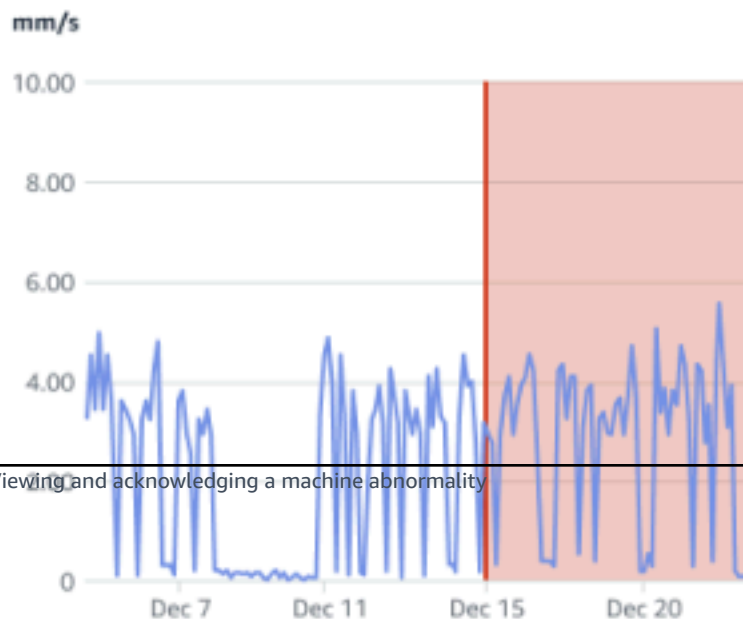
📅 Dec 7, 2022 - Dec 20, 2022 ⏪ ⏩

Total vibration - Vrms ⓘ ⚙️
(10-1000Hz) (mm/s)

4.63

— Total Vibration

Dec 7- Dec 20, 2022



The status of the asset changes to:

Maintenance

After the alarm has been acknowledged, the abnormality can be examined and fixed as appropriate.

Step 4: Resolving a machine abnormality

Resolving an abnormality returns the sensor to healthy status and provides information about the issue to Amazon Monitron so it can better determine when a failure might occur in the future.

For information about failure modes and causes, and how to resolve abnormalities, see [Resolving a Machine Abnormality](#) in the *Amazon Monitron User Guide*.

To resolve an abnormality

1. In the **Assets** list, choose the asset with the issue.
2. Choose the position with the resolved abnormality.
3. Choose **Resolve**.
4. For **Failure mode**, choose one of the available types.
5. For **Failure cause**, choose the cause.
6. For **Action taken** choose the action taken.
7. Choose **Submit**.

In the **Assets** list, the asset status returns to **Healthy**.

Step 5: Muting and unmuting alerts

You can choose to mute and unmute alerts (alarms and warnings) for a position.

Topics

- [Muting alerts](#)
- [Unmuting alerts](#)

