

Thank you for using Analyst Inside!

This User's Guide is intended to help you get Analyst Inside up and running. It is not intended to be a comprehensive manual covering every detailed aspect of the Analyst Inside Configurator software and the Analyst Inside Webpage...we hope that we have made them intuitive enough that you will be able to navigate them without much trouble.

If can't find what you need here, please reach out to us at <insert proper support email here> and we'd be happy to help!

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Getting Started

Getting Analyst Inside up and running is a four step process.

- 1) Install the data acquisition hardware and Analyst Inside module
This includes installing the accelerometers on the machine, wiring the accelerometers to the 1444 Dynamix data acquisition blocks, configuring the 1444s in the Logix Controller, and installing the Analyst Inside module in the control rack
- 2) Configure the Analyst Inside
This is where you tell Analyst Inside what type of machine is being monitored and the location of the accelerometers on the machine. You'll also configure users to receive email and/or text messages when Analyst Inside detects any issues.
- 3) Baseline the Machine
Once the configuration has been downloaded to the Analyst Inside module, the system will baseline the machine's vibration signature under normal operating conditions. This requires 100 samples and typically takes around 25 hours of machine runtime to complete
- 4) Access the Analyst Inside Web Page
Once the configuration is done, most of the interaction with the system will be done via the Analyst Inside web page. This web page is served up from the module itself (as opposed to an external web server out on the Internet somewhere). From this webpage you will be able to view Active Alarms, view historical Alarm Logs, view the state of the Machines being monitored, and perform some troubleshooting diagnostics if necessary

Installation

Install hardware

Install power to the Analyst Inside module and connect Ethernet cable(s).

The standard convention is to connect one NIC port to the Automation network and the other NIC port to the Business/Office network.

Note: The 1444 vibration monitor requires Logix controller version 20 or later

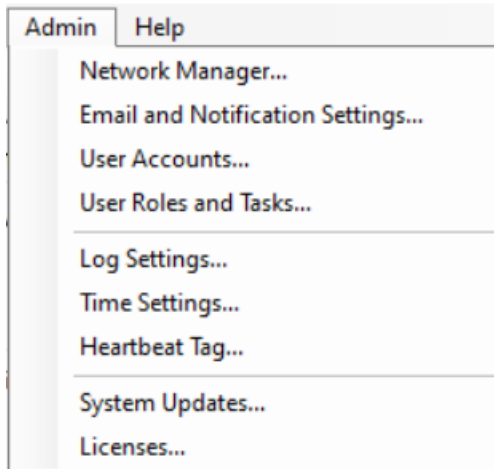
Install configuration software

Initially run the AnalystInsideConfiguratorInstaller.exe file to install the configuration software.

Afterward, firmware updates can be installed to the module using the configuration software. The latest configuration software update can then be installed back to the computer from the Analyst Inside module using the Admin / System Updates function.

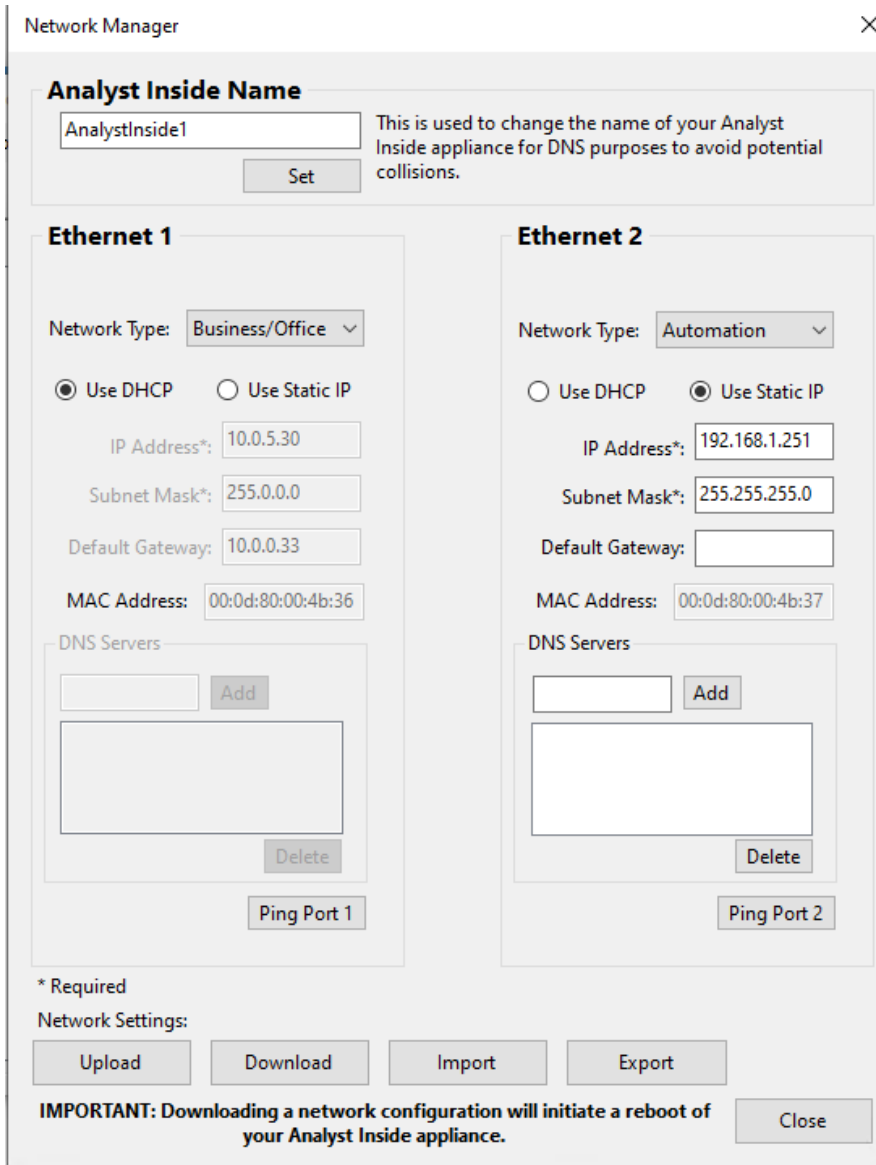
Configure Analyst Inside – Infrastructure

The Admin menu has the following settings:

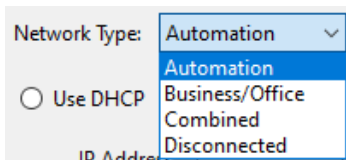


Network settings

Use the Admin / Network Manager dialog to Upload the default network settings (192.168.1.250) from the module, modify as needed, and Download changes back to the module.



Note: A port can also be configured for Combined Automation and Business/Office networks. The other port then defaults to Disconnected.



E-mail and Notification Settings

The Admin / E-mail and Notification Settings function is used to configure the sending of notifications from the Analyst Inside module.

Configure Host Settings with the company E-mail server and (if required) enter a valid username and password with access to the server.

The Message Info section can be configured as desired to indicate where the message is coming from. The address here doesn't have to be an existing E-mail address, it's just for information purposes.

Notification options are configurable and are described in the dialog text.

Selecting the Ignore Pre-Alerts option will prevent the lowest level alarms from generating E-mail/Text notifications.

Email and Notification Settings

Host Settings

Host:

Port: Use TLS

Username:

Password:

Message Info

From Address:

Subject:

Message:

Notifications

Notify on Increasing and Decreasing Alarms

Latch on Highest Alarm

Always Notify

Ignore Pre-Alerts

This generates the fewest notifications. When latched, notifications are not given for secondary alerts on the machine or decreasing alarms unless they increase beyond the highest seen. If they decrease and increase again to the highest or lower levels, no notifications are sent. Notifications are only sent when the highest level increases. This is on a per machine basis, and the highest level resets when all alarms on the given machine are cleared.

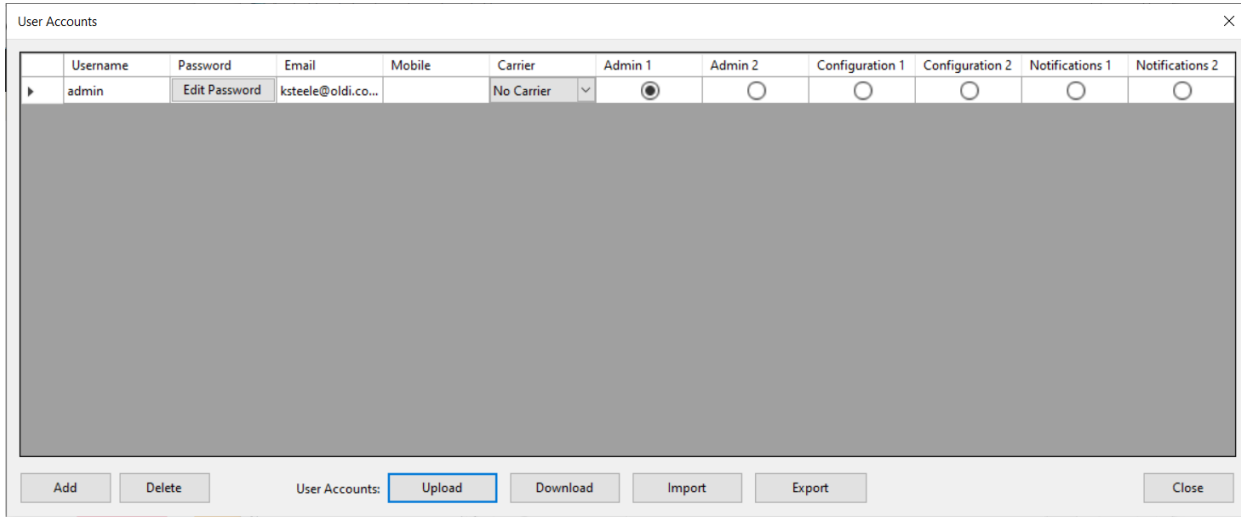
SMTP and Notification Settings:

User Accounts

The Admin / User Accounts function is used for adding users, setting passwords (default for new users is no password), and setting the user type (which determines access privileges).

This is also where E-mail address and Mobile number/carrier are entered for receiving alarm and other notifications.

At least one administrative user should be configured to receive E-mail notifications of when log files are full, system errors, etc.



User Roles and Tasks

The Admin / User Roles and Tasks function is used for customizing the access privileges for each user type.

