



Gestalt Trend™-User Guide

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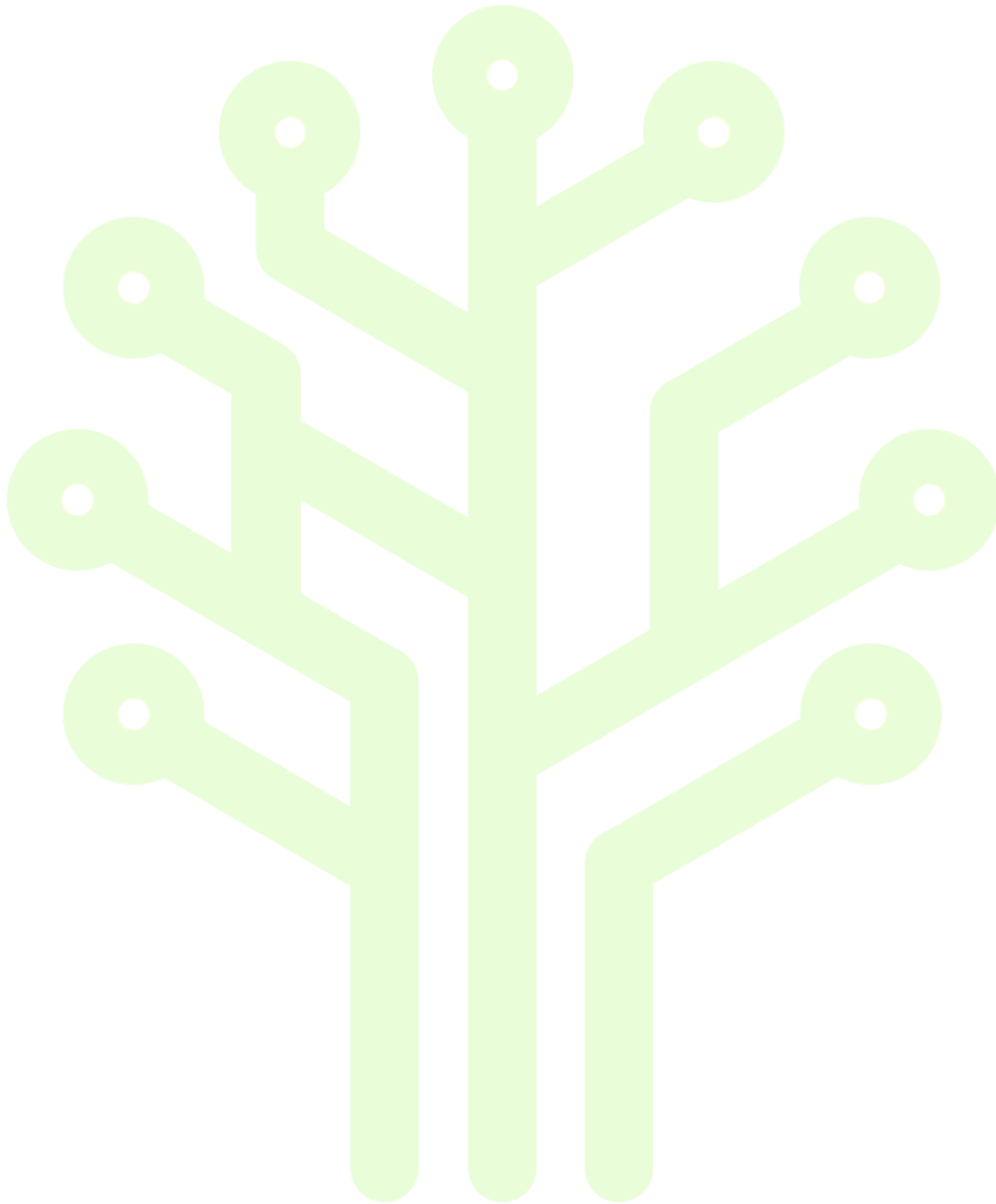
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1 Purpose of Document

This document gives instructions on how to use Gestalt Trend™. By following the detailed steps within this document this tool allows you to view your process data. You can configure data sources then switch between multiple views for in-depth analysis of your data in real time.

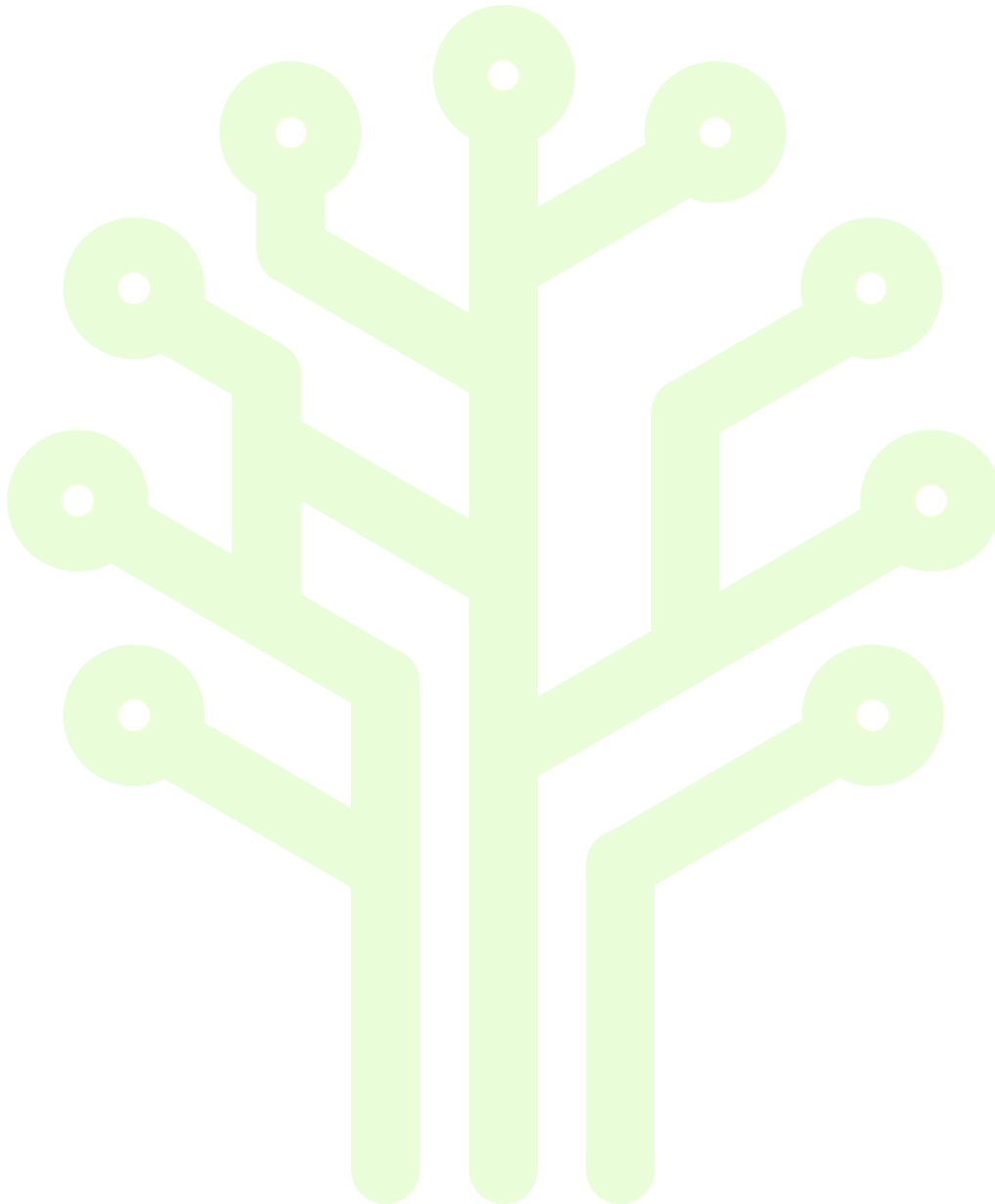


2 What's New

This section allows users who may have already browsed this user guide a quick link option to look at the new features and enhancements.

2.1 October 2023

Go to App Store Wiki for detailed updates (Ctrl+Click)



3 Quick Start Guide to Using Gestalt Trend

Select this link appstore.intelligentplant.com to log into the Industrial App Store. Use either your Google or Microsoft account, or register your organisation with the Industrial App Store.

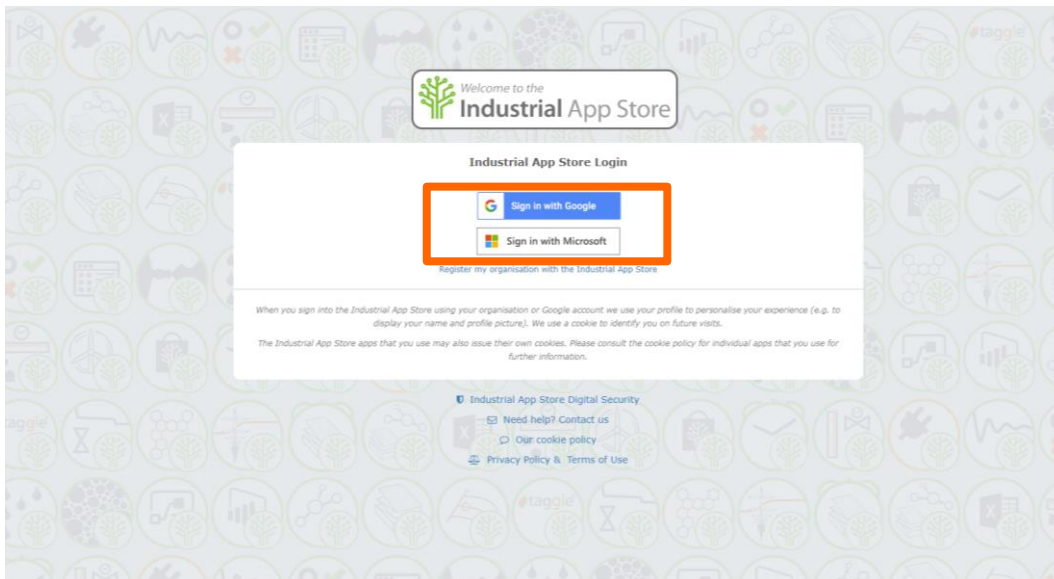


Figure 3-1 Access the Industrial App Store

3.1 Industrial App Store

Hover over the Gestalt Trend postcard and select "More Info". This will take you to the Trend Profile.

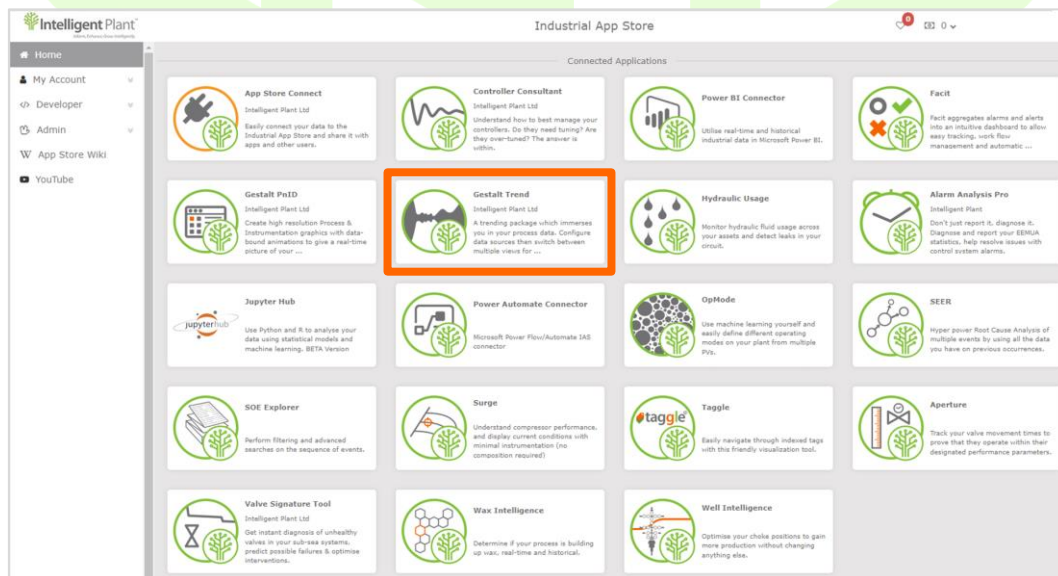


Figure 3-2 Industrial App Store Home Page

3.1.1 Trend Profile

The Trend Profile area allows you to either select the start button and immediately start creating trends, or you can browse this profile page to find out a little more information regarding trend.