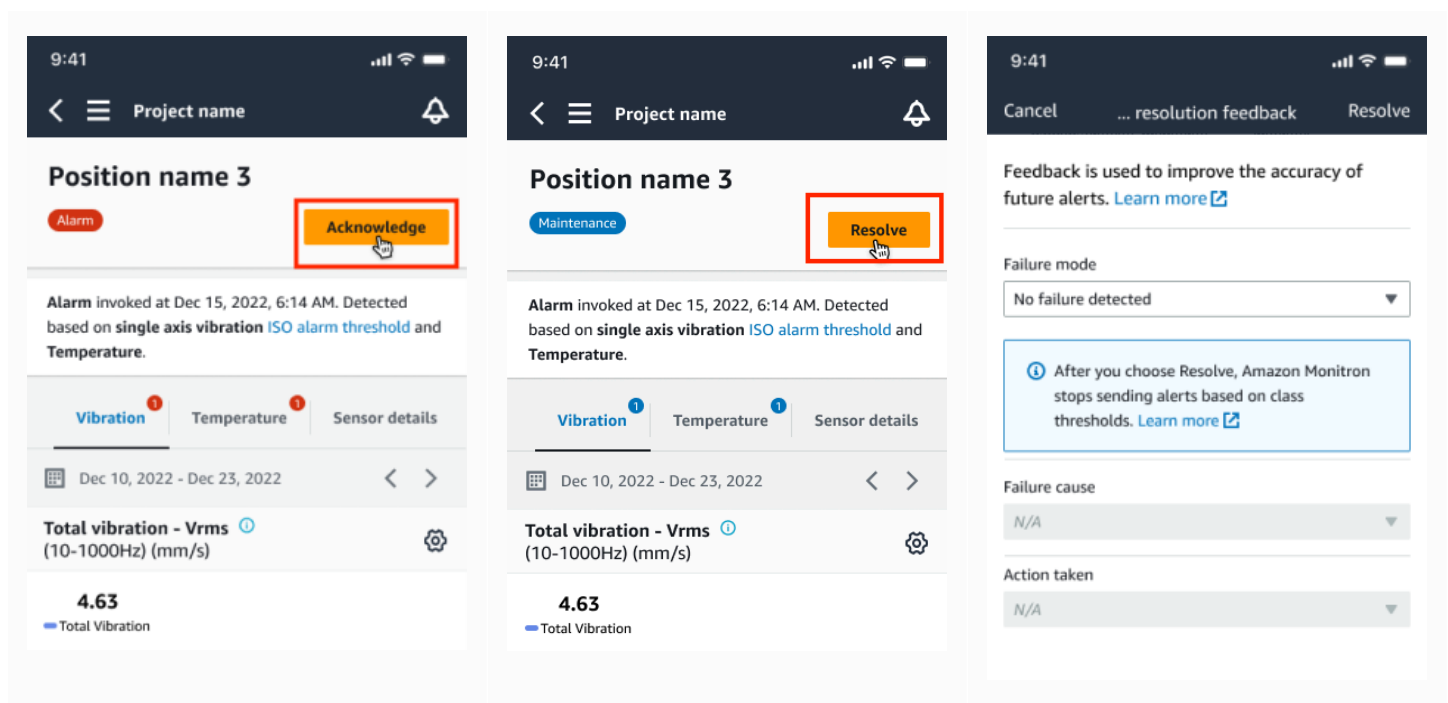
Muting alerts

ISO thresholds apply broadly to large classes of equipment. Therefore, when detecting the potential failure of a specific asset, you may consider other factors as well. For example, you can mute a notification generated by ISO vibration thresholds if you assess that your equipment is still healthy when the alert is raised.

You also can mute alerts (alarms and warnings) by providing the 'No failure detected' feedback for the 'Failure mode' while closing the alert. Note that Amazon Monitron will continue to notify users of potential failures detected based on machine learning, even when notifications based on ISO thresholds are muted.

Muting alerts on mobile app

The following images show you how to mute alerts on the Amazon Monitron mobile app.



Muting alerts on web app

The following images show you how to mute alerts on the Amazon Monitron web app.

Project name 1 ▾ Support ▾ Mary Major ▾

Assets (793) < Hide

Find assets

- Asset name 7
- Position name 1
- Position name 2
- Position name 3** Alarm
- Position name 4
- Position name 5
- Position name 6
- Asset name 1

Position name 3

Bearing | Class I | Site_m776v1khz9

Alarm

- ISO vibration threshold detected
- Temperature ML detected

May 22, 2023, 12:34 PM

Vibration 1 Temperature 1 Sensor details

Date range: Last 2 week

Total vibration - Vrms (10-1000Hz) (mm/s)

Total vibration is the combination of all three axes, monitored by machine learning.

Actions ▾ Acknowledge

Download CSV

Chart type ▾

Project name 1 ▾ Support ▾ Mary Major ▾

Assets (793) < Hide

Find assets

- Asset name 7
- Position name 1
- Position name 2
- Position name 3** Maintenance
- Position name 4
- Position name 5
- Position name 6
- Asset name 1

Position name 3

Bearing | Class I | Site_m776v1khz9

Maintenance

- ISO vibration threshold detected
- Temperature ML detected

May 22, 2023, 12:34 PM

Vibration 1 Temperature 1 Sensor details

Date range: Last 2 week

Actions ▾ Resolve

Download CSV

Position name 3 Maintenance

Issue resolution feedback

Feedback is used to improve the accuracy of future alerts. [Learn more](#)

Failure mode: No failure detected

After you choose Resolve, Amazon Monitron stops sending alerts based on class thresholds. [Learn more](#)

Failure cause: Select failure cause

Action taken: Select action taken

Cancel Resolve

Unmuting alerts

You can choose to unmute alerts (alarms and warnings) at any time. When unmuting alerts, you can choose from the following options.