User Actions	Admin 1	Admin 2	Configuration 1	Configuration 2	Notifications 1	Notifications 2
System Configuration						
Network Configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Time Configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
View Users and Roles	View Users and Roles		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Configure Users and Roles	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Configure Licenses	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Install Updates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Machinery Configuration						
View Machinery Configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Modify Machinery Configuration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Control Raptor						
Start/Pause/Resume Learn Mode and Monitoring	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Start NEW Learn Mode	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
View Notifications & Alerts						
View Notifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Acknowledge Notifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ignore Notifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Comment On Notifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Forward Notifications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Receive Machine Notifications Via Email	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Receive Machine Notifications Via SMS Text	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Receive System Notifications Via Email	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
Receive System Notifications Via SMS Text	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
Perform Log Tasks						
View log files	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Delete log files	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Receive exported log files	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

User Roles:

Licensing

The Analyst Inside will be licensed to some level when purchased, but this function can be used to upgrade the licensed capabilities.

From the Admin menu, select Licenses...

Select the number of Points to license and enter a User ID for reference.

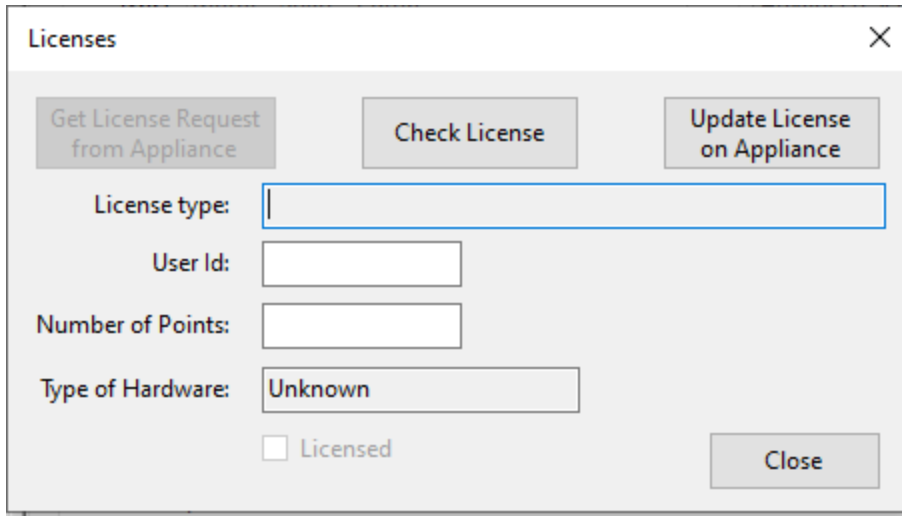
Click the Get License Request from Appliance button.

Login to the module, then save the request to a file.

Forward (e.g. E-mail) the License Request file to get a License file.

Click the Update License on Appliance button, browse to open the provided license file to download it to the module.

Click the Check License button to confirm licensing.



The screenshot shows a dialog box titled "Licenses" with a close button (X) in the top right corner. The dialog contains several interactive elements:

- Three buttons at the top: "Get License Request from Appliance", "Check License", and "Update License on Appliance".
- A "License type:" label followed by an empty text input field.
- A "User Id:" label followed by an empty text input field.
- A "Number of Points:" label followed by an empty text input field.
- A "Type of Hardware:" label followed by a dropdown menu currently showing "Unknown".
- A checkbox labeled "Licensed" which is currently unchecked.
- A "Close" button in the bottom right corner.

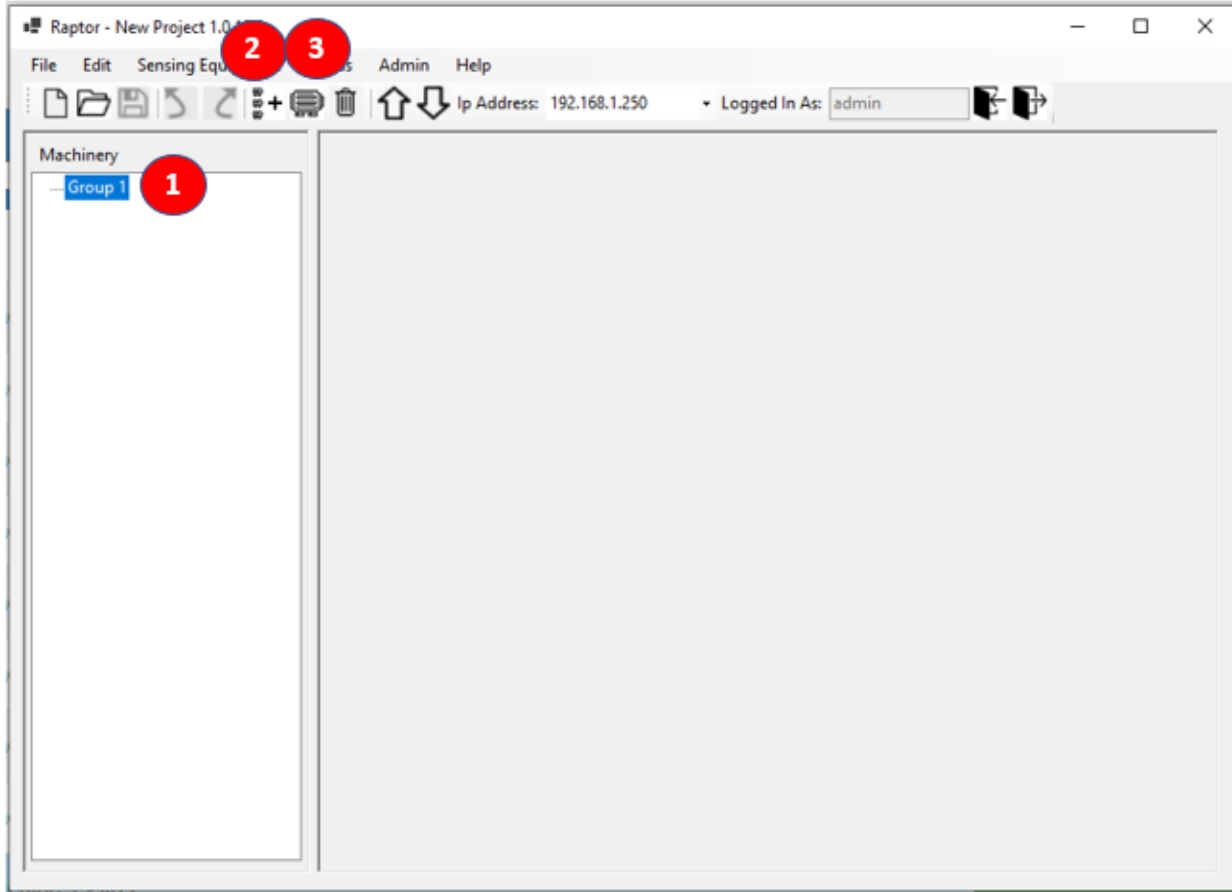
Configure Analyst Inside – Machine Information

Configure Basic Machine Info

Use Groups to organize Machines as desired, e.g., by plant area. Click on a Group (1) in the navigation tree to edit the Group Name.

Click the Add Group button (2) to add additional Groups.

Highlight a Group and click the Add Machines button (3) to add Machines under the appropriate Group. Note: Hover over the buttons to see tooltips describing the buttons.



When adding a Machine, configure the following settings to match the physical machine.

The screenshot shows a 'Basic Settings' dialog box with the following fields and options:

- 1** Machine Type: Motor - Load (dropdown menu)
- 2** Coupling: Direct Shaft, Belt Drive, Gearbox
- 3** Motor to Load Speed Ratio: 1.0 (text input field)
- 4** Machine Orientation: Horizontal Layout, Vertical Layout, Don't Know
- 5** Load Mounting Style: Centerhung, Overhung, Don't Know
- 6** Machine Sensor Prioritization: Standard Machine (2 sensors), Critical Machine (6 sensors)

Buttons: OK, Cancel

Select the Machine Type (1). e.g. Motor/Pump, Motor/Fan, or Motor/Load (for other types of driven components). This will affect the type of analysis performed on the machine, as well as the naming conventions used throughout the system.

Select the type of Coupling (2).

For Belt or Gear couplings, enter the speed ratio (3). This will calculate the speed of the driven component, which is essential for vibration analysis.

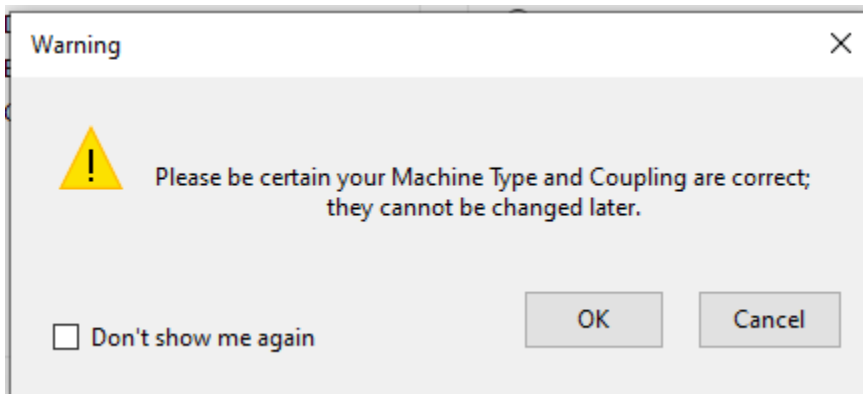
Select the Machine Orientation (4). This will affect the type of analysis performed, as well as the naming convention for measurement location.

Select the driven component mounting style (5). This will affect the type of analysis performed. e.g. Centerhung is for components suspended between two bearings and Overhung is for components suspended beyond one or two bearings.

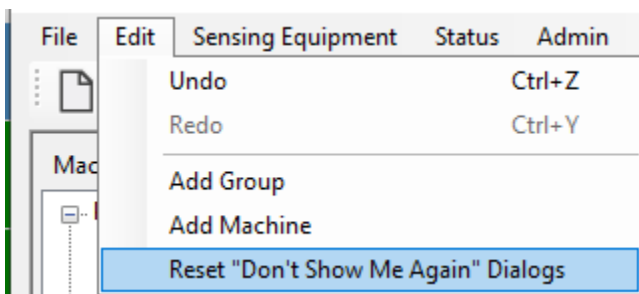
Select Standard or Critical (6) to generate the number of default sensor locations. Note: additional default locations are generated for machine drive trains that include a gearbox. Additional locations can also be manually added after creating a Standard configuration.

Click OK to close this dialog.

A confirmation dialog is displayed to ensure the Machine and Coupling types are correct, as these settings cannot be changed after the machine configuration is created. After saving, changing these settings requires deleting the machine configuration and starting over. Checking the “Don't show me again” box will prevent this dialog from being displayed for future machine configurations.