In the profile area you can find links to the user guide, YouTube videos, FAQs, Industrial App Store Wiki and browse screenshot views that have been produced in Gestalt Trend. Select the Start button to proceed.

Note:

Bookmark this page for quick access.

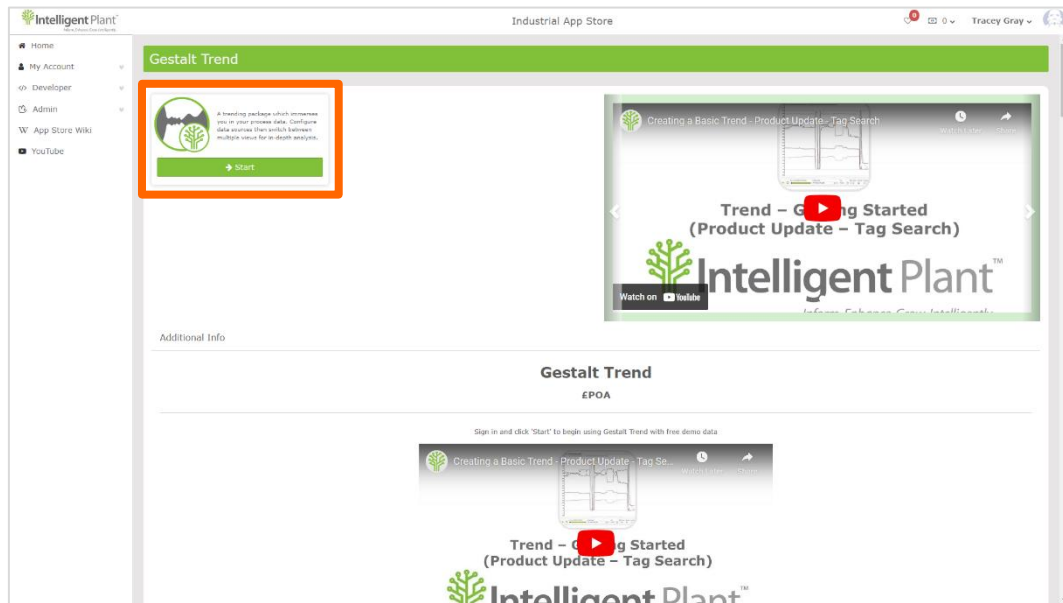


Figure 3-3 Gestalt Trend Profile Area

The home page of trend appears with the tag search pop-up in view. You can select a data source from the drop-down menu and then either, add a wild card to search for a specific tag or if you can see that tag then select the (+) icon at the right side of the pop-up. As you select a tag the (+) icon will turn yellow (searching for the tag) and then green once the tag has been found and added to your page. When you have finished adding your tags, close the pop-up by selecting the (x) close icon at the top right of the pop-up.

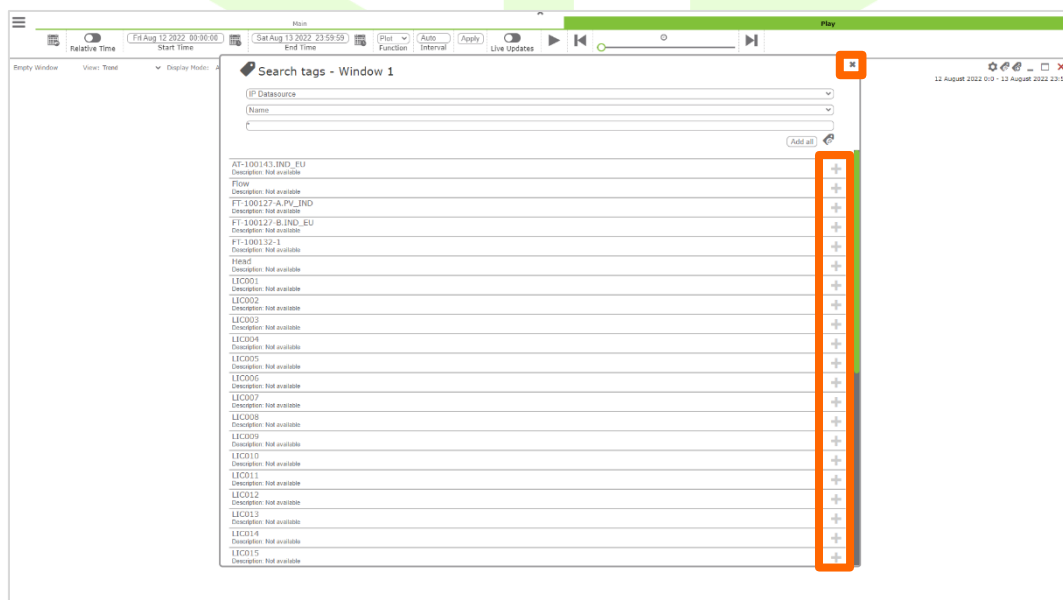


Figure 3-4 Data source and Tag Search Pop-Up

The tags you selected appear on the canvas.

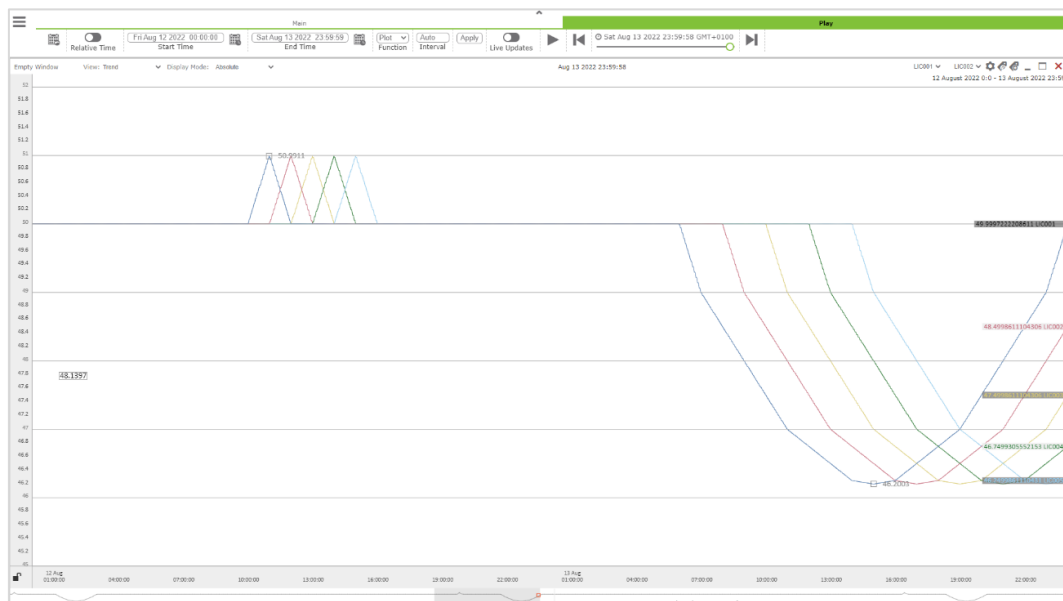


Figure 3-5 Dashboard with Added Tags

Note:

Adding many tags will initiate the 'Busy' icon in the bottom right hand corner of your page. This lets the user know that their action is in progress.

4 Advanced Guide to Using Gestalt Trend

In Gestalt Trend the same functionality options can be accessed in various locations:

1. Main and Play tab options
2. Left-Side Panel
3. Settings icon on the main canvas

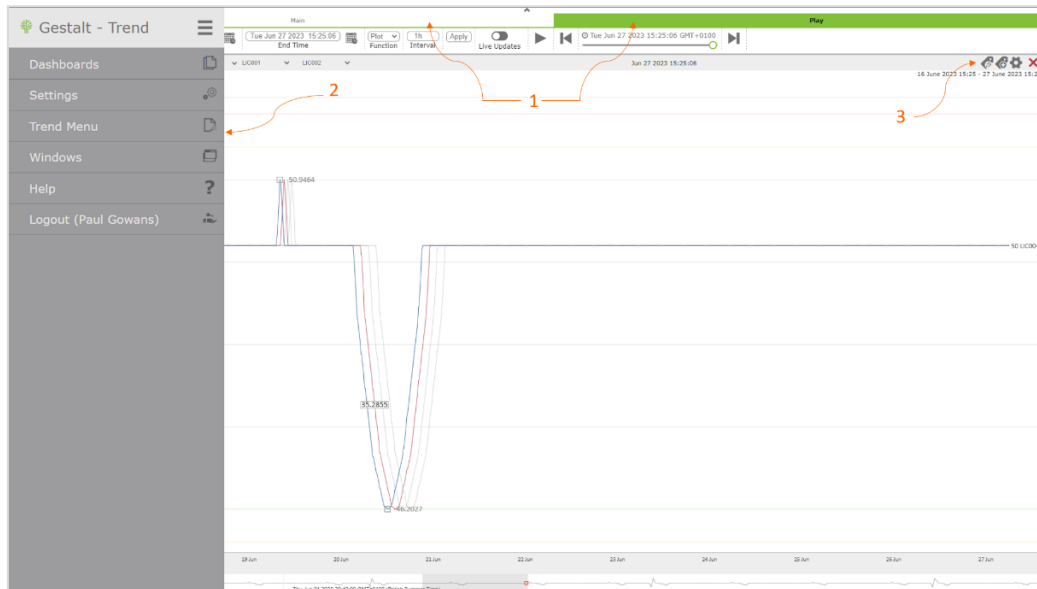


Figure 4-1 Functionality Options

4.1 Tab Options

There are two options:

- Main tab - Create or access/edit existing dashboard(s), save dashboard, set dashboard mode, title bars, share a dashboard, export data and change background colour
- Play tab - Set specific dates and times, set function and interval, apply changes, toggle live updates on or off and play/pause through the times that have been set

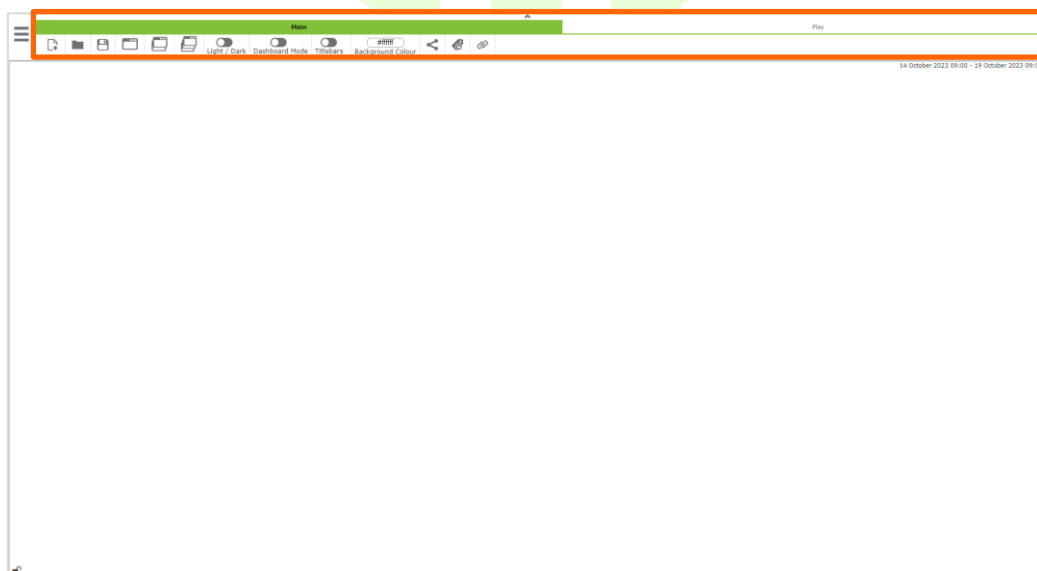


Figure 4-2 Tab Options

4.1.1 Main Tab

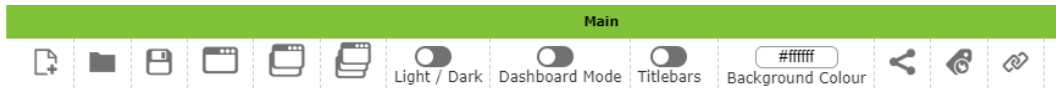


Figure 4-3 Main Tab

From left to right the options are:

Select the New Dashboard option to create a new page.