Available options

- [Resume all alerts \(alarms and warnings\)](#)
- [Resume alarms but keep warnings muted](#)
- [Resume only alarms](#)
- [Resume only warnings](#)

Resume all alerts (alarms and warnings)

If you've muted both alarms and warnings, you can unmute them.

Resume all alerts on mobile

The image displays three sequential screenshots from a mobile application interface for monitoring vibration.

Left Screenshot: Shows a graph titled "Single axis vibration - Vrms (10-1000Hz) (mm/s)". The current value is 4.63 mm/s. The graph shows a blue line representing the maximum vibration over time (Dec 7 to Dec 20, 2022). Horizontal dashed lines indicate "Alarm" (red) and "Warning" (yellow) thresholds. A red box highlights a message at the bottom: "Alarms based on class thresholds are stopped. Learn more. To resume alerts click here." A hand cursor is pointing at the "click here" link.

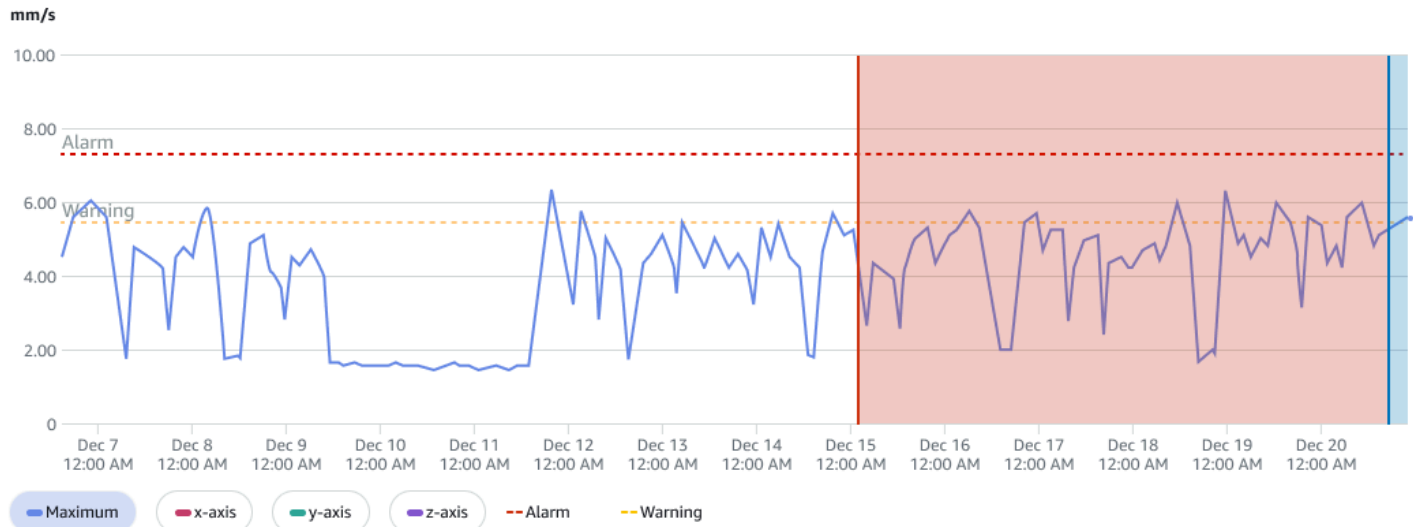
Middle Screenshot: Shows a "Resume alerts" dialog box. The question is "Do you want to resume alarms and warnings for this position?". There are two radio button options: "Resume alarm and warning" (which is selected) and "Resume alarm and keep warnings muted". There are "Cancel" and "Confirm" buttons at the bottom.

Right Screenshot: Shows the same graph as the first screenshot, but with a green box highlighting a confirmation message at the bottom: "Alarms and warnings successfully resumed." The "Maximum" value is still 4.63 mm/s.