Note: This type of warning dialog can be restored by selecting the Edit / Reset “Don't Show Me Again” Dialogs command.



Click OK to confirm the settings.

Note: Click the Basic Settings... button to return to the Basic Settings dialog.



The image shows a configuration panel titled "Machine Identity". It contains two input fields: "Name" with the value "Motor and Pump 123" and "Type" with the value "Motor - Shaft - Pump". To the right of these fields are two buttons: "Basic Settings..." and "Advanced Settings" with a downward arrow.

Bind Sensor Mounting Locations to Vibration Input Channels

This step is to link Sensor Mounting Locations in the configuration software to physical vibration sensor input channels.

Click the ellipsis (...) button (1) next to each Sensor Mounting Location to link it to a physical vibration sensor channel.

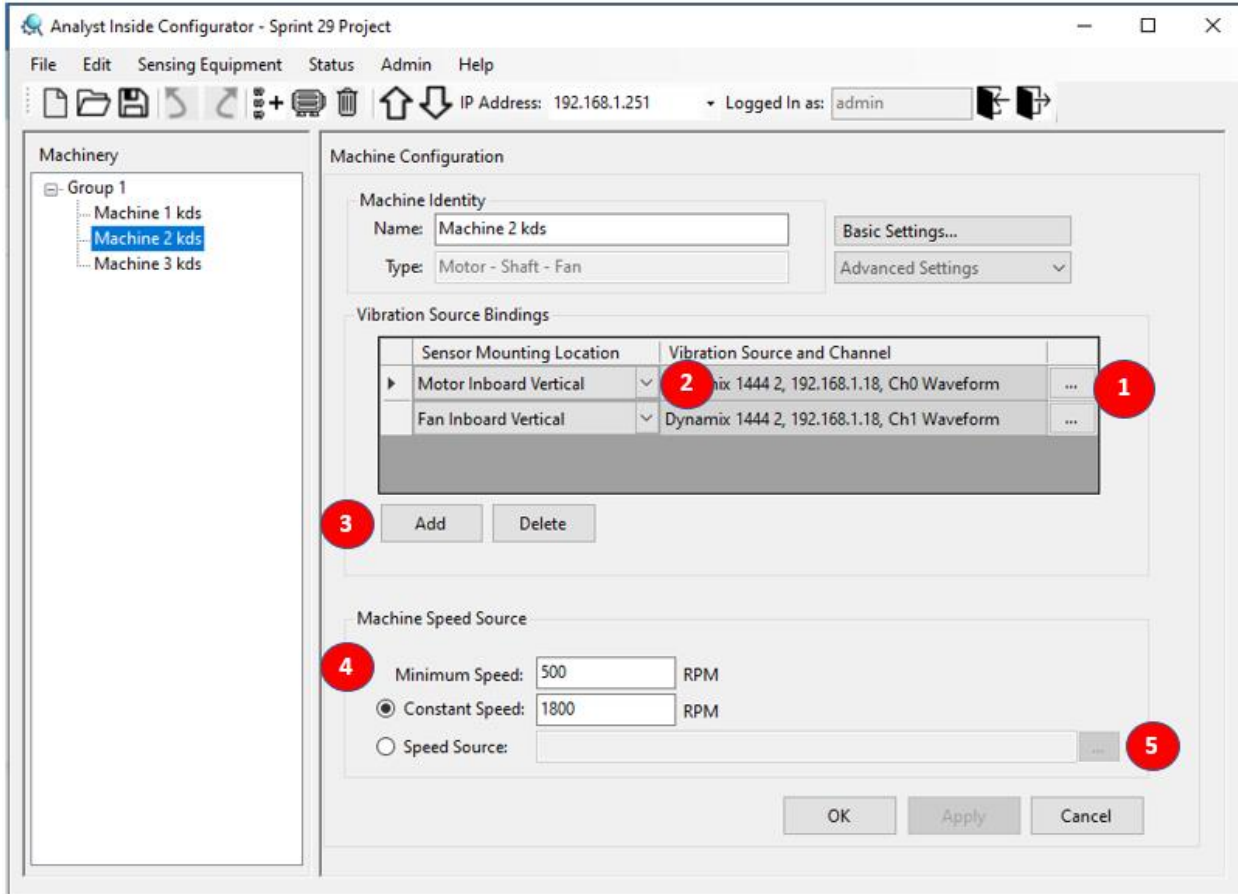
Use the Sensor Mounting Location drop down lists (2) to change/select from the available sensor mounting locations to link to physical input channels.

Use the Add/Delete buttons (3) to add or delete from the set of available Sensor Mounting Locations.

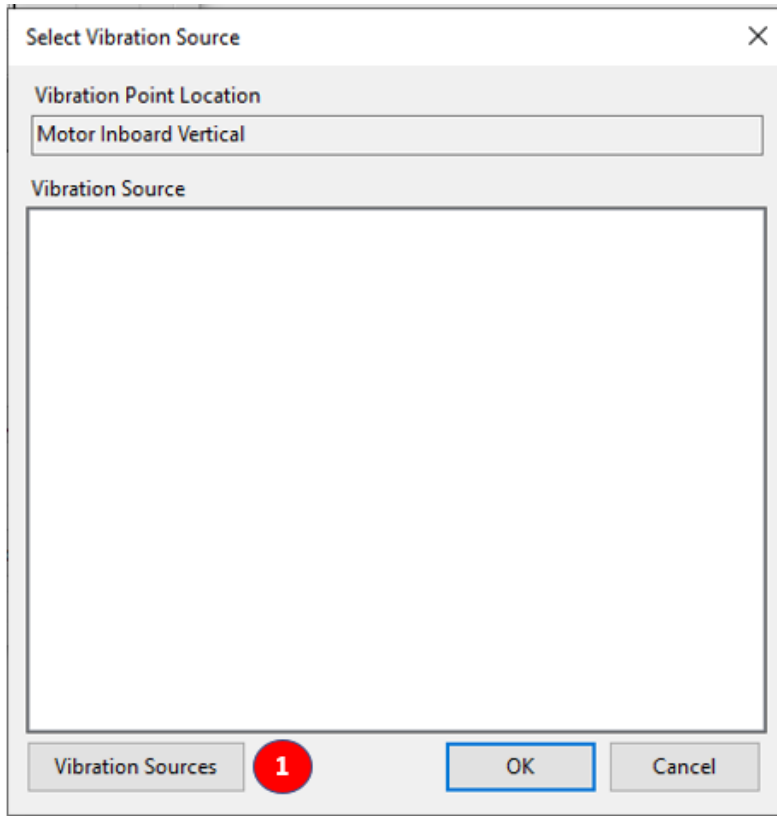
Enter a Constant Speed value for the machine or select the Speed Source option (4) to obtain the machine speed from a controller tag.

A Minimum Speed is configurable, below which vibration monitoring will be suspended. (e.g. if the machine has stopped, or running so slow that vibration monitoring is not useful).

If the Speed Source option is selected, click the ellipsis (...) button (5) to link to a controller tag for reading a variable machine speed.



After clicking the ellipsis button next to a Sensor Mounting Location, to link it to a physical vibration sensor channel, click the Vibration Sources button (1) to add a vibration source (e.g., a 1444).



On the following dialog, enter the IP Address of the 1444 module.

The Label for the 1444 can also be edited.

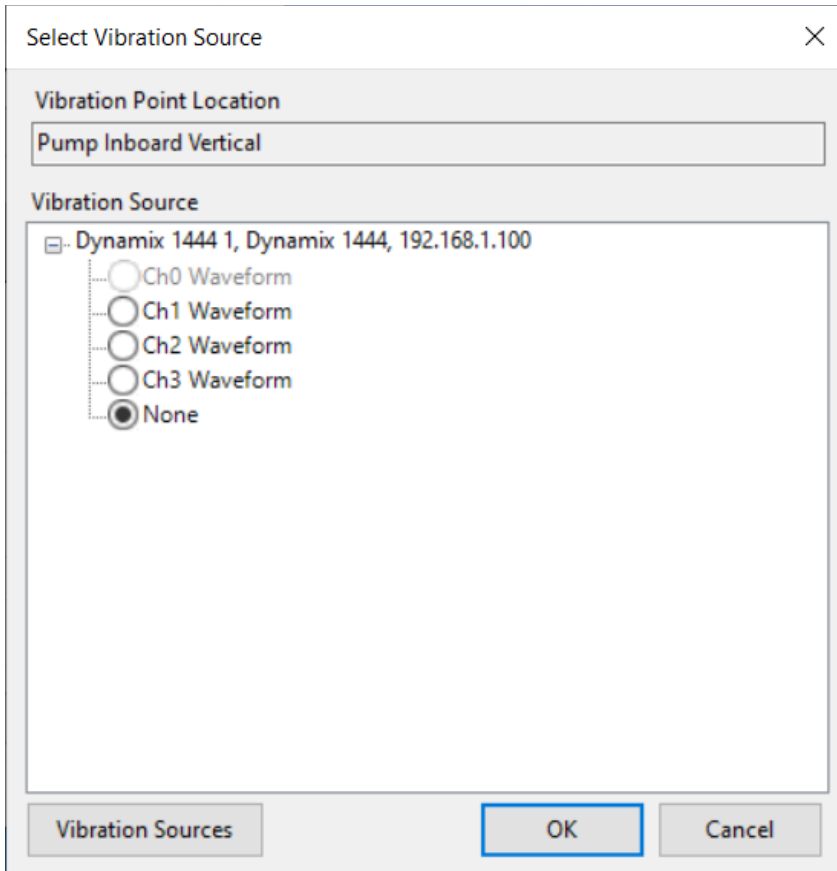
Then, click OK.