Figure 4-4 Main Tab – New Dashboard

On choosing New Dashboard a caution pop-up will appear on your screen. This reminds you to save any work you may currently have open.

Select the Open Folder option to access any dashboards that have already been created.



Figure 4-5 Main Tab – Open Folder

The Dashboards panel will appear allowing you to open an existing trend or folder or create a new dashboard.

Select the Save option to save your work.



Figure 4-6 Main Tab – Save

On selection of the save icon a pop-up will appear confirming your save was successful. On saving a new dashboard you will be prompted to add a new dashboard name.

You can add more windows to your workspace.



Figure 4-7 Main Tab – One, Two or Three Window Options

Select one, two or three window options and see the new windows automatically fill your workspace.

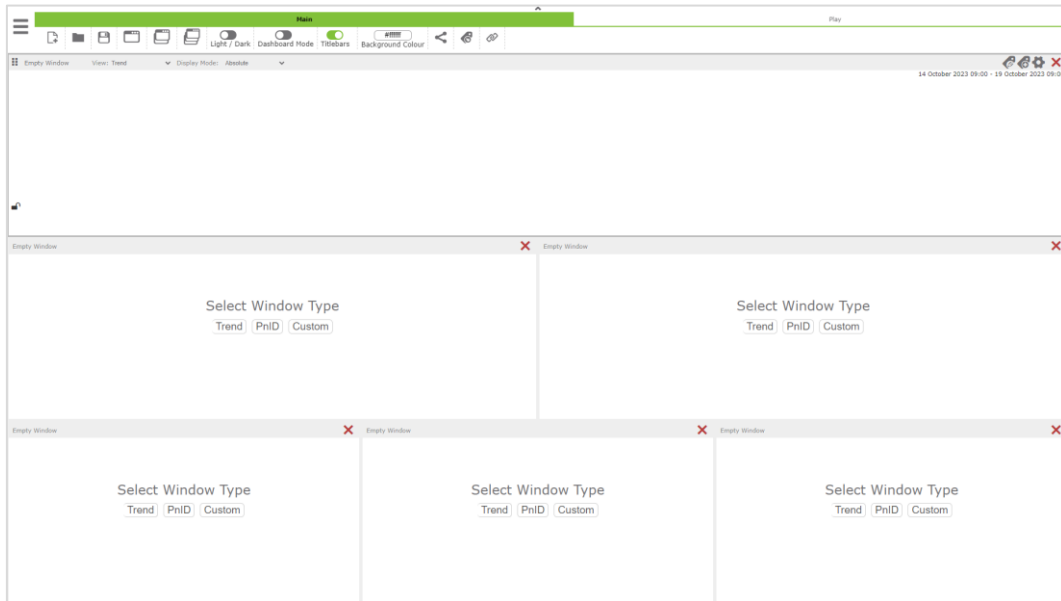


Figure 4-8 Main Tab – One, Two and Three Window in Workspace

Close any of the windows by selecting the (x) close icon at the top right of each window.

Note:

If you have multiple windows open and want to see a closer view of one window. Double-click to see that view fill the page. Double-Click again to return to your multiple window views.

Once you have added your new windows you have the option to create a Trend, open a page from Gestalt PnID or select Custom to open a web page. Select PnID Option.

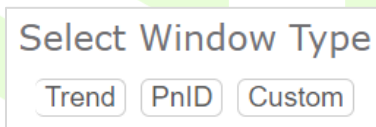


Figure 4-9 Trend, PnID or Custom Options

The Gestalt PnID home page appears (You can view the demo pages by selecting any thumbnail).

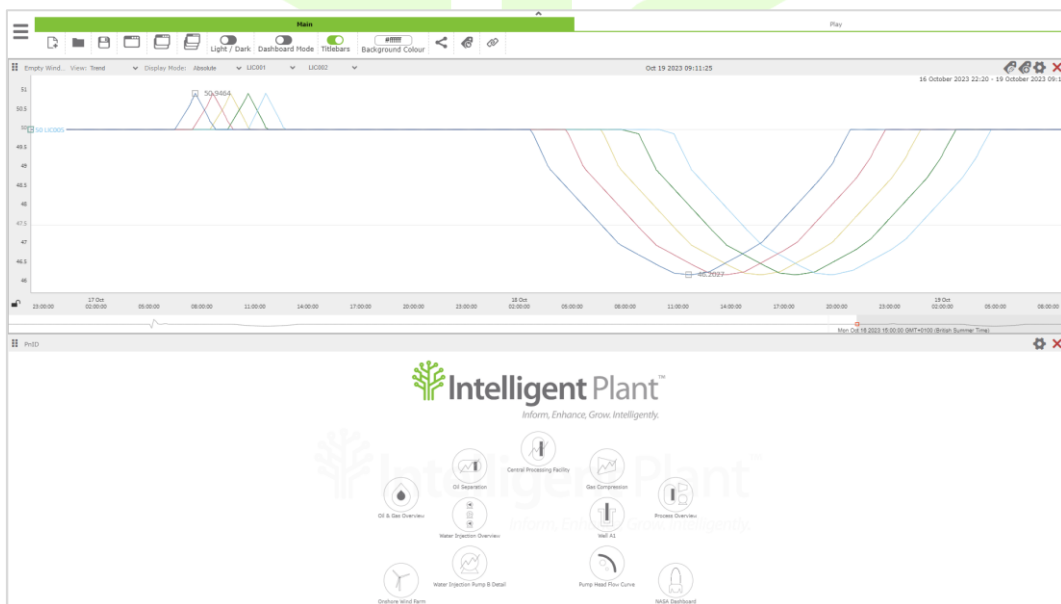


Figure 4-10 PnID Option within Trend

In this PnID page you can select the burger icon to open the Left-Side Panel and choose from the existing dashboards or select New Dashboard to create your own.

Select Custom Option. The Intelligent Plant Website home page will appear as the default custom page.

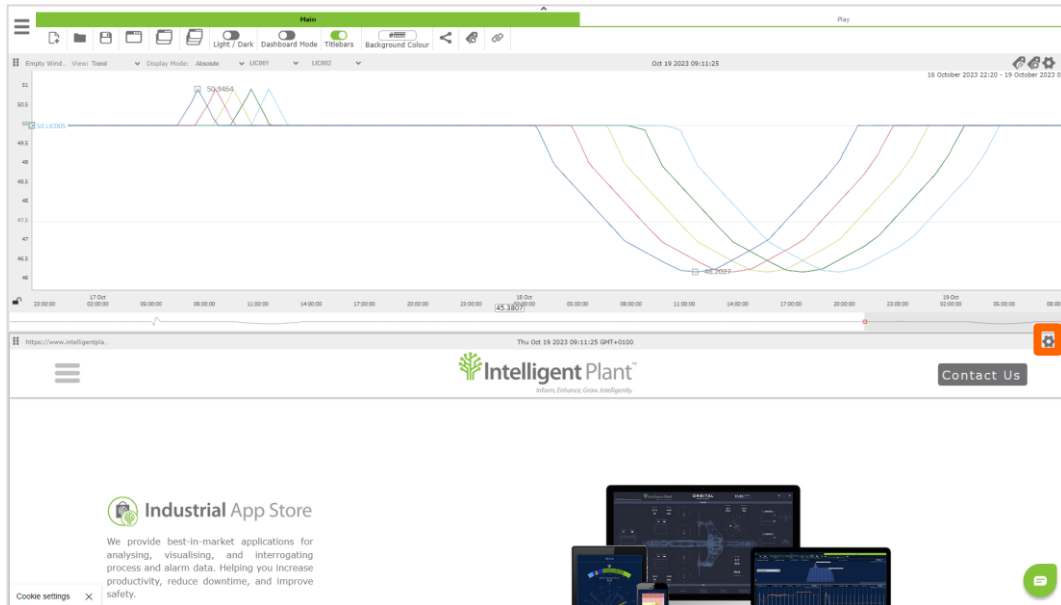


Figure 4-11 Custom Option – Settings

Select settings icon to view the pop-up that allows you to add your custom URL.

Overwrite the default link with your new website link. Select Go.

Note:

Websites that enforce a same-origin policy cannot be displayed using the Custom feature. Additionally, the Industrial App Store's Content Security Policy only allows the use of URLs that are on our permitted list. To get your URL on to this permitted list, please contact support@intelligentplant.com.

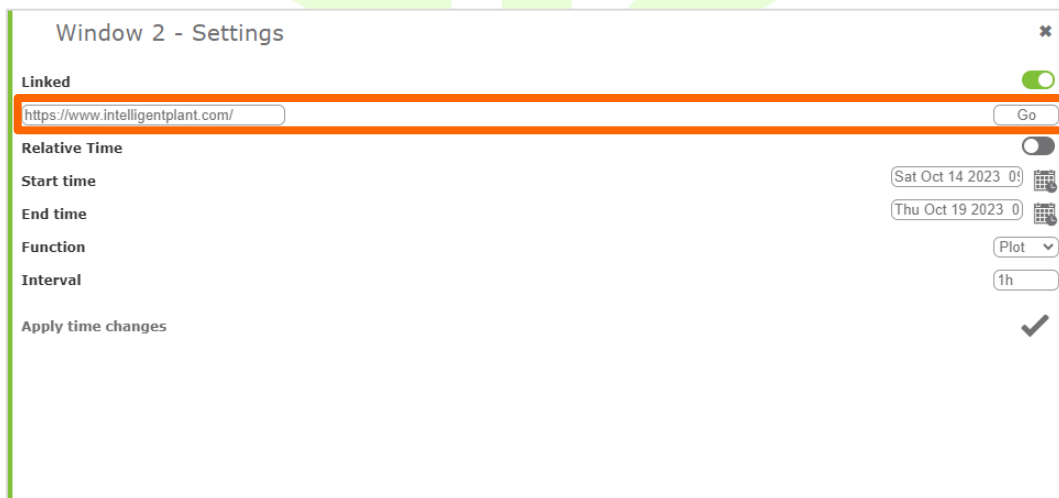


Figure 4-12 Custom Option – Settings Pop-Up

The background colour is by default set at light. To change to dark mode, move the toggle button to the right.

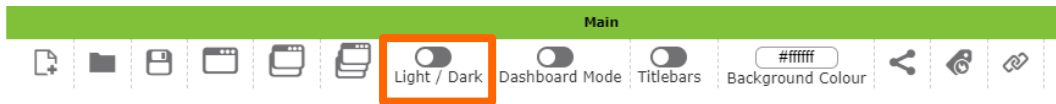


Figure 4-13 Background Colour – Light/Dark

Light Mode.

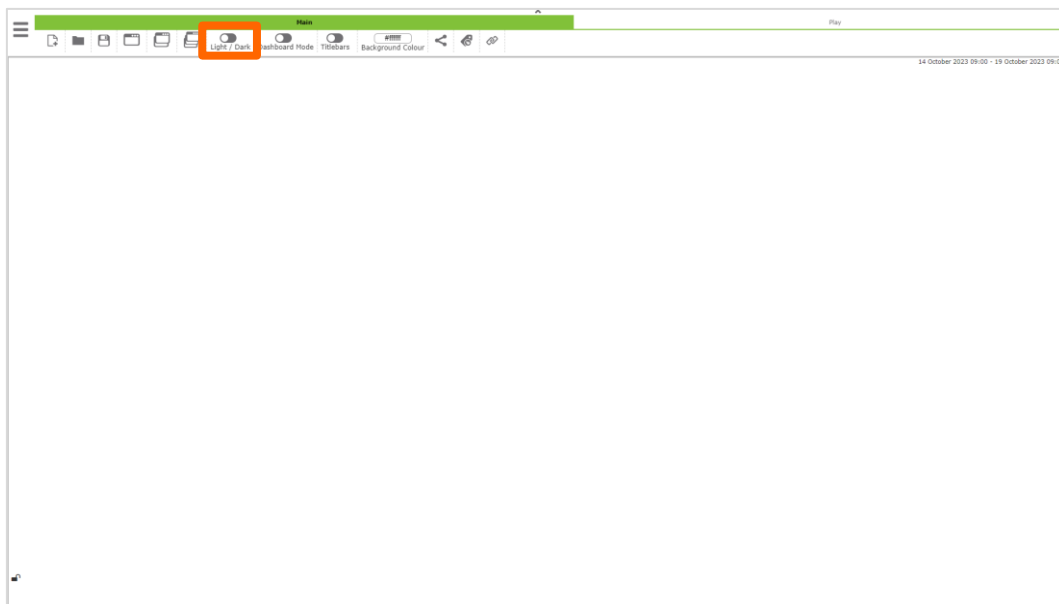


Figure 4-14 Background Colour – Light Mode

Dark Mode.