Resume all alerts on web

Single axis vibration - Vrms (10-1000Hz) (mm/s)

Maximum of x, y or z axis is monitored according to ISO 20816 or class severity.



Alarms and warnings based on class thresholds are stopped. [Learn more](#)
To resume alerts [click here](#).

Vibration Temperature Sensor details

Date range

Last 2 week

Total vibration

Total vibration

mm/s

10.00

8.00

6.00

4.00

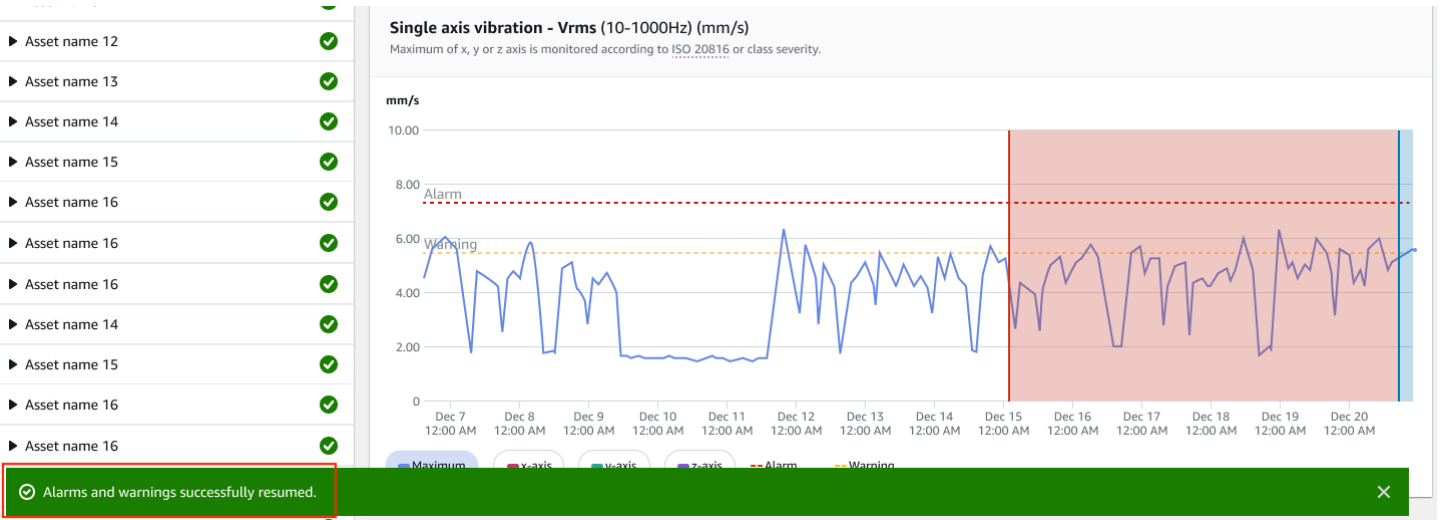
Resume alerts

Do you want to resume alarms and warnings for this position?

Resume alarm and warning

Resume alarm and keep warnings muted

Cancel Confirm



Resume alarms but keep warnings muted

If you've muted both alarms and warnings, you can unmute alarms and keep warnings muted.

Resume alarms keeping warnings muted on the mobile app

Alarms based on class thresholds are stopped. [Learn more](#)
To resume alerts [click here](#).

Alarms based on class thresholds are stopped. [Learn more](#)
To resume alerts [click here](#).

Resume alerts

Do you want to resume alarms and warnings for this position?

Resume alarm and warning

Resume alarm and keep warnings muted

Cancel Confirm

Resume alarms keeping warnings muted on the web app

Single axis vibration - Vrms (10-1000Hz) (mm/s)
Maximum of x, y or z axis is monitored according to ISO 20816 or class severity.

Alarms and warnings based on class thresholds are stopped. [Learn more](#)
To resume alerts [click here](#).