Vibration Sources

	Label	Type	IP Address
▶	Dynamix 1444 1	Dynamix 1444	

Add Delete Dynamix 1444 ▼ OK Cancel

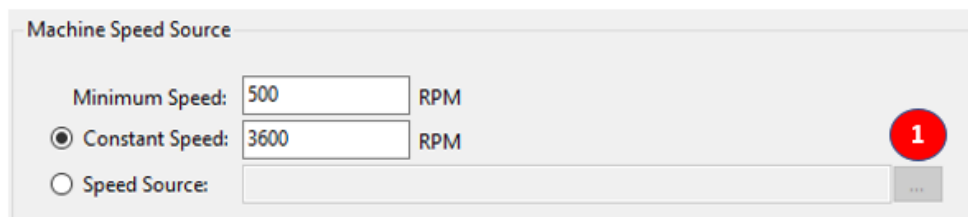
Click a radio button to select the desired vibration Channel input (channels that have already been assigned are grayed out), then click OK



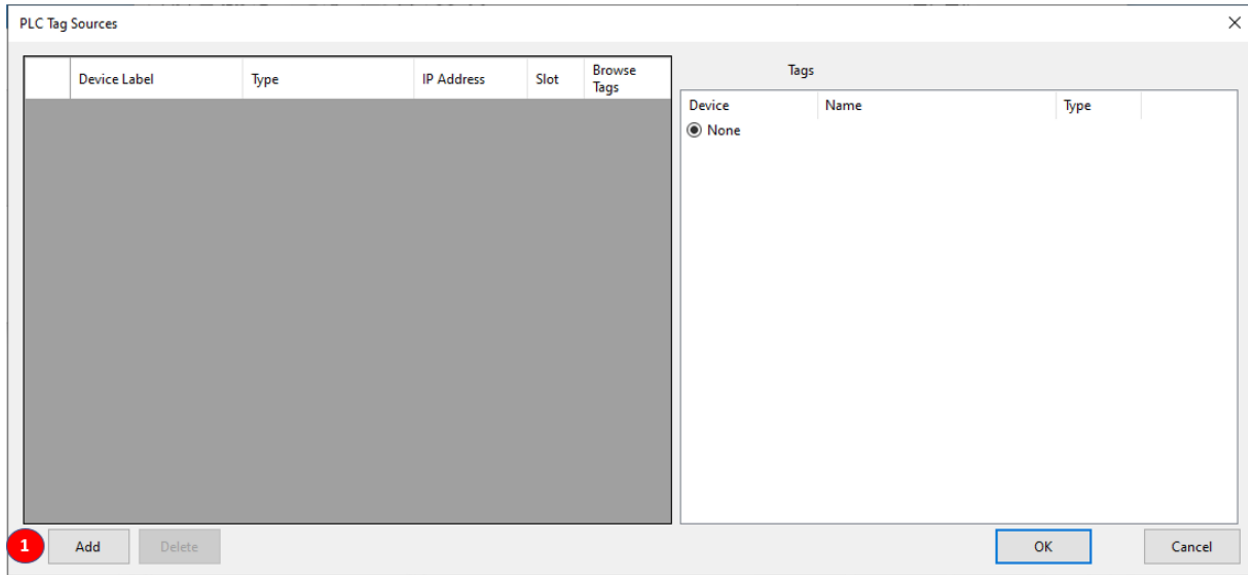
Configure Machine Speed / Source

Enter a Constant Machine Speed, or for variable speed machines select the Speed Source option to browse to a Tag from the controller to indicate the current machine speed.

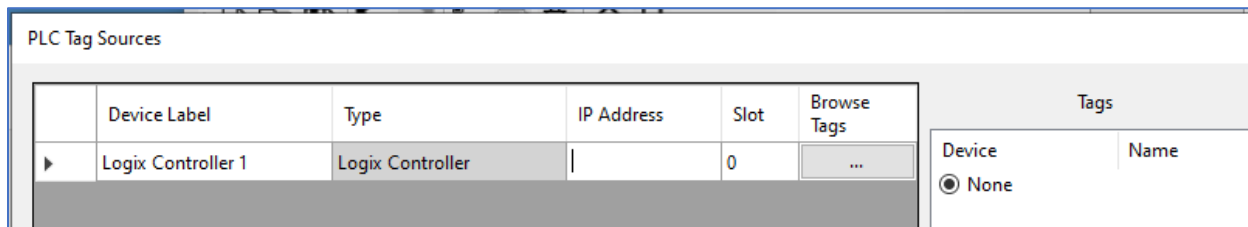
Click the ellipsis button (1) to browse to a Speed tag. The speed tag type must be a numerical value.



Click the Add (1) button on the following dialog to add a controller.



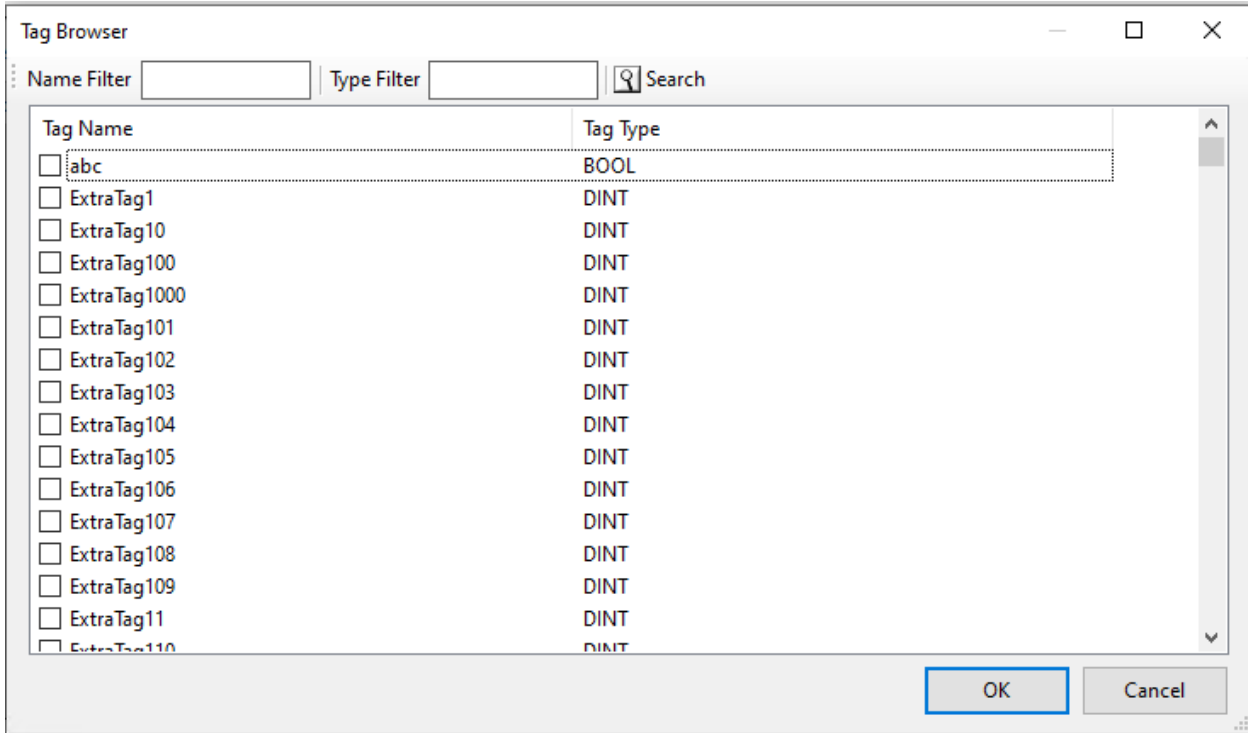
Enter the IP address and slot number of the controller. The Device Label can also be edited.
 Click the Browse Tags ellipsis button to display a list of selectable tags



An Alias tag must be created in Logix Designer for the tag to show up in this list. The Alias tag should be linked to a Speed tag from a 1444.

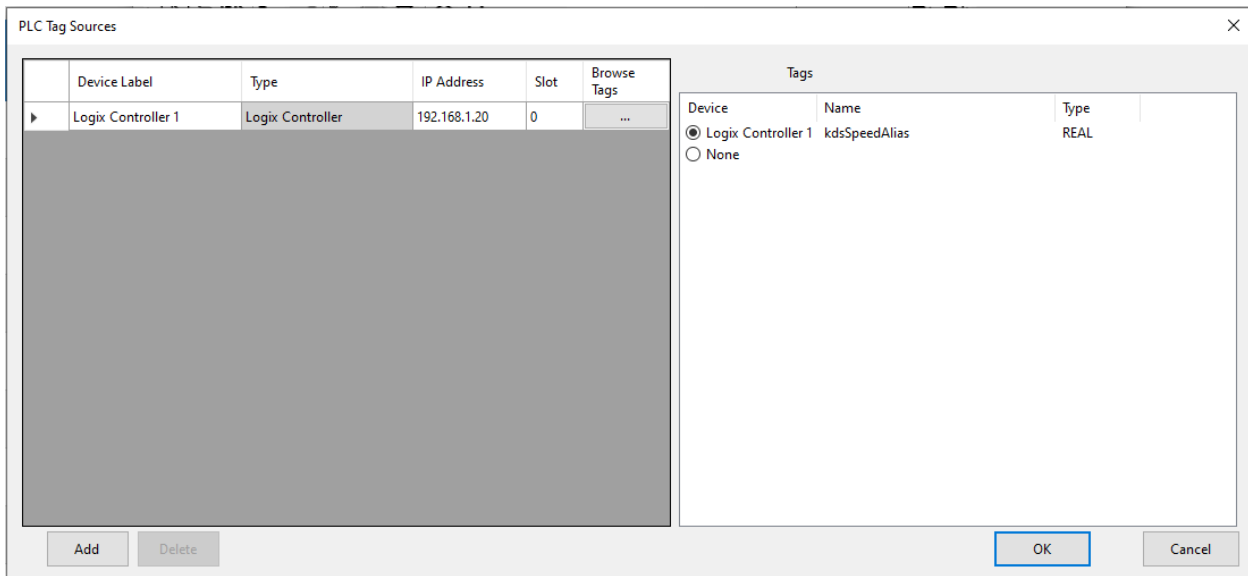
If the tag list is long, the Name and Type filter fields can be used to reduce the number of tags displayed (enter text to search for, then click the Search button).

Select a Speed Alias Tag and click OK.