Figure 4-15 Background Colour – Dark Mode

The default setting of dashboard mode shows Main, Play tabs and axis on your dashboard. To remove these, move the toggle button to the right.

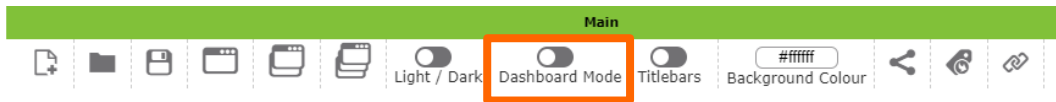


Figure 4-16 Dashboard Mode–Toggle Left

If you have not saved your page, you can refresh to re-instate the Main, Play tabs and axis info. If you have saved your page, go to the Left Side Panel, choose Settings, and move the dashboard mode toggle button to the left.

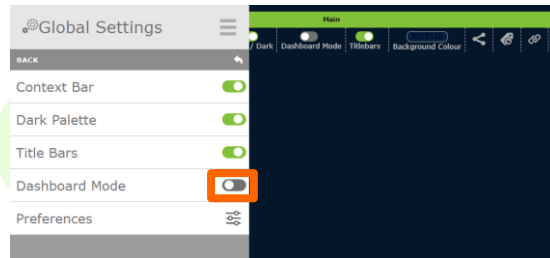


Figure 4-17 Dashboard Mode Toggle Option–Toggle Left - Left Side Panel

Left Side Panel view that shows moving the toggle button to the right, the Main, Play tabs and axis info will be removed from the canvas.

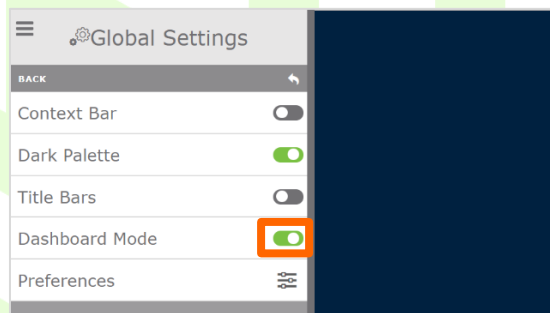


Figure 4-18 Dashboard Mode Toggle Option–Toggle Right - Left Side Panel

Titlebars by default appear on your dashboard. Toggle button is moved to the right

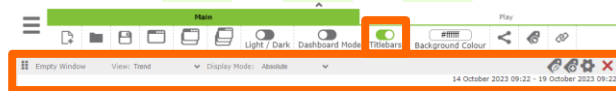


Figure 4-19 Titlebars–On

Left Side Panel view of Titlebars toggle button on.

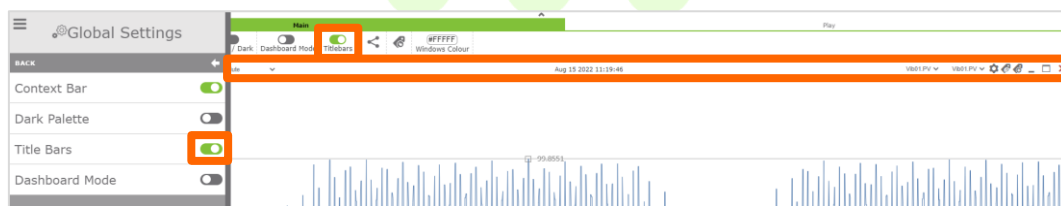


Figure 4-20 Titlebars–On – Left Side Panel

To remove the Titlebars, move the toggle button to the left.

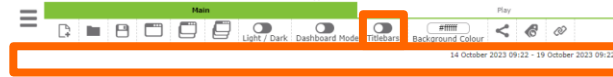


Figure 4-21 Titlebars-Off

Left Side Panel view of Titlebars. Toggle button is moved to the left.

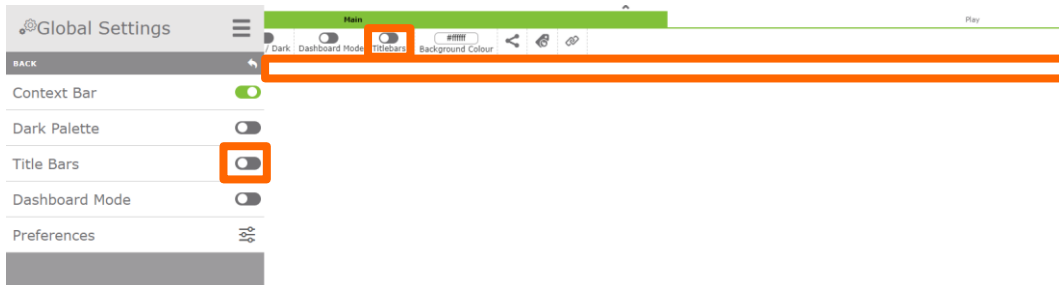


Figure 4-22 Titlebars-Off – Left Side Panel

You can alter the background colour of your dashboard by changing the hex value within the Background Colour section.



Figure 4-23 Change Background Colour

By default, the background is set to white (#FFFFFF). By clicking on the input box, a colour hex window will open, where you can select premade colours, or by inserting your own hex value at the box below.

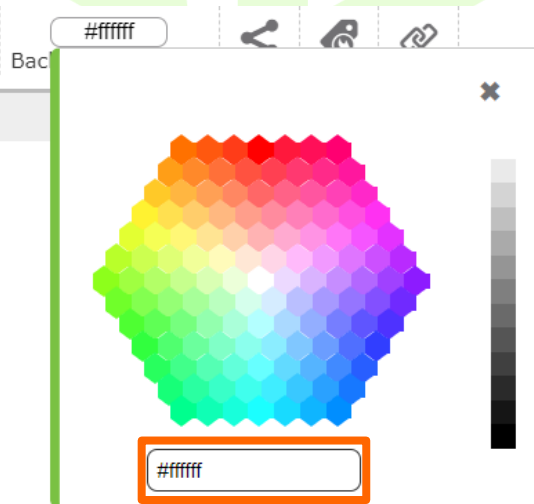


Figure 4-24 Edit hex value of background colour

Select the Share Dashboard icon to share your work with other users or groups.



Figure 4-25 Share Dashboard

A pop-up will appear with a list of users and groups. To select a user or group, select one of these options from the drop-down menu, then select the user or group you wish to share with. A user or group can have either Read, Write or Admin authorisation. Select one of these from the drop-down menu near the bottom left of the pop-up. Select Ok.

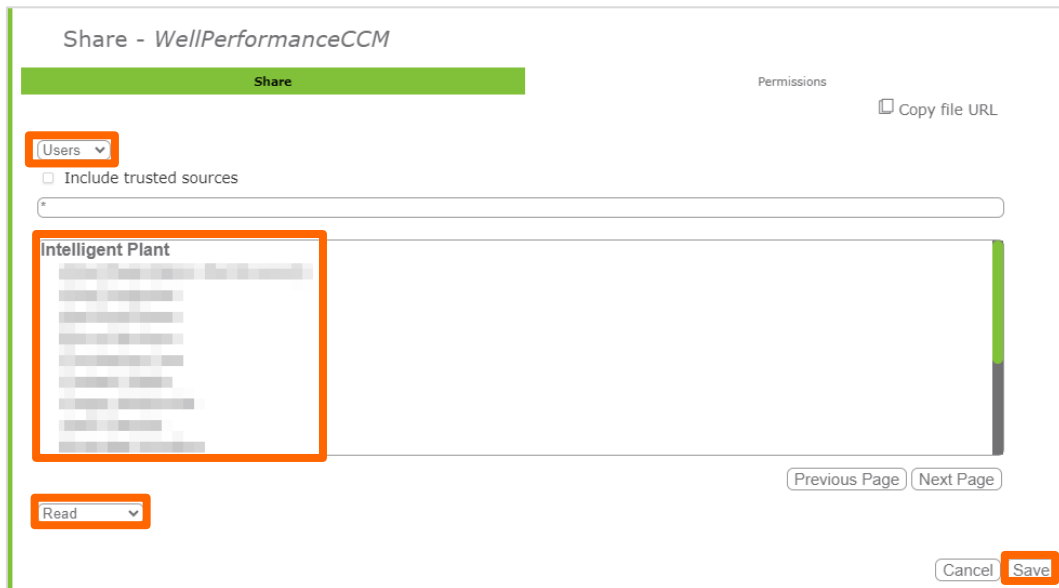


Figure 4-26 Select Authorised Users or Groups

Users or Groups will be able to see the dashboard that's been shared with them when they open their dashboards area in the Left- Side Panel.

'New Share Available' indicates the dashboard is available to the user. Click to accept the share.

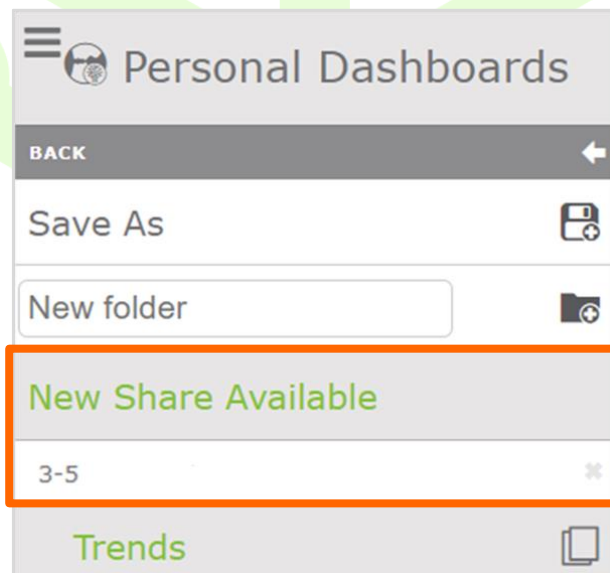


Figure 4-27 Accept Share

Note:

- You can only share a file or folder with users or groups within your organisation or those from organisations you trust
- If you delete a file or folder that you've previously shared, the shared users or groups will no longer have access if you chose Delete for everyone in the delete file pop-up
- If you move a file or folder that you've previously shared the shared users or groups will still have access

To export data that's in your dashboard, select the Export Data icon.



Figure 4-28 Export Data

A pop-up will appear. Select the check box 'Use Excel Friendly Data Format'. Choose the Time Zone from the available options. Select Ok.

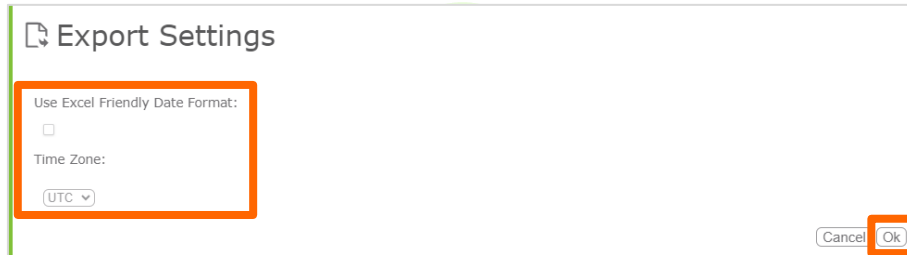


Figure 4-29 Export Settings Pop-Up

Selecting the Create a shareable Trend URL icon will let you generate a URL snapshot of a dashboard that can then be shared with other users.