Healthy Report issue

Vibration | Temperature | Sensor details

Date range: Last 2 week Download CSV

Resume alerts ×

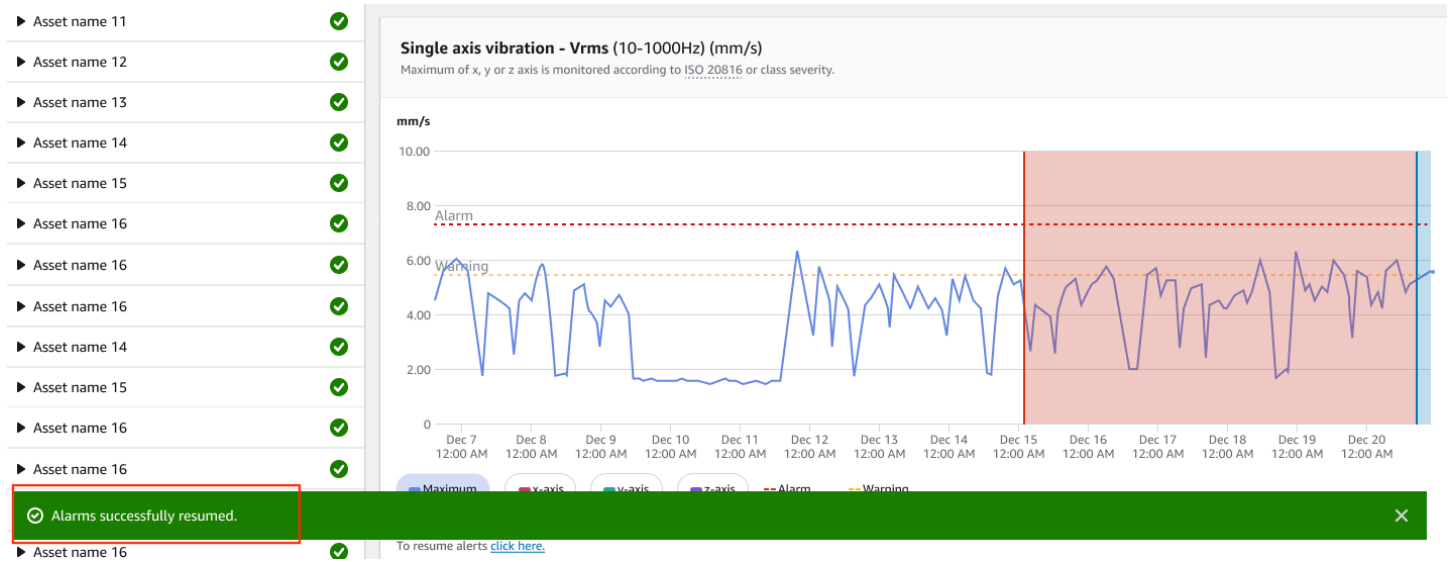
Do you want to resume alarms and warnings for this position?