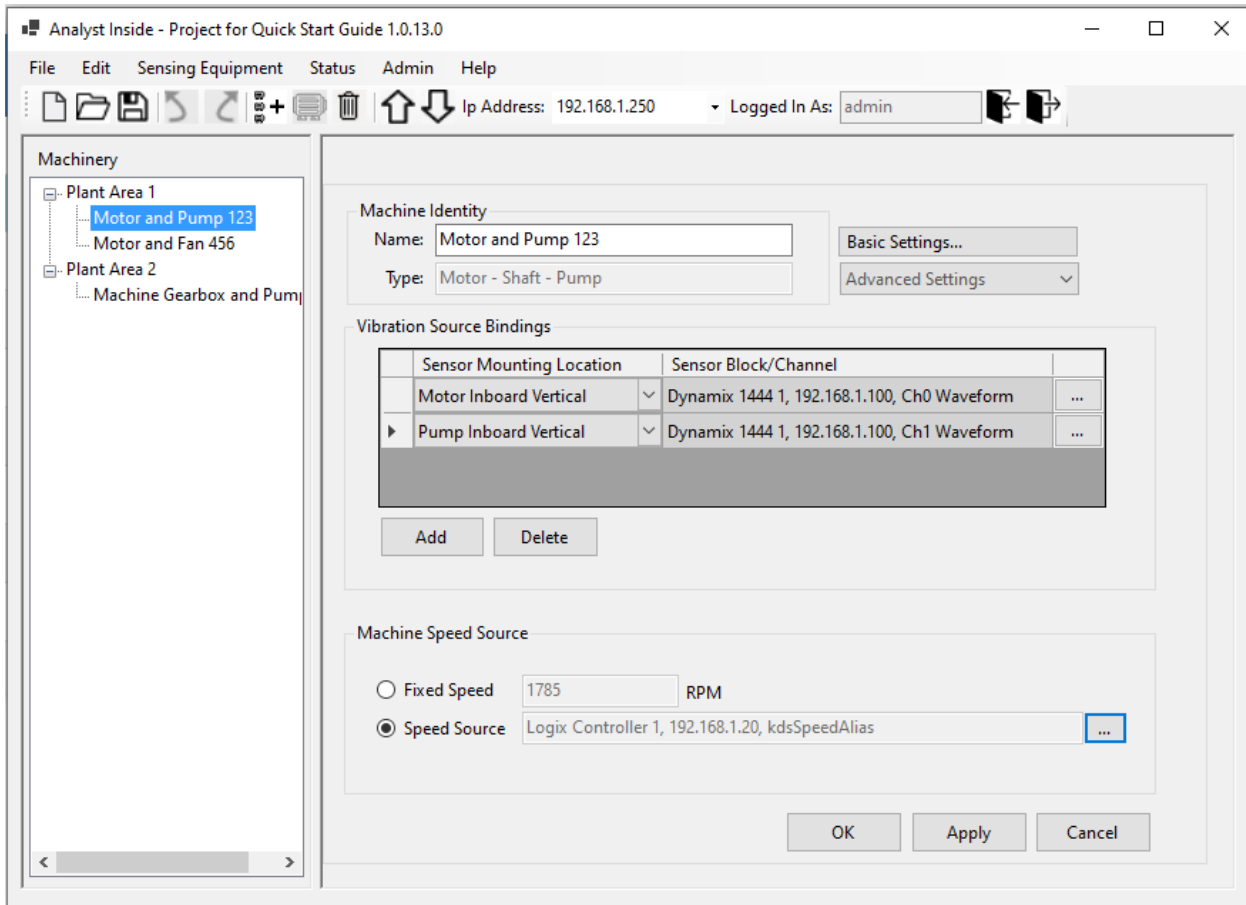


The selected Speed tag will then be displayed on the following dialog.

Make sure the desired Speed tag is selected and click OK to finalize the selection.



When complete, the configuration could look something like this:



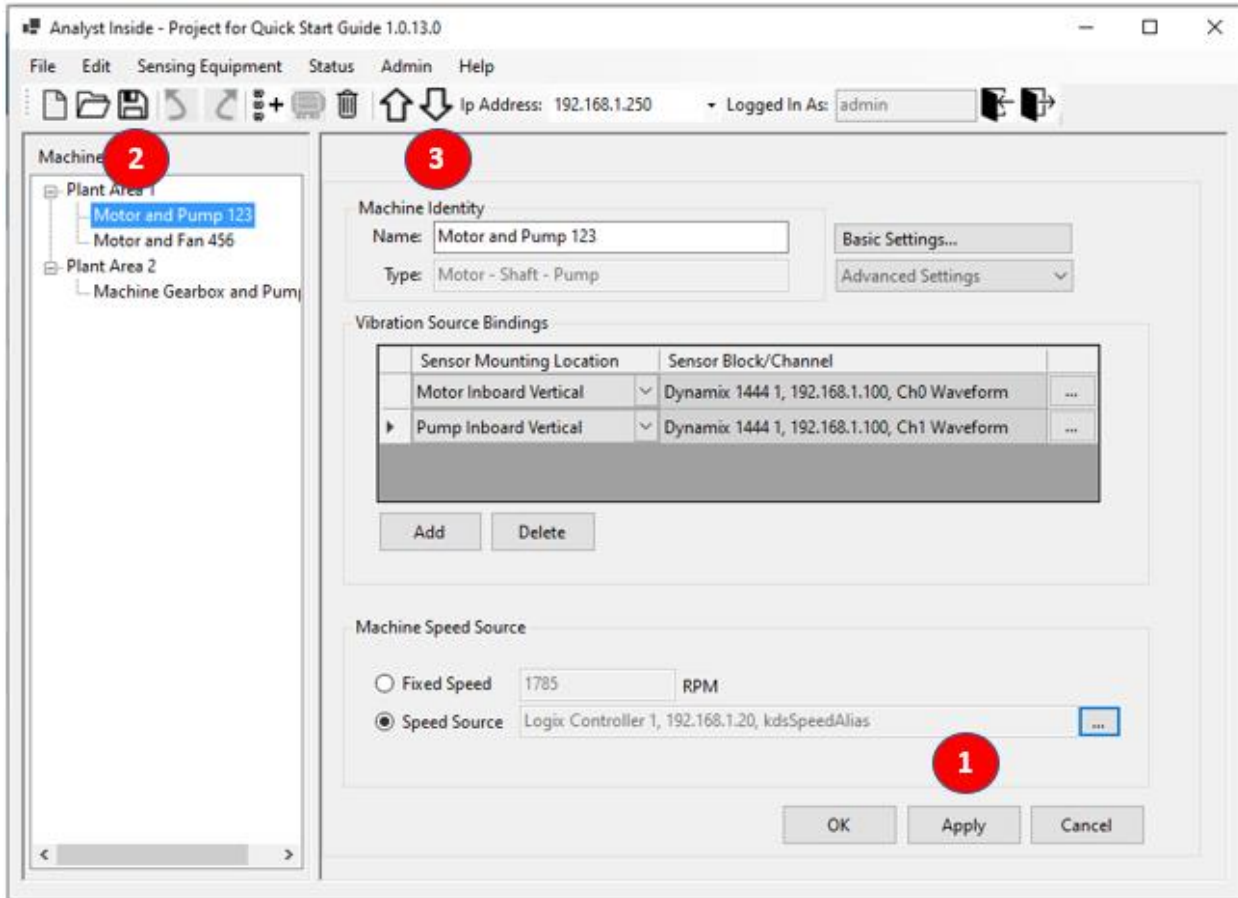
Save / Download

After assigning Vibration and Speed sources, click Apply (1) to save changes.

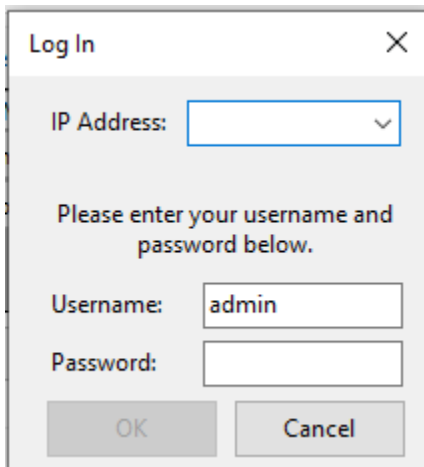
Click the file Save (2) button to save a backup of the project to a file on the computer hard drive.

Click the Download arrow (3) to download the configuration to the Analyst Inside module.

Note: Clicking the Upload arrow will retrieve the configuration that is currently loaded in the module.



Note: If not already logged in, a prompt will appear to enter the IP address of the module and enter a username and password.

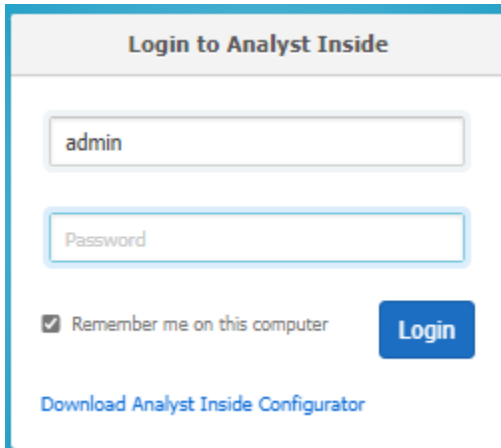


A confirmation dialog is displayed after the Download is complete.

Web App

Launch a web browser and enter the IP address of the Analyst Inside module.

Enter a valid username and password to login to the Analyst Inside module.



Note: The Configurator software can also be downloaded from this menu, without logging in.

Machines page

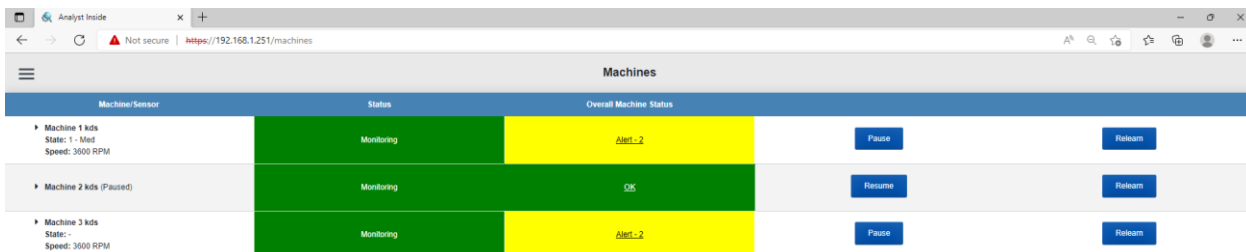
The Analyst Inside Web Application initially opens on the Machines page (or on the last page that was selected before a browser session expired).

The Status column indicates whether the machine is Monitoring for alarms, or is still in a state of Learning the machine's baseline vibration characteristics, or if a channel is unconfigured.

The Overall Machine Status column indicates the highest alarm level of the machine.

Pause: The Pause button will pause the monitoring of the machine (for example when the machine is down for repair)

Relearn: The Relearn button will cause the Analyst Inside module to relearn a new baseline state for a machine (for example, after the machine is replaced or repaired). Note: After a repair, the Analyst Inside should be allowed to run for a while with the previous baseline data to confirm the repair was successful and the alarm state has returned to OK.