Figure 4-30 Export Settings Pop-Up

When you click the icon, it will open your browser's built in sharing API, allowing you to share easily to other apps. A Copy Link option is visible on the API as well.

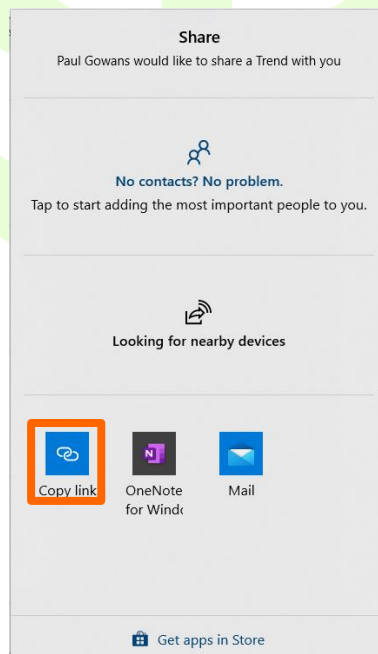


Figure 4-31 Browser API for sharing Trend dashboard

4.1.2 Play Tab

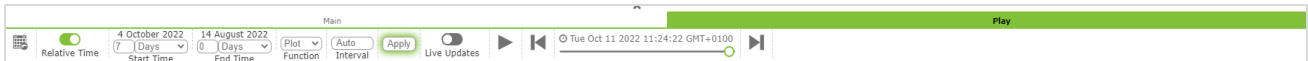


Figure 4-32 Play Tab

From left to right the options are:

Select Reload Previous Query to revert to last known query (before current query)

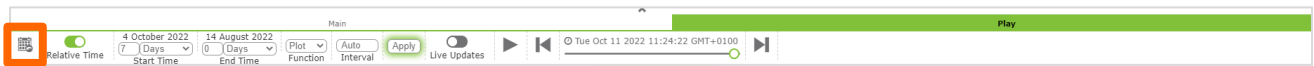


Figure 4-33 Reload Previous Query

By default, the Relative Time toggle button is set to on when you create a new page. You can set start and end times by way of drop-down menus. Add a number (days) in the first box, then from the second box choose either seconds, minutes, hours, days, months or years.

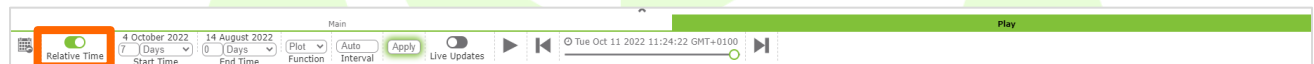


Figure 4-34 Relative Time – Toggle Right

To set the Absolute Time move the toggle button to the left. To set start and end time do the following:



Figure 4-35 Relative Time – Toggle Left

Start Time - Select the Start Time calendar icon.



Figure 4-36 Start Time

A pop-up will appear allowing you to set a date and time. Choose from the drop-down menus for month and year. Select a day from the calendar, move the hour, minute and second sliders if a specific time is needed. Select Done to apply your new settings.

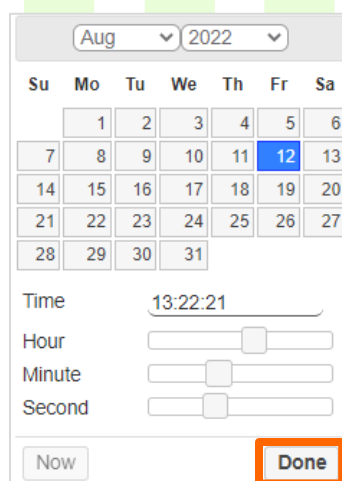


Figure 4-37 Start Time - Pop-Up

End time - Select the End Time calendar icon. Follow the same steps as in the start time pop-up.



Figure 4-38 End Time

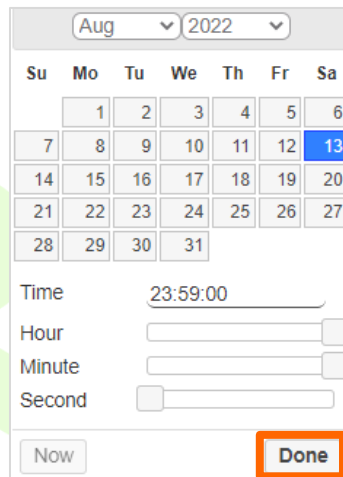


Figure 4-39 End Time - Pop-Up

The Function drop down menu allows you to select either Plot, Interp, Max, Min, Avg or Raw.

- Plot – Returns up to 4 values per interval, the starting value, minimum, maximum and the ending value. If any of these refer to the same datapoint, it will only be returned once
- Interp – For interpolated data
- Max – Maximum value calculated at each sample interval over a time range
- Min - Minimum value calculated at each sample interval over a time range
- Avg – Mean value calculated at each sample interval over a time range
- Raw – Performs a raw data query (requests unprocessed data) on a data source for a specified tag and date range. These are generally not advised as they are likely to return a bulky result set that may well be cropped by size constraints



Figure 4-40 Function

Interval - Time step between samples - Set to Auto by Default but you can set your own interval time.

e.g. 1s, 1m, 1d, 1w (1 second, 1 minute, 1 day, 1 week etc.)



Figure 4-41 Interval

If you have selected any of the options that appear before the Apply button, select Apply to confirm your changes.



Figure 4-42 Apply Button

Move the toggle button to the right to allow Live Updates. Once enabled, the end time will be set to now, and the trends will be updated in real-time as new values come in from the data source.



Figure 4-43 Live Updates

The Play settings allow you to Play or Pause Data, Step back or forward (new data) by one display unit i.e. the data visible on the screen.

You can watch the time (green circle icon) move through the data range that's been set.

Whether the time range is in play or stop mode you can click onto and drag the circle icon to any point in the time range using the left button on your mouse. Just left click, hold and drag the icon forward or backwards in the time range.

You can also left mouse click on any point in the time range and the circle icon will move to that point.



Figure 4-44 Play Settings

5 Left-Side Panel

The Left-Side Panel offers the same options that are available on the main canvas these are – Main and Play tabs and the Settings, Tags Manager and Add Tag and icons (top right side of canvas).

Access the Left-Side Panel by choosing the icon to the left of the Main Tab.

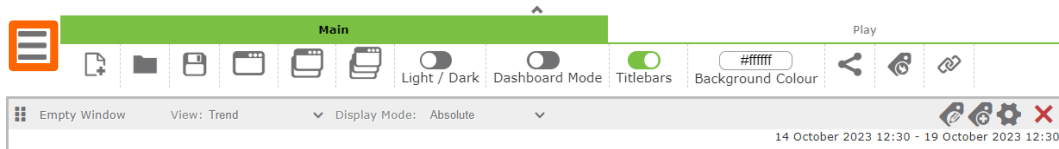


Figure 5-1 Access Left-Side Panel

The options in the Left-Side Panel are Dashboards, Settings, Trend Menu, Windows, Help and Logout.

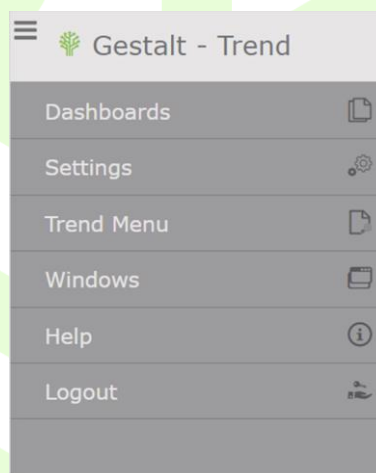


Figure 5-2 Left-Side Panel

5.1 Dashboards

Select Dashboards.

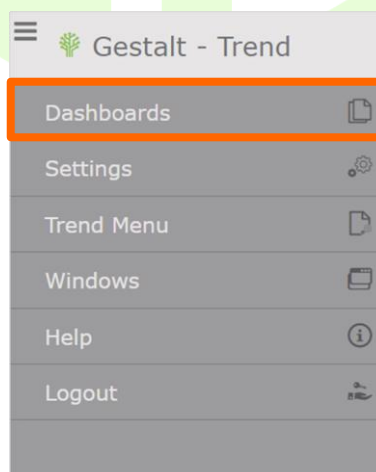


Figure 5-3 Left-Side Panel - Dashboards

In the Dashboard Panel you can - Create New Dashboard, Save, Save As, Export File, Import File, Export Data, and Access Personal Dashboards and Group Dashboards.

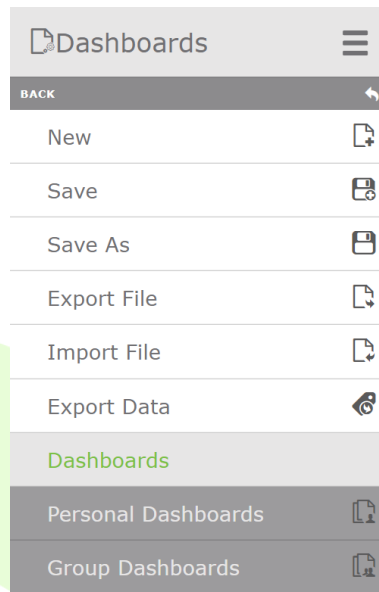


Figure 5-4 Dashboards Panel

On choosing New a caution pop-up will appear on your screen. This reminds you to save any work you may currently have open.

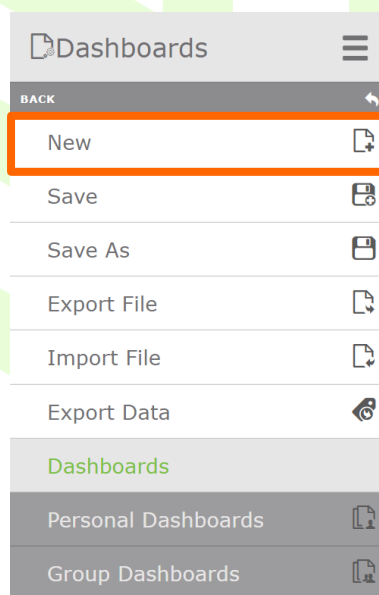


Figure 5-5 New Dashboard

Either select Cancel and save your work or select Ok to continue.



Figure 5-6 Caution Pop-Up

Select the Save icon option.