Resume alarm and warning

Resume alarm and keep warnings muted

Cancel Confirm

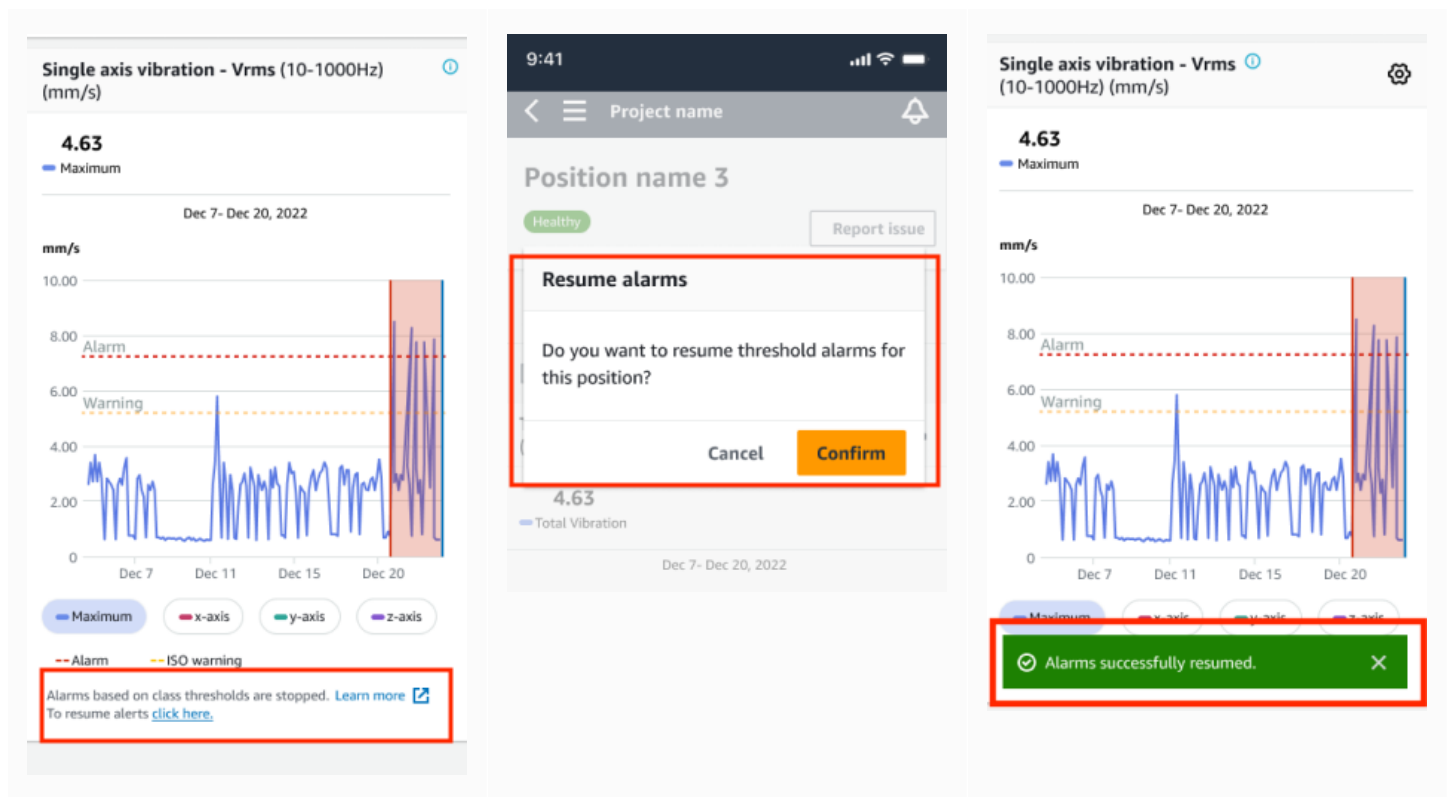
Total vibration Chart type ▼



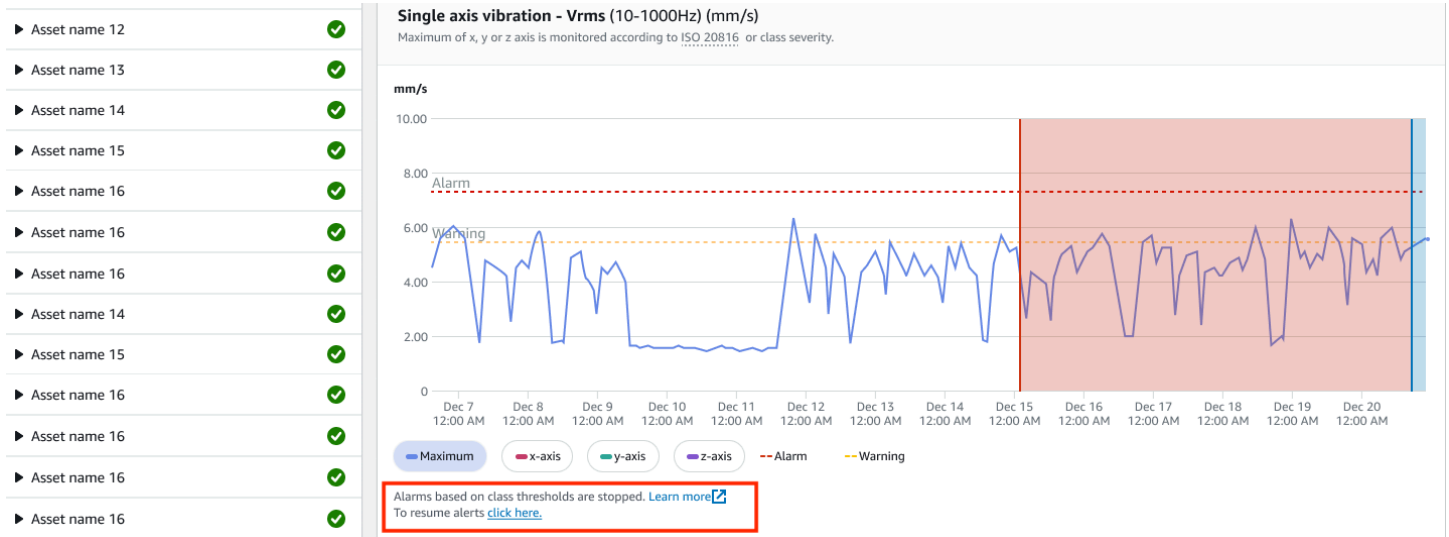
Resume only alarms

If you've muted alarms, you can unmute them.