Machine/Sensor	Status	Overall Machine Status	Buttons
Machine 1 kds State: 1 - Med Speed: 3600 RPM	Monitoring	Alarm 2	Pause, Relearn
Machine 2 kds (Paused)	Monitoring	OK	Resume, Relearn
Machine 3 kds State: - Speed: 3600 RPM	Monitoring	Alarm 2	Pause, Relearn

Expanding a machine displays the individual measurement points/channels on a machine.

Machines			
Machine/Sensor	Status	Overall Machine Status	
Machine 1 kds State: 1 - Med Speed: 3600 RPM	Monitoring	Alert 2	Pause Release
Motor Inboard Vertical	Monitoring	Details	
Pump Inboard Vertical	Monitoring	Details	

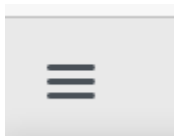
Details: The Detail buttons provide more information such as what Speed Range and State condition a channel is monitoring.

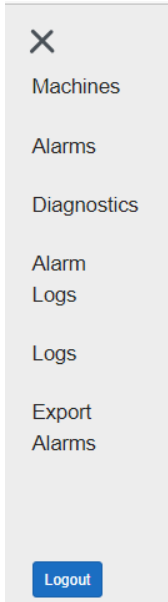
Motor Inboard Vertical ✕

Name: Dynamix 1444 1
Attribute: Ch0 Waveform
IP Address: 192.168.1.100

	State/ Speed	Status
	0 - Hot 3420 - 3779	Monitoring
	0 - Hot 4140 - 4499	Monitoring
✓	1 - Med 3420 - 3779	Monitoring
	1 - Med 4140 - 4499	Learning
	2 - Cold 3420 - 3779	Monitoring
	2 - Cold 4140 - 4499	Learning

The “hamburger” menu at the top left corner provides navigation between the Machines, Active Alarms, Diagnostics, Alarm Logs, and Logs pages; as well as Alarm Export and Logout functions.

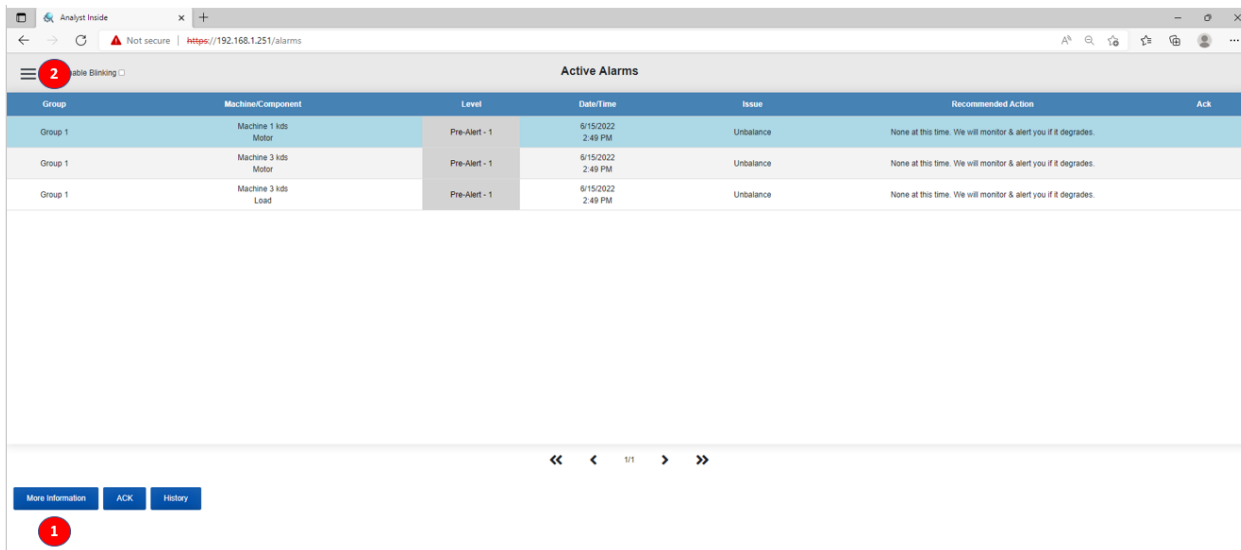




Active Alarms page

Clicking the hamburger menu and selecting the Active Alarms page displays currently active alarms.

Note: For a particular Machine/Component, the highest alarm from any speed/state will be displayed, even if that speed/state is not currently active.



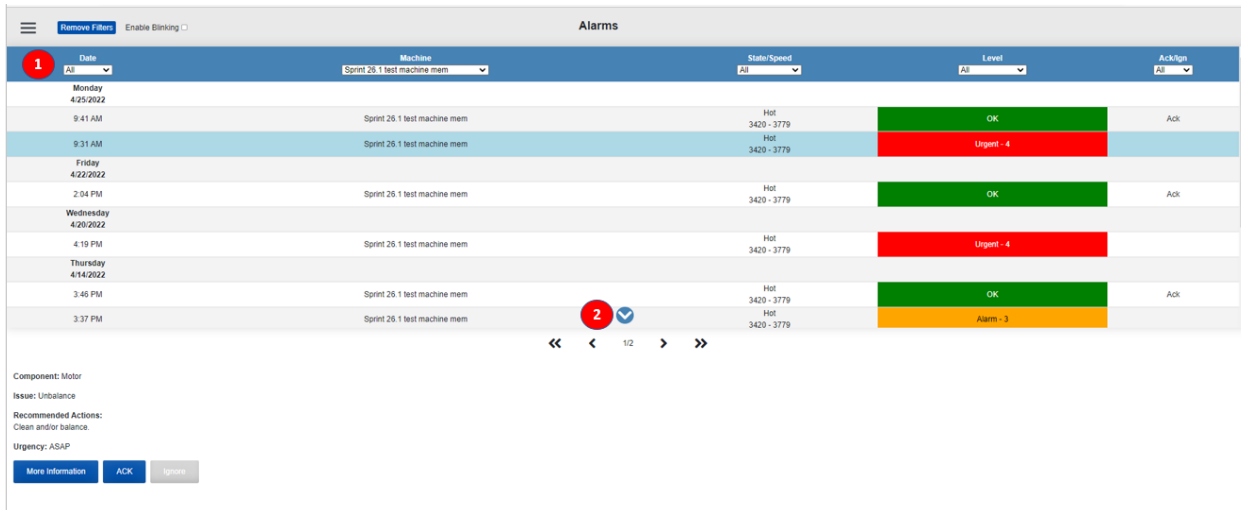
The buttons (1) at the bottom left allow more information to be displayed for a selected alarm, or to Acknowledge the alarm, or to display a History of the alarm.

The Enable Blinking check-box, next to the hamburger menu, controls whether unacknowledged alarms blink or not.

The filter selections in the top row (1) of the Alarms page provide the ability to focus in on specific alarms of interest. The Remove Filters button in the top left corner will remove any selected filtering.

Alarms are listed by date/time. Each row includes details on the Machine name, the State/Speed in which the alarm occurred, the alarm severity, and the acknowledged/Ignore state.

The blue down-arrow button (2) indicates more alarms are listed on the current page.



The screenshot shows the 'Alarms' page interface. At the top, there are filter controls: 'Remove Filters' (with a red circle '1' next to it), 'Enable Blinking', and a title 'Alarms'. Below this is a table with columns: 'Date', 'Machine', 'State/Speed', 'Level', and 'Ack/Ignore'. The table lists several alarm events across different days (Monday, Friday, Wednesday, Thursday). The last row of the table has a blue down-arrow button (with a red circle '2' next to it) in the 'Machine' column, indicating more alarms are available. Below the table is a pagination control showing '<< < 1/2 > >>'. At the bottom, there is a 'More Information' dialog box with fields for 'Component: Motor', 'Issue: Unbalance', 'Recommended Actions: Clean and/or balance', and 'Urgency: ASAP'. It includes buttons for 'More Information', 'ACK', and 'Ignore'.

Date	Machine	State/Speed	Level	Ack/Ignore
Monday 4/25/2022	Sprint 25.1 test machine mem	Hot 3420 - 3779	OK	Ack
9:41 AM	Sprint 25.1 test machine mem	Hot 3420 - 3779	Urgent - 4	
9:31 AM	Sprint 25.1 test machine mem	Hot 3420 - 3779	OK	Ack
Friday 4/22/2022	Sprint 25.1 test machine mem	Hot 3420 - 3779	OK	Ack
2:04 PM	Sprint 25.1 test machine mem	Hot 3420 - 3779	OK	Ack
Wednesday 4/20/2022	Sprint 25.1 test machine mem	Hot 3420 - 3779	Urgent - 4	
4:19 PM	Sprint 25.1 test machine mem	Hot 3420 - 3779	Urgent - 4	
Thursday 4/14/2022	Sprint 25.1 test machine mem	Hot 3420 - 3779	OK	Ack
3:48 PM	Sprint 25.1 test machine mem	Hot 3420 - 3779	OK	Ack
3:37 PM	Sprint 25.1 test machine mem	Hot 3420 - 3779	Alarm - 3	

Double clicking an alarm row (or clicking the More Information button) opens a More Information dialog.

Clicking the Add Note button under the “Notes for This Issue” field, allows notes to be entered for this specific alarm instance.

Clicking the Add Note button under the “Notes for This Type of Issue” allows notes to be entered that will show up on all instances of this same issue, regardless of the alarm severity level.

More Information ×

Machine: Machine 1 kds

State: 1 - Med

Speed Band: 3420 - 3779

Date/Time: 6/17/2022 11:16 AM

Component: Motor

Likely Issue: Unbalance

Level: Alert - 2

Recommended Actions:
Clean and/or balance.

Urgency: When convenient

Notes For This Issue:

[Add Note](#)

Notes For This Type of Issue:

[Add Note](#)

ACK

Copy+Link

Analyst

Reset

Buttons at the bottom of this dialog provide options for Acknowledging an alarm. This tag can be used to filter the displayed list of alarms.

The Reset option is for rare cases when an alarm is present from a State the machine no longer runs in. This can be used to reset the alarm to an OK state, which will prevent it from being considered in determining the overall alarm state displayed on the Machines page. The Reset function should not be used on alarms for a currently active machine speed/state.

Clicking the Analyst button provides additional information on what is generating the alarm.

<
Analyst
×

Machine: Machine 1 - kds

State: N/A

Speed Band: 3420.0676 - 3780.075

Alarm Date: 12/30/2021 8:22 PM

Component: Motor

Issue: Unbalance

Level: Critical - 5

Recommended Actions:
Clean and/or balance.