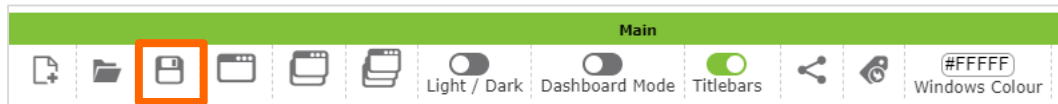


Figure 5-7 Main Tab – Save

A pop-up will appear allowing you the option to rename the page, and to select which folder to save the file

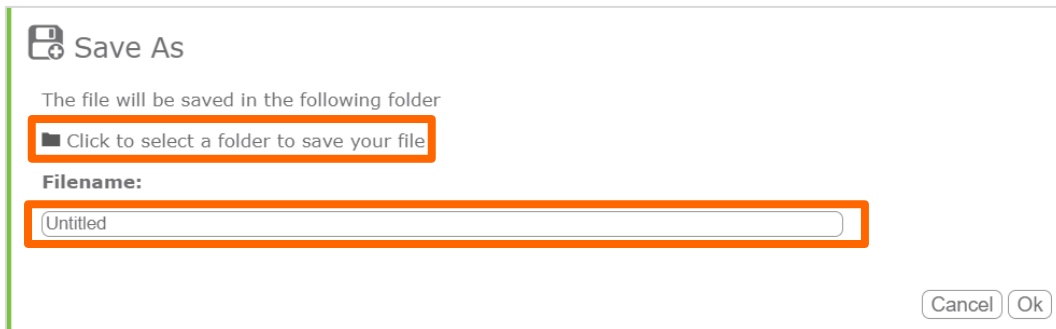
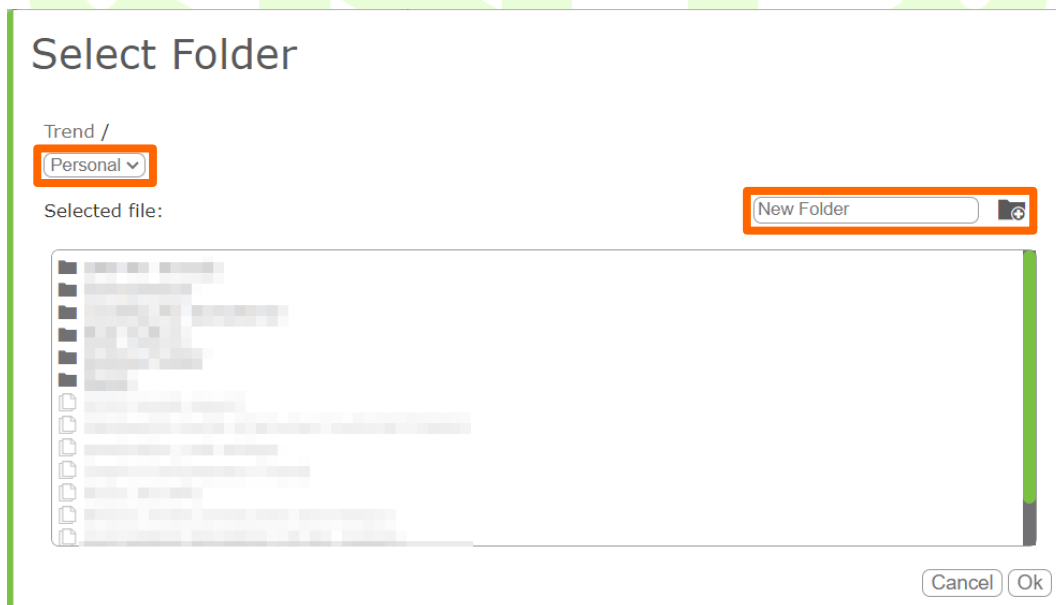


Figure 5-8 Main Tab – Rename Default Page Name

When click to select a folder, a window will appear. Here, you can choose whether to save the file to an existing Personal or Group folder, or to create a new Personal or Group folder.



Once you have renamed the page, select Ok.

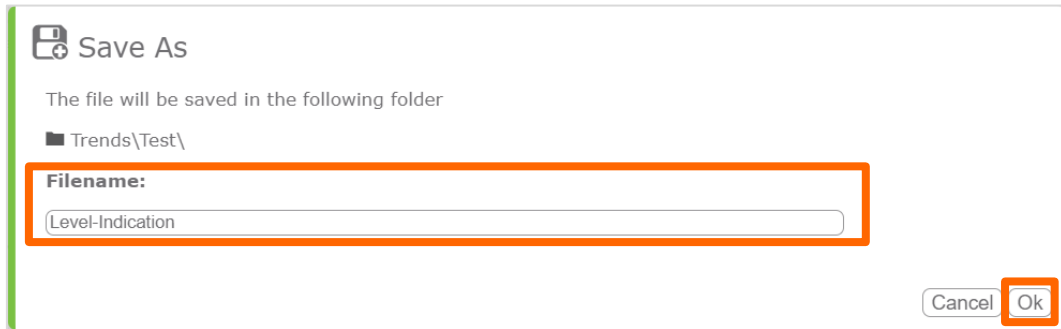


Figure 5-9 Main Tab – Page Renamed

A pop-up will appear indicating a successful save, select Ok.

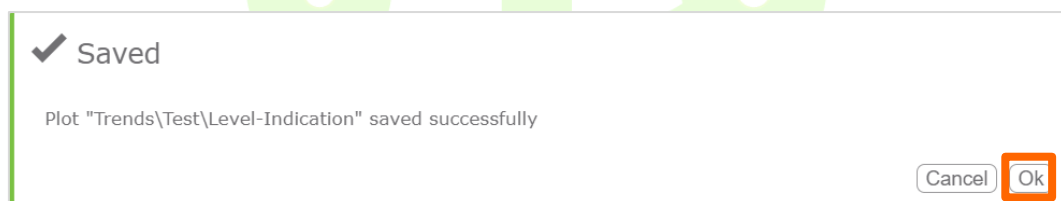


Figure 5-10 Main Tab – Save Successful

You can also go to the Left-Side Panel to check the page has been saved.

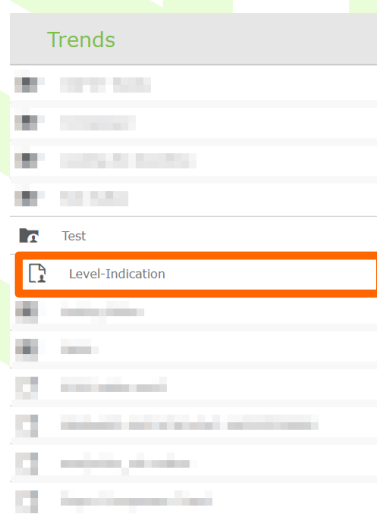


Figure 5-11 Left Side Panel – Saved Page

5.2 Settings

Select Settings

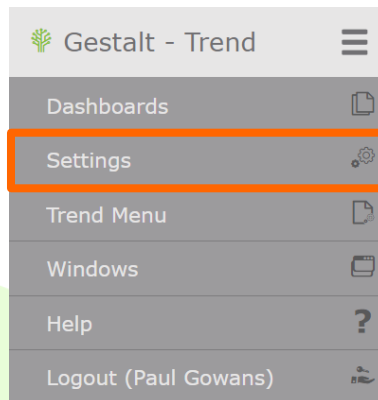


Figure 5-12 Settings

In the Global Settings Panel, you can toggle on/off the Context Bar, Dark Palette, Title Bars, Dashboard Mode, and access your Preferences.

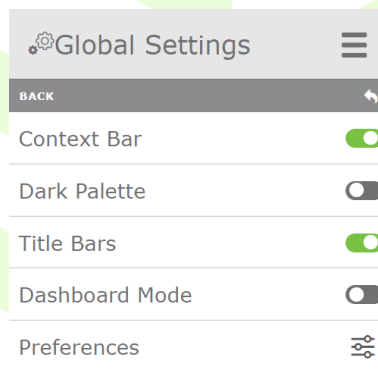


Figure 5-13 Global Settings

5.2.1 Context Bar

The Context Bar toggle button is by default set to on. The Main and Play Tabs on the canvas are in view. Moving the Context Bar toggle button to the left switches off the Main and Play Tabs .

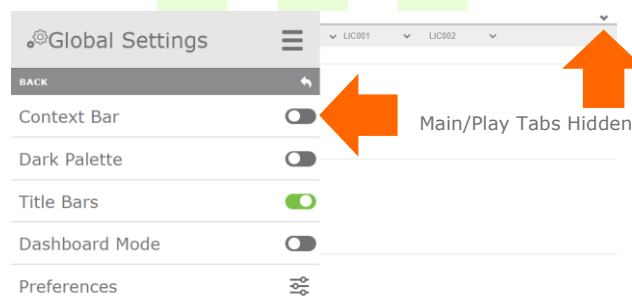


Figure 5-14 Global Settings – Context Bar

5.2.2 Dark Palette

The canvas background is by default set to light. When the Dark Palette toggle button is moved to the right, the canvas colour will switch to dark mode.

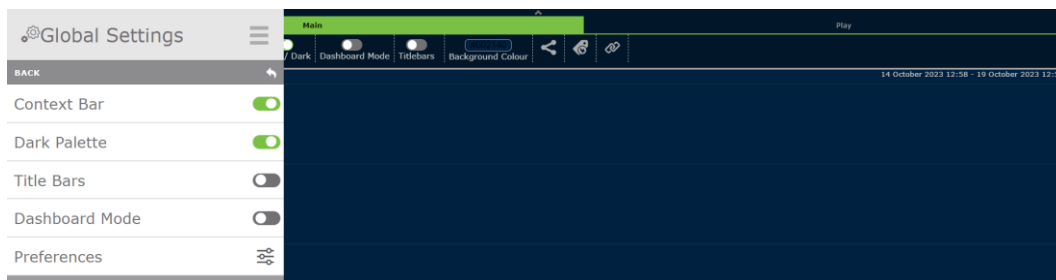


Figure 5-15 Dark Palette

5.2.3 Titlebars

The Titlebars toggle button is by default set to on. The canvas area shows titles in view. Moving the Titlebars toggle button to the left switches off the Title Bars.

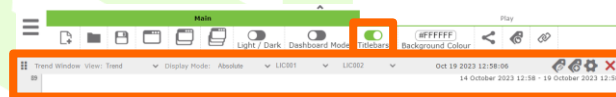


Figure 5-16 Titlebars – On

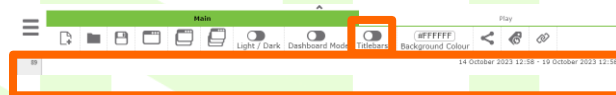


Figure 5-17 Titlebars – Off

5.2.4 Dashboard Mode

The Dashboard Mode toggle button is by default set to off. This shows the Main, Play tabs and axis info. Moving the toggle button to the right removes both tabs and axis info from view.

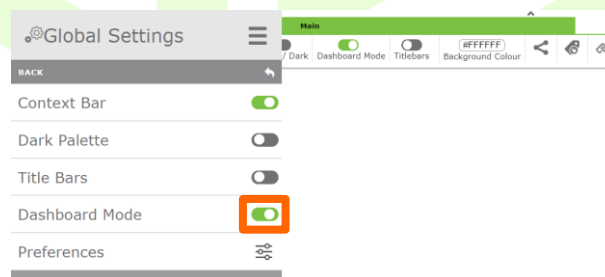


Figure 5-18 Dashboard Mode Toggle Button

5.2.5 Preferences

The Preferences option lets you select your default Trend options. Each time you enter the app, these preferences will be used to set up your Trend page.

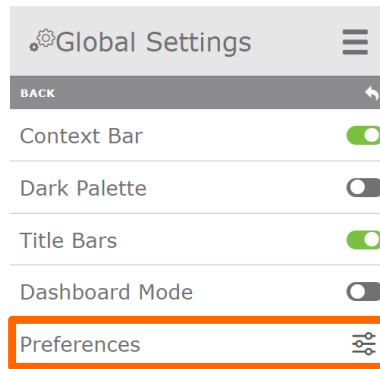


Figure 5-19 Preferences option

When selecting Preferences, the Preferences window will pop up, where these default selection option can be made.

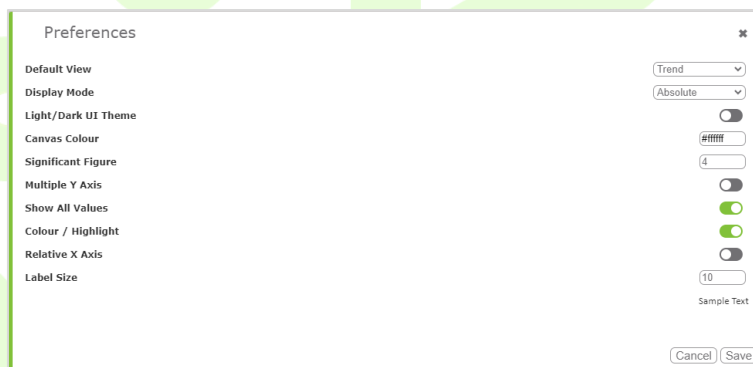


Figure 5-20 Preferences window

The options available on the Preferences window are as follows:

- Default View – Choose between Trend, Parallel Co-ordinate Plots (PCP), Fast Fourier Transform (FFT), Histogram, XY Scatter, Cross Correlation Graph (CCGraph), Cross Correlation Matrix (CCMatrix), 3DCW1 (Calm Waters View 1), and 3DCW2 (Calm Waters View 2).
- Display Mode – Choose between Absolute and Normalised by default.
- Light/Dark UI Theme – Toggle between having a light or dark UI by default.
- Canvas Colour – Select the default background colour of your canvas.
- Significant Figure – Specify how many significant figures you want tag values to show by default.
- Multiple Y Axis – Choose whether to have a single Y axis, or multiple Y axis by default.
- Show All Values – Choose whether to show all values by default
- Colour/Highlight -Choose whether all tags have colour, or only highlighted tags by default.
- Relative X Axis – Choose whether the X axis show calendar days, or relative times.
- Label Size – Choose the default size you want tag labels to be on your page.