Resume alarms on mobile app



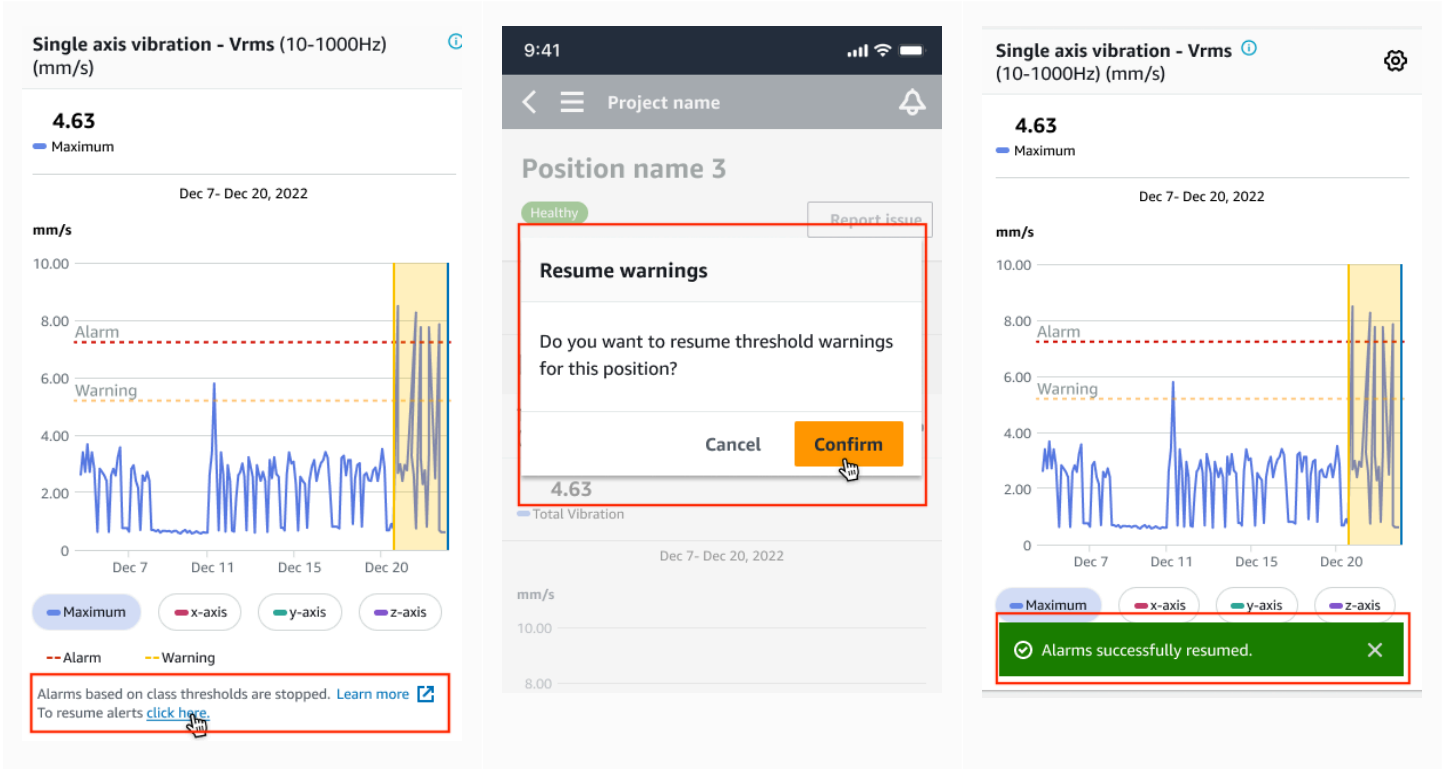
Resume alarms on web app



Resume only warnings

If you've muted warnings, you can choose to resume them.

Resume warnings on mobile app



Resume warnings on web app

Single axis vibration - Vrms (10-1000Hz) (mm/s)

Maximum of x, y or z axis is monitored according to ISO 20816 or class severity.

Warnings based on class thresholds are stopped. [Learn more](#)
To resume alerts [click here](#).

Healthy Report issue

Vibration | Temperature | Sensor details

Date range: Last 2 week < > Download CSV

Total vibration Chart type

Resume warnings

Do you want to resume threshold warnings for this position?

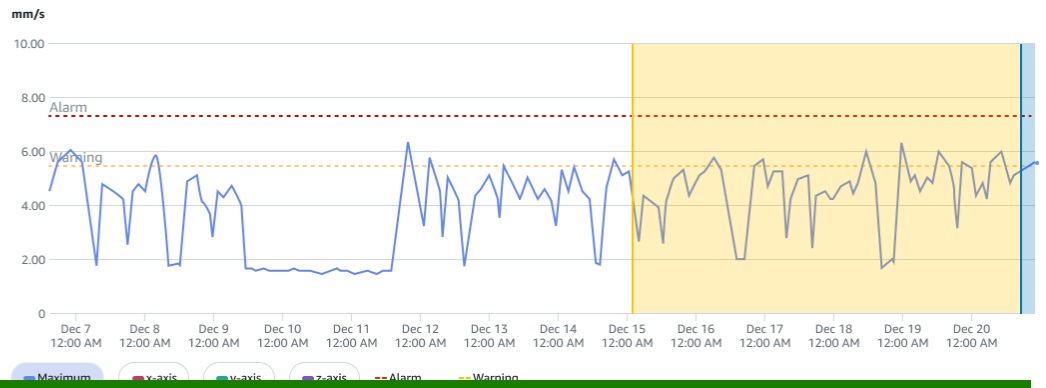
Cancel Confirm

- ▶ Asset name 11 ✓
- ▶ Asset name 12 ✓
- ▶ Asset name 13 ✓
- ▶ Asset name 14 ✓
- ▶ Asset name 15 ✓
- ▶ Asset name 16 ✓
- ▶ Asset name 16 ✓
- ▶ Asset name 16 ✓
- ▶ Asset name 14 ✓
- ▶ Asset name 15 ✓
- ▶ Asset name 16 ✓
- ▶ Asset name 16 ✓

Single axis vibration - Vrms (10-1000Hz) (mm/s)

Maximum of x, y or z axis is monitored according to ISO 20816 or class severity.

Chart type ▼



Alarms successfully resumed. ✕

Detailed documentation

You can learn more about Amazon Monitron by reading the following:

- [Amazon Monitron User Guide](#) – An overview of Amazon Monitron and procedures for common admin and technician tasks. This guide provides information about setting up sites within your project, placement options for gateways and sensors, and Amazon Monitron hardware specifications.

Document history for the Amazon Monitron User Guide

- **Latest documentation update:** January 31, 2024

The following table describes important changes in each release of Amazon Monitron. For notification about updates to this documentation, you can subscribe to the [RSS feed](#).

Change	Description	Date
Unmuting ISO alerts	You can now unmute ISO alerts (alarms and warnings) . See Muting and unmuting alerts for more details.	January 31, 2024
Updated mobile images	Updated vibration ISO and ML temperature charts to show updated measurement functionality.	March 16, 2023
New service and guide	This is the initial release of the Amazon Monitron Getting Started Guide	December 1, 2020