Urgency: Now

Evidence

Fault Type: Unbalance

Asset Name: Motor Inboard Vertical

Alarm Level: Critical

Feature Type: HarmonicsOfRunningSpeed

Harmonic Number: 1

Fault Type: Undetermined

Asset Name: Motor Inboard Vertical

Alarm Level: Critical

Feature Type: RadarPlotFFT

Harmonic Number: 4

Fault Type: Undetermined

Asset Name: Motor Inboard Vertical

Alarm History Page for a specific alarm

Clicking the History button, at the bottom of the Active Alarms page, displays a history of that alarm.

☰ Enable Blinking
Active Alarms

Group	Machine/Component	Level	Date/Time	Issue	Recommended Action	Ack
Group 1	Machine 1 kds Motor	Alert - 2	6/17/2022 11:16 AM	Unbalance	Clean and/or balance.	

[Show Cleared Alarms](#) [Show Unspecified Alarms](#)

Group	Machine/Component	Level	Date/Time	Issue	State	Speed
Group 1	Machine 1 kds Motor	Alert - 2	6/17/2022 11:16 AM	Unbalance	1 - Med	3420 - 3779
Group 1	Machine 1 kds Motor	Pre-Alert - 1	6/15/2022 2:49 PM	Unbalance	1 - Med	3420 - 3779
Group 1	Machine 1 kds Motor	OK	6/15/2022 1:14 PM	Unbalance	1 - Med	3420 - 3779
Group 1	Machine 1 kds Motor	OK	6/15/2022 1:08 PM	Unbalance	2 - Cold	3420 - 3779
Group 1	Machine 1 kds Motor	Urgent - 4	6/14/2022 12:01 PM	Unbalance	2 - Cold	3420 - 3779
Group 1	Machine 1 kds Motor	Alarm - 3	6/14/2022 11:56 AM	Unbalance	2 - Cold	3420 - 3779
Group 1	Machine 1 kds Motor	Urgent - 4	6/14/2022 11:03 AM	Unbalance	2 - Cold	3420 - 3779
Group 1	Machine 1 kds Motor	Alarm - 3	6/14/2022 10:43 AM	Unbalance	2 - Cold	3420 - 3779

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More Information
ACK
Close History

Diagnostics page

Selecting the Diagnostics option from the hamburger menu provides additional information on system issues. A red triangle is used to draw attention to specific issues, such as a bad sensor.

Diagnostics			
Machine/ Sensor			
<ul style="list-style-type: none"> Sprint 26.1 test machine mem Test 	State: Read Successful 0 - Hot	Speed: Read Successful 3600.0713 rpm	
<ul style="list-style-type: none"> Machine 2 - Read test with bad sensor Test 	State: Read Successful	Speed: Read Successful 3500 rpm	
Motor Inboard Vertical	Device: Dynamic: 1444.1 IP: 192.168.1.100 Channel: Ch3 Waveform	Sensor Communication: Read Successful	Waveform: Invalid ▲
Pump Inboard Vertical	Device: Dynamic: 1444.2 IP: 192.168.1.18 Channel: Ch0 Waveform	Sensor Communication: Read Successful	Waveform: Valid
<ul style="list-style-type: none"> Machine 1 Test 	State: Read Successful	Speed: Read Successful 1785 rpm	

Alarm Logs page

Selecting the Alarm Logs option from the hamburger menu lists all alarms that have occurred for all machines.

Alarm Logs						
Group	Machine/Component	Level	Date	Issue	State	Speed
Group 1	Machine 2 kds Fan	OK	6/6/2022 2:16 AM	Unspecified issue	-	1710 - 1889
Group 1	Machine 2 kds Motor	Alarm - 3	6/6/2022 2:11 AM	Misalignment	-	1710 - 1889
Group 1	Machine 2 kds Fan	Pre-Alert - 1	6/6/2022 2:11 AM	Unspecified issue	-	1710 - 1889
Group 1	Machine 2 kds Motor	Alert - 2	6/6/2022 1:41 AM	Misalignment	-	1710 - 1889
Group 1	Machine 2 kds Fan	OK	6/6/2022 1:34 AM	Unspecified issue	-	1710 - 1889
Group 1	Machine 2 kds Fan	Pre-Alert - 1	6/6/2022 1:30 AM	Unspecified issue	-	1710 - 1889
Group 1	Machine 2 kds Fan	OK	6/6/2022 1:21 AM	Unspecified issue	-	1710 - 1889
Group 1	Machine 2 kds Fan	Pre-Alert - 1	6/6/2022 1:16 AM	Unspecified issue	-	1710 - 1889
Group 1	Machine 2 kds Motor	Alarm - 3	6/6/2022 1:01 AM	Misalignment	-	1710 - 1889
Group 1	Machine 2 kds Motor	Alert - 2	6/6/2022 12:54 AM	Misalignment	-	1710 - 1889

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[More Information](#)

Logs page

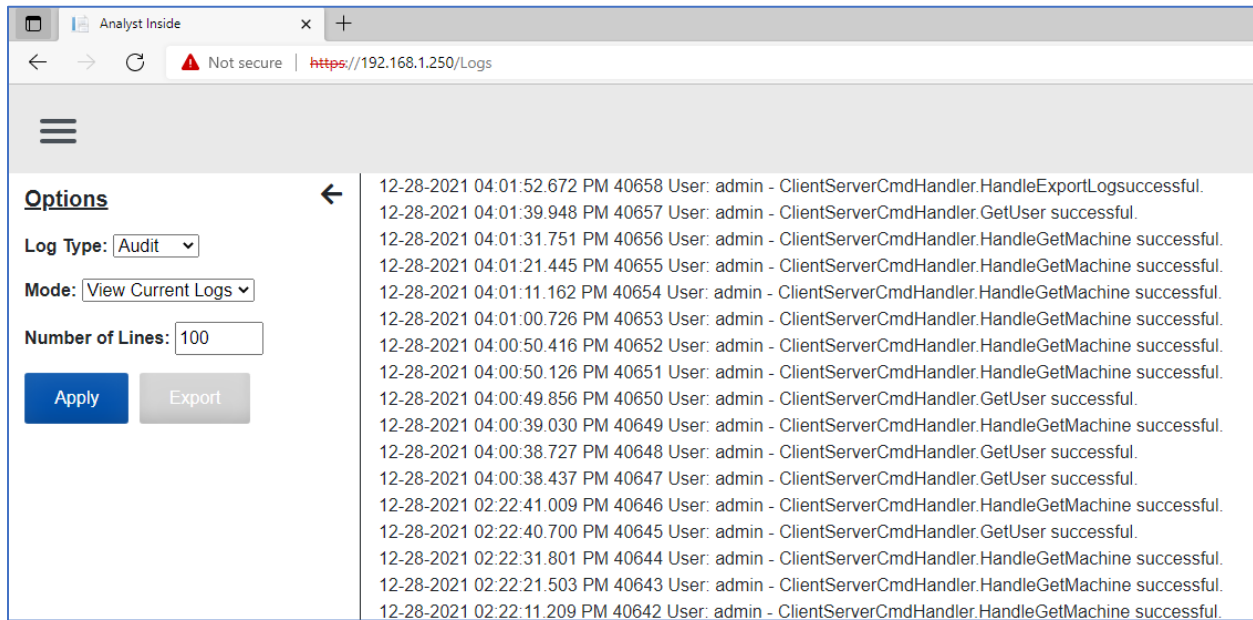
Clicking the hamburger menu and selecting the Logs page provides detailed log information. The Log type can be selected as Audit or System (Consider System Logs to be debug and general operations information. Audit log is for user interactions, login/out, change of configuration etc.).

The mode can be set to current or historical logs.

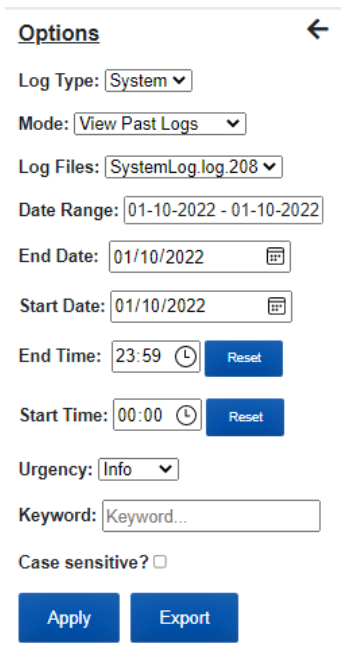
The number of log lines to display can be entered.

After making changes to the Options selections, click the Apply button to make them take effect.

Example of View Current Logs:



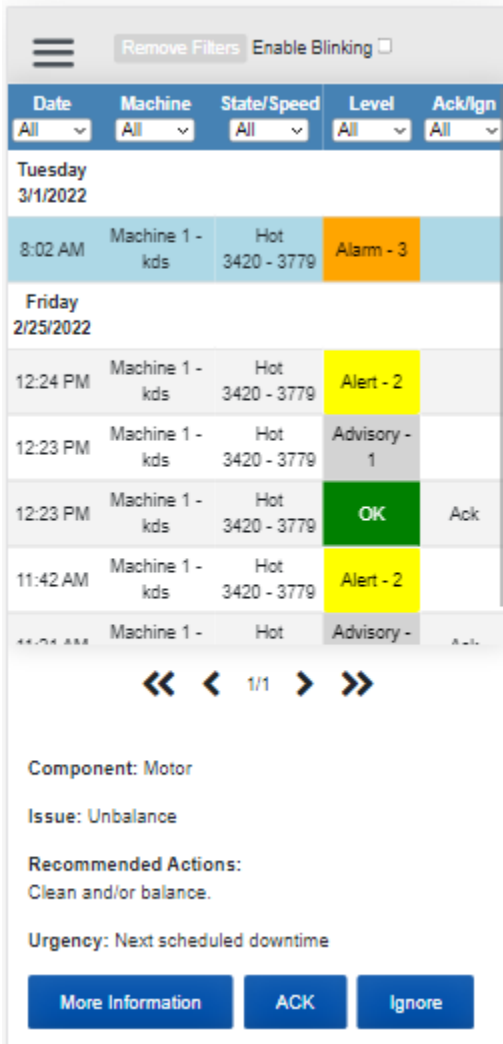
Example of View Past Logs filtering options:



Smart Phone / Tablet Interaction

From a web browser on a smart phone or tablet device, enter the IP address and login credentials for an Analyst Inside module to see similar screens as from the Web App running on a PC.

This interface works basically the same as the Web App on a PC, except for slight formatting changes to fit on a smaller screen, and the use of tap and swipe gestures instead of mouse clicks and scroll bars.