5.3 Trend Menu

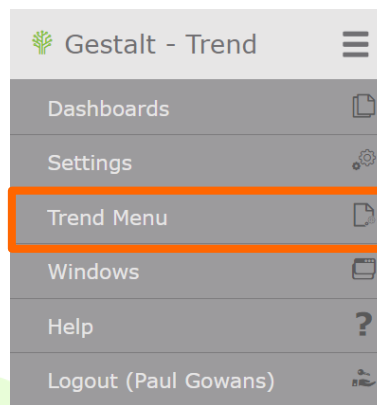


Figure 5-21 Trend Menu

Here you can access:

- Play Menu
- Time Menu

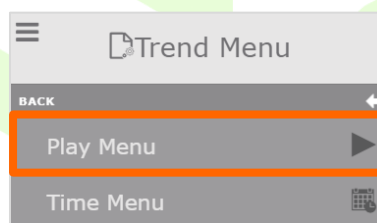


Figure 5-22 Trend Menu – Play

5.3.1 Play Menu

Select anywhere in the Play Menu area to access the play settings.

The Play settings allow you to play or pause data, step back or forward (new data) by one display unit i.e. the data visible on the screen.

You can watch the circle icon move through the data range that's been set.

Whether the time range is in play or stop mode you can click onto and drag the circle icon to any point in the time range using the left button on your mouse. Just left click, hold and drag the icon forward or backwards in the time range.

You can also left mouse click on any point in the time range and the circle icon will move to that point.

Select the Play icon.

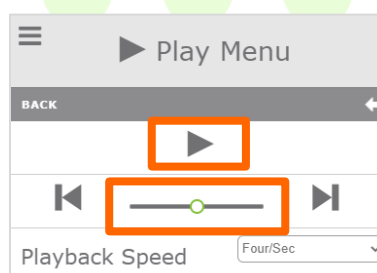


Figure 5-23 Play Menu - Play

Once the play icon has been selected it is replaced by the stop icon.

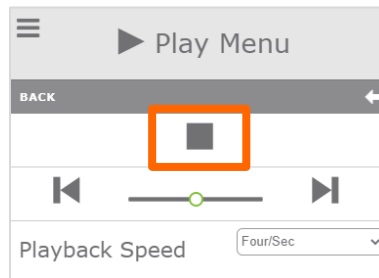


Figure 5-24 Play Menu - Pause

The Playback Speed drop down menu allows you to choose the following options:

- Four/Sec
- Fastest
- Two/Sec
- One/Sec

This dictates the speed the application steps through the data when playback is enabled.

5.3.2 Time Menu

Select anywhere in the Time Menu area to access the time settings.

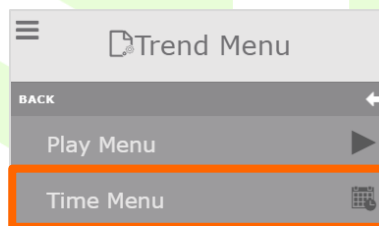


Figure 5-25 Trend Menu - Time

Further options are available allowing you to:

- Previous Query – Reload a previous query
- Relative Time/Absolute Time – Set different time settings depending on which option is chosen
- Set a Start and End Time – Select Days/Dates and Times from each pop-up calendar
- Choose a Function – Plot, Interp, Max, Min, Avg, Raw
- Set Interval – Time Step (how long between samples) Set your own interval time - 1s, 1m, 1d, 1w etc.
- Apply – Select to apply any changes you have made
- Live Updates – Toggle button by default is set to off. Move right to enable, the dashboard will update in real-time as new values come through

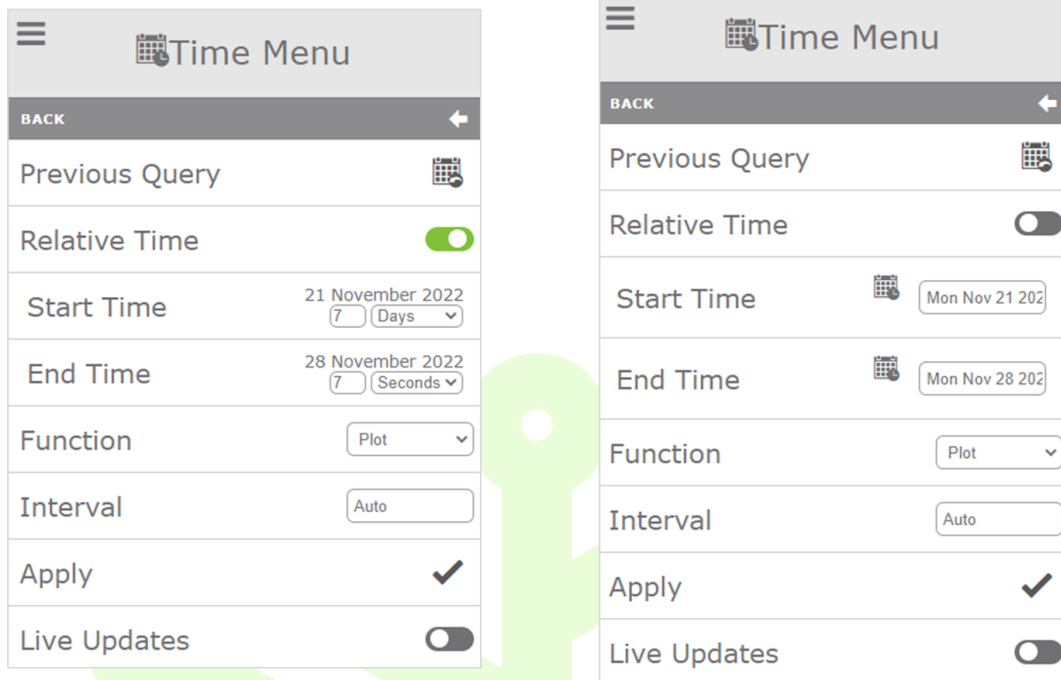


Figure 5-26 Time Menu Options

5.4 Windows

Select the Windows option.

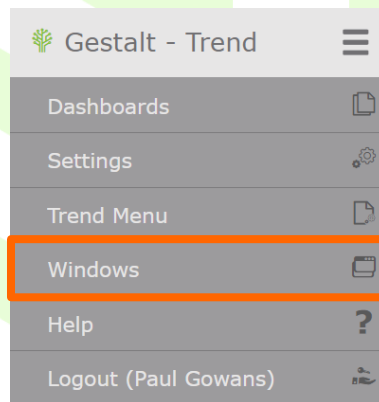


Figure 5-27 Windows

On selecting Windows, you can either Add New Window or select Window 1.

Note:

If you had two windows in your current dashboard you would see Add New Window, Window 1, Window 2 in this panel.

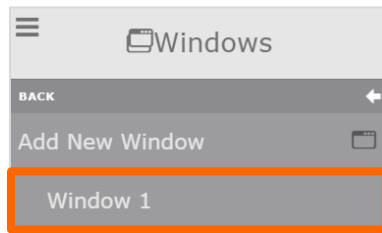


Figure 5-28 Windows 1

Window 1 is the current dashboard on your canvas.

Select Window 1 to view further options.

These are:

- Trend
- View
- Settings
- Time
- Axis

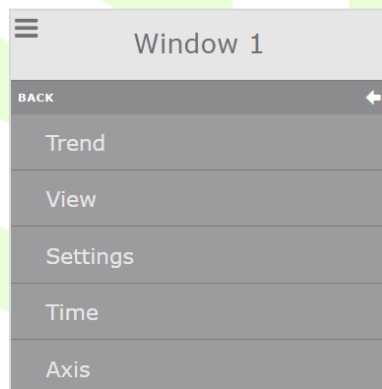


Figure 5-29 Window 1 Options

5.4.1 Trend

Select the Trend Option.

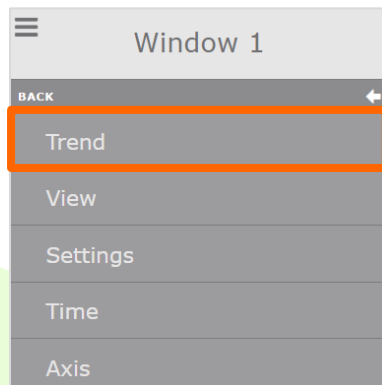


Figure 5-30 Window 1 - Trend

Further options are available allowing you to:

- Add New Tag
- Remove Selected Tag
- Select Tag (From Drop Down Menu)
- Change Colour of a tag
- Compare Tag
- Add Annotation
- Show Limits (by default set to off)
- Select Operating Limits from the drop-down menu
- Reset Limits
- Create Shareable URL

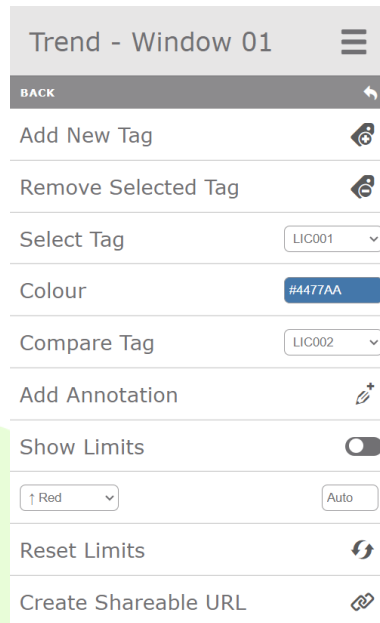


Figure 5-31 Window 1 – Trend Options

Many of these options can also be found along the Titlebar of your dashboard.



Figure 5-32 Window 1 – Trend Options on Canvas

5.4.2 View

Select the View Option.

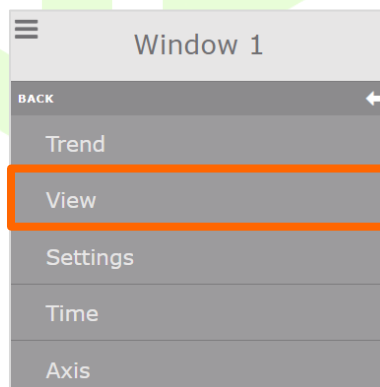


Figure 5-33 Window 1 – View

Further options are available allowing you to:

- Type – Change view to - Trend, PCP, FFT, Histogram, Limits, XY Scatter, CCGraph, CCMatrix, 3DCW1, 3DCW2
- Zoom Y - Zoom In or Out
- All Values – Toggle Button by default set to on. Move to the left to remove tag names and descriptors*
- Coloured – Toggle button by default set to on. Move to the left to change colours of trends on the canvas**
- Update Y Range – If your Trend is normalised, having Update Y Range toggled on will keep the highest and lowest data points visible on the screen as 100% and 0% respectively.

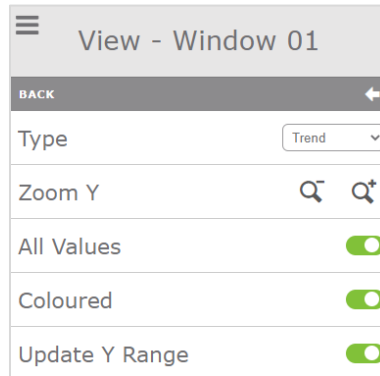


Figure 5-34 Window 1 – View Options

Notes:

*On moving All Values toggle button to the left all tag information will be removed in the canvas apart from the tag that is at the top of the Primary Trend list.

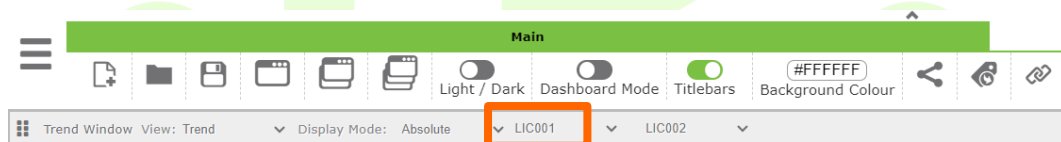


Figure 5-35 Window 1 – Primary Trend

**On moving Coloured toggle button to the left all tag colours will be greyed out apart from the tags at the top of the Primary Trend list and the Trend to Compare list.