Notifications can also be configured to send E-mail and/or text messages to a phone.

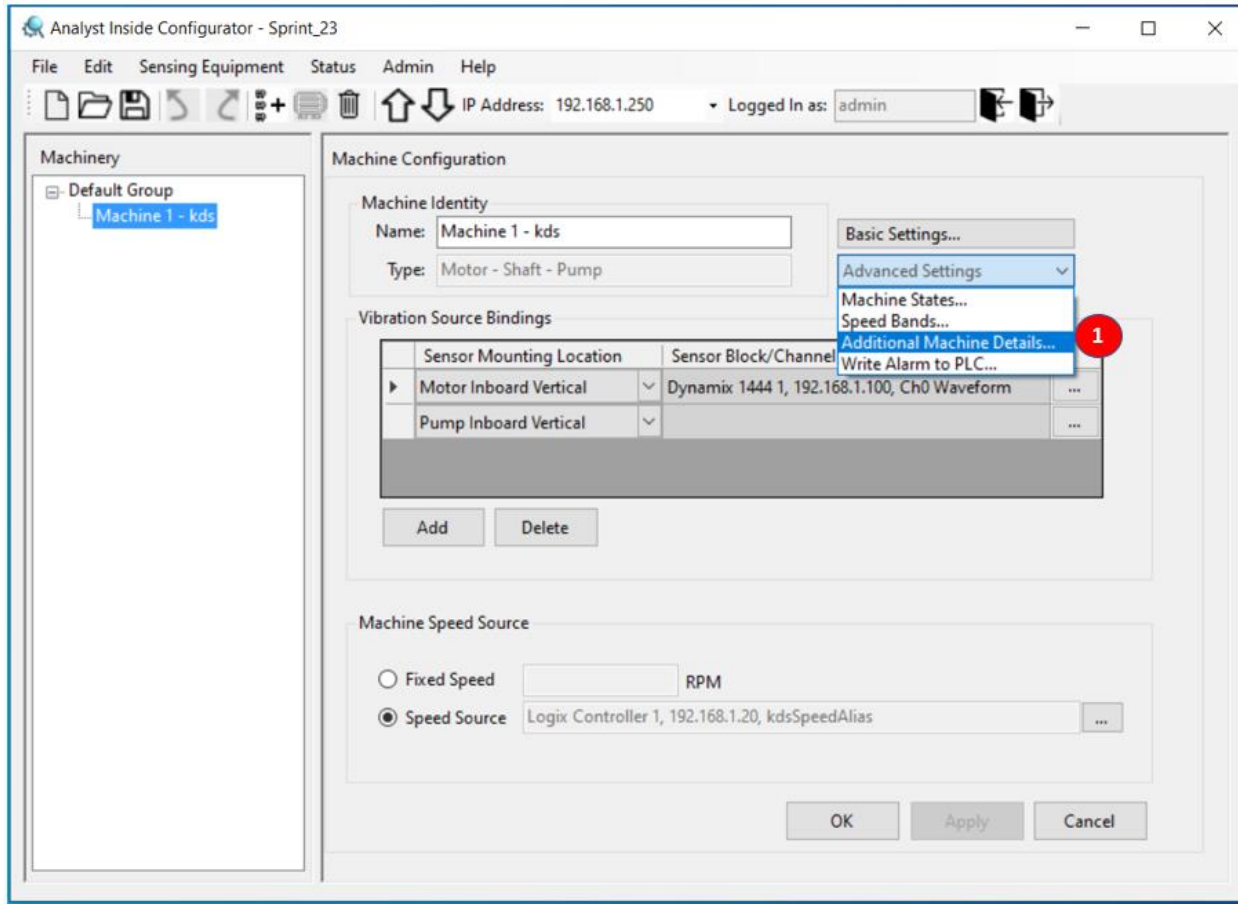
Appendix 1

Details on Advanced Settings and Admin functions

Additional Machine Details

Entering additional information about the machine will improve the vibration analysis results.

From the Machine Configuration dialog, click the Advanced Settings drop-down and select the Additional Machine Details option (1).



Enter as much information as known about the machine.

Note: If something is unknown, it's better to leave it blank than to guess and enter something that is incorrect (example: number of gear teeth). Entering incorrect machine details can result in an incorrect diagnosis.

The drop-down list (1) on the far-right column allows selection of each bearing for entering bearing fault frequencies

If bearing coefficients are known, enter these for best bearing analysis results.

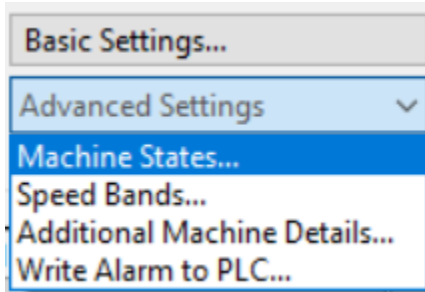
The second column will vary based on the type of coupling selected. Entering information on the type of coupling and dimensions of belt/pulleys or # gear-teeth will help the Analyst Inside provide more detailed results.

Coupler (Belt Drive)	Coupler (Gearbox)
<p>Specific Dimensions Known:</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Belt Length (inches): <input type="text" value="0.00"/></p> <p>Driver side pulley pitch diameter (inches): <input type="text" value="0.00"/></p> <p>Driven side pulley pitch diameter (inches): <input type="text" value="0.00"/></p> <p>Is Timing Belt</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Driver side pulley teeth: <input type="text" value="0"/></p> <p>Driven side pulley teeth: <input type="text" value="0"/></p>	<p>Gear Mesh</p> <p>Number of teeth on bull gear <input type="text"/></p> <p>Number of teeth on pinion <input type="text"/></p>

The third column will vary based on the type of driven component selected. Entering information on the type of component and number of Vanes/Blades will help the Analyst Inside provide more detailed results.

Pump	Fan
<p>Pump Type</p> <p><input checked="" type="radio"/> Centrifugal</p> <p><input type="radio"/> Gear</p> <p><input type="radio"/> Other</p> <p>Number of Vanes <input type="text" value="0"/></p>	<p>Fan Type</p> <p><input checked="" type="radio"/> Axial Fan</p> <p><input type="radio"/> Centrifugal (Blower/Squirrel Cage)</p> <p>Number of blades/impellers <input type="text" value="0"/></p>

Machine States settings



This function allows configuration of multiple machine states where the machine vibration levels can be baselined and monitored with different alarm settings separately for each state.

The machine state is determined by linking to an Integer controller tag that provides the current state (e.g., 0, 1, 2, ...).

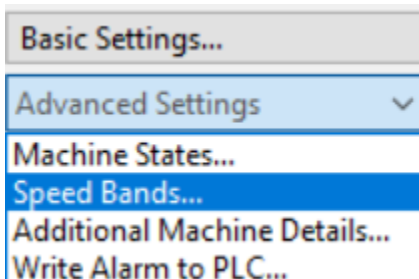
In addition to linking to the State Tag, a table must be created to indicate the meaning of each State value.

Examples of different states include Full/Med/No Load, Hot/Cold, Dampers Open/Closed, different batch products being produced, etc.

It is possible to assign the same state tag to multiple machines, or create a separate state tag for each machine.

Note: If a State Tag/Table are added, any data collected prior to adding the State configuration will be deleted.

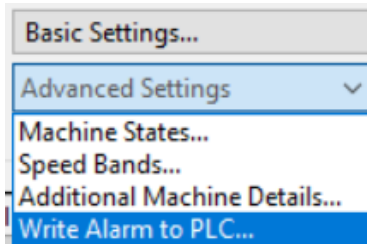
Speed Bands settings



This function allows configuration of Manual Speed Bands -vs- Auto Learned Speed Bands.

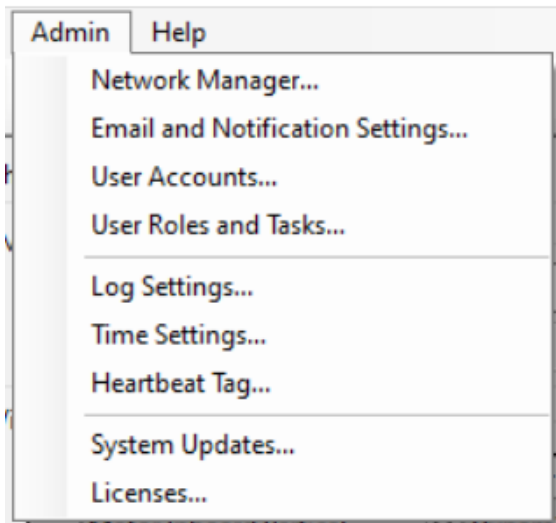
Having multiple speed bands allows vibration levels to be baselined and monitored with different alarm settings for different speed ranges.

Write Alarm to PLC settings



This function allows linking to a controller tag for writing the Alarm state of a Machine. Each machine should be assigned a separate Tag to indicate its alarm state to the controller.

Additional Admin settings:



Log Settings

The Log Settings dialog allows configuration of how log files are stored in the Analyst Inside module.

Log Settings ✕

System Health Log Settings

The system health log tracks the behavior of the monitoring system. For instance, when an alarm occurs or a sensor fails to read, the system log gets updated.

Number of Log Files:

Log File Size (MB):

Log Detail Level:

Audit Log Settings

The audit log tracks the interactions of users with the system. For instance, when an alarm is acknowledged or a project file is downloaded, the audit log gets updated.

Number of Log Files:

Log File Size (MB):

Log Detail Level:

SMTP Export Enabled

Log Settings:

Time Settings

The Time Settings dialog allows updates to the internal clock in the Analyst Inside module.

The auto Time Sync function requires the module to have access to the internet.

Time Settings

Time Zone Settings

Time Zone:
(UTC-05:00) Eastern Time (US & Canada)

Automatically adjust for daylight savings

Set Time Zone

Manual Time Sync

6/16/2022

4:17:07 PM

Set Appliance Time

Refresh Time

Turn on Time Sync

Current time sync status is: Unknown

Close

Heartbeat Tag

This function allows linking an Analyst Inside module to a controller tag to write the status of the module. The Analyst Inside will write a 1 to this tag each time it performs a set of measurements. Controller logic can be written to make use of this function to indicate if the Analyst Inside stops writing to this tag. A separate controller tag should be used for each separate Analyst Inside module.

System Updates

This function allows firmware updates to the module as new releases become available.

It also provides a method to install configuration UI software updates, which are bundled with the Analyst Inside firmware.

It also provides a means to backup/restore the module to a previous state.