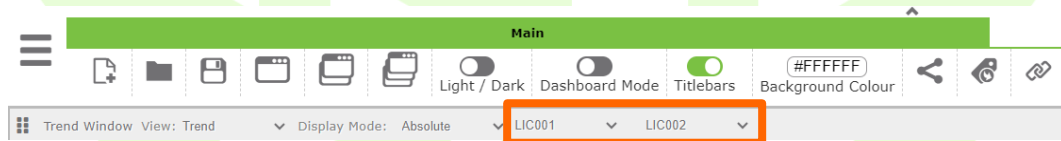


Figure 5-36 Window 1 – Primary & Trend to Compare Lists

5.4.3 Settings

Select the Settings option.

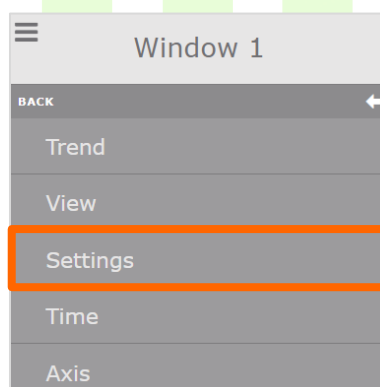


Figure 5-37 Window 1 – Settings

Further options are available:

- Linked – Toggle button by default set to on.
- Display Mode – Options here are Absolute, Normalised, Enumerated, Deviation, Deviation Absolute
- Stack – Toggle button by default is set to off. Move the toggle button to the right to view your trends individually on the canvas
- Pre-Scrub and Post-Scrub – Move the circle icon on both options to set these features
- Expression Evaluator – Within the dialogue you can create new trends derived from mathematical operations in your plot window

Select Expression Evaluator.

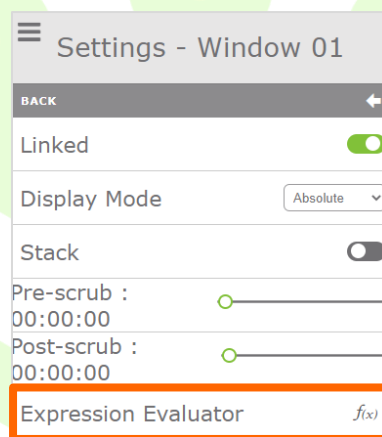


Figure 5-38 Window 1 – Settings Options

The Expression Evaluator pop-up will appear. In Name, type in a new Expression Evaluator name.

You can add tags by clicking the required tag from the list of Available Tags on the right side of the pop-up.

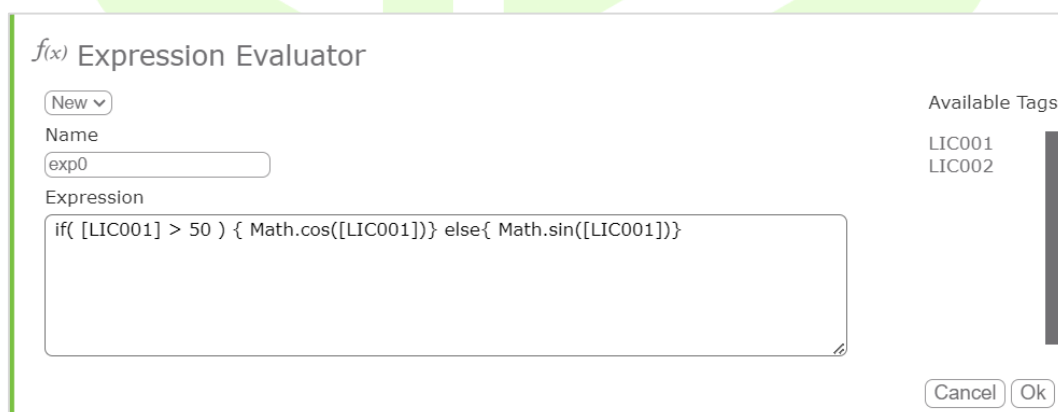


Figure 5-39 Window 1 – Expression Evaluator Pop-Up

The Expression Evaluator uses JavaScript, therefore if you have JavaScript experience, you can create complex expressions here.

The basics to creating an expression are as follows:

To reference a particular trend, you need to enter the tag name wrapped in square brackets:

[tag name]

This can then be used as a variable in the expression. As an example, if you wanted to scale a particular trend by 2, you would do the following:

[tag name] * 2

Or if you wanted to calculate the difference between two trends:

[tag name 1] - [tag name 2]

An expression can contain any number of trends and below is a table detailing all the available operations that can be used in the expression, along with their corresponding notation:

Operation	Notation
Add	+
Minus	-
Multiply	*
Divide	/
Exponentiation	**

Figure 5-40 Window 1 – Expression Evaluator - Operation Notation List

Once you have written your formula, you can then give it a name and select Ok. This will then add the computed trend resolved from the expression to the current plot window, which you can select via the Primary Trend & Trend to Compare drop-down menus on the right side of your canvas.

5.4.4 Time

Select the Time option.

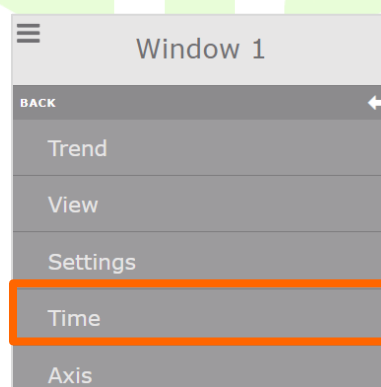


Figure 5-41 Window 1 - Time

The time options here are:

- Relative Time – Toggle button by default is set to off. Move toggle button to the right to switch to relative time
- Start Time – Click once within the date that is already showing to see a pop-up where you can choose day, month, year and time

- End Time – Follow same procedure as Start Time
- Function – Select an option from the drop-down menu. Either Plot, Interp, Max, Min, Ave, Raw
- Interval – Type an interval into the available space
- Apply – Select the tick icon to apply any updates you have made
- Live Updates - Toggle button by default is set to off. Move toggle button to the right to allow live updates

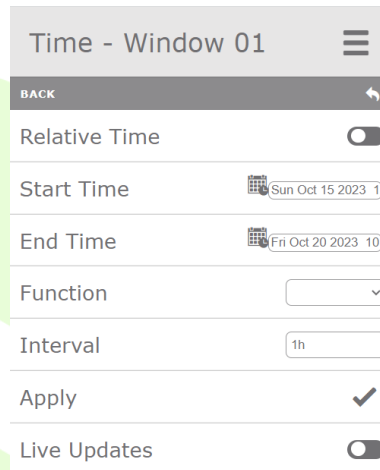


Figure 5-42 Window 1 – Time Options

5.4.5 Axis

Select the Axis option.

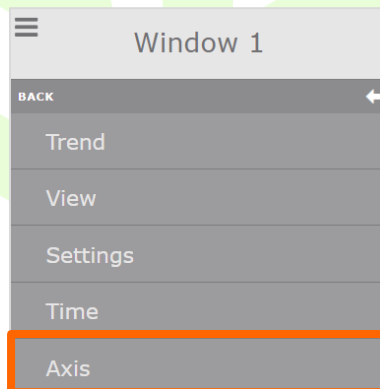


Figure 5-43 Window 1 – Axis

Further options are available:

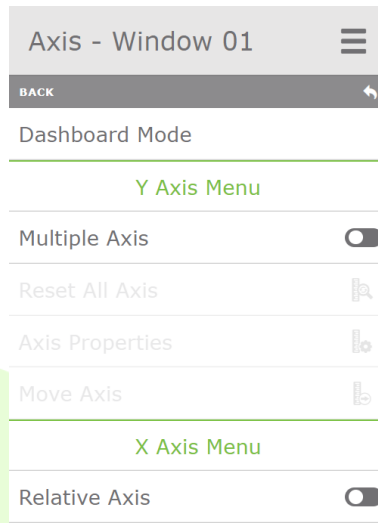


Figure 5-44 Window 1 - Axis Options

- Dashboard Mode – Can be set to on or off

Y-Axis Menu

- Multiple Axis – Toggle button by default is set to off. Move toggle button to the right to see a y-axis for each tag that's on your canvas
- Reset All Axis – If you've moved any of the axis select to return to original position
- Axis Manager – Allows fine tune control of what tag is on what axis
- Move Axis – Select icon to move axis to the opposite side of canvas

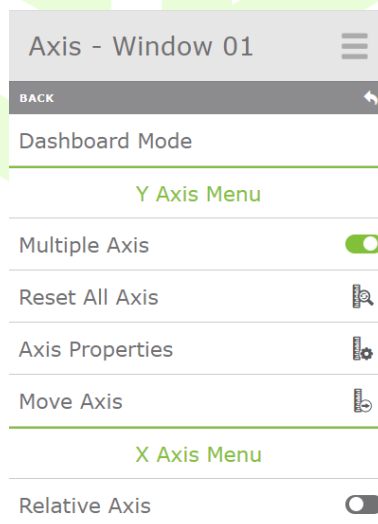


Figure 5-45 Window 1 – Y-Axis Options

X-Axis Menu

- Relative – Toggle button by default is set to off. Move toggle button to the right to see the x-axis change from showing day/month to -7 days in -1-day increments

5.5 Help

Select the Help option.

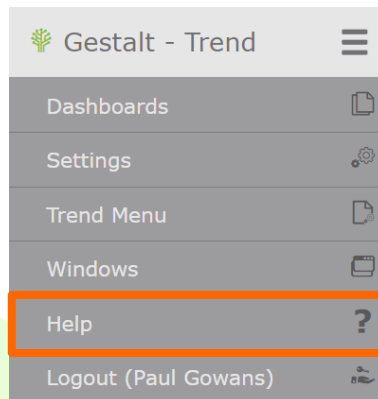


Figure 5-46 Trend - Help

This will take you to Trend information on our App Store Wiki. Select any of the links on this page for more information.

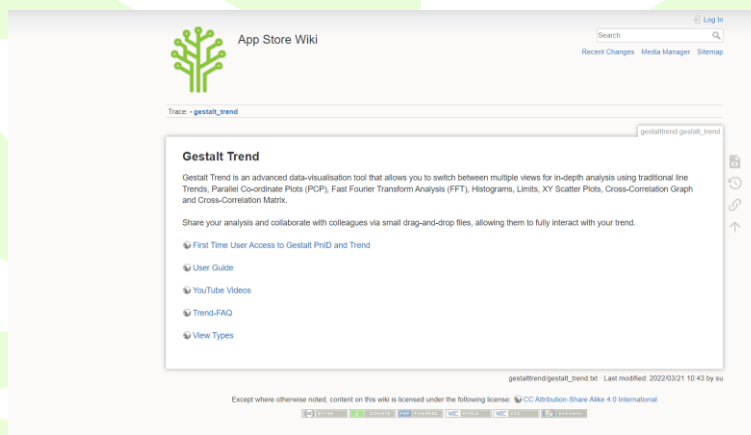


Figure 5-47 Help Options – App Store Wiki

5.6 Logout

Select this option to logout of Gestalt Trend.

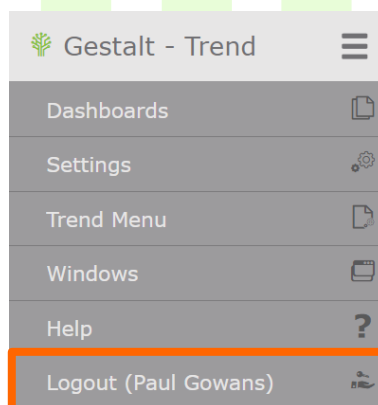


Figure 5-48 Logout of Trend

6 Main Canvas Area

On the left-hand side of the canvas the drop-down menu that leads with View: Trend, allows you to set a different view type of your tags.

The options are Trend, Parallel Co-ordinate (PCP), Fast Fourier Transform (FFT), Histogram, Limits, XY Scatter, Cross Correlation Graph (CCG), Cross-Correlation Matrix (CCM), Calm Waters (3DCW1 & 3DCW2).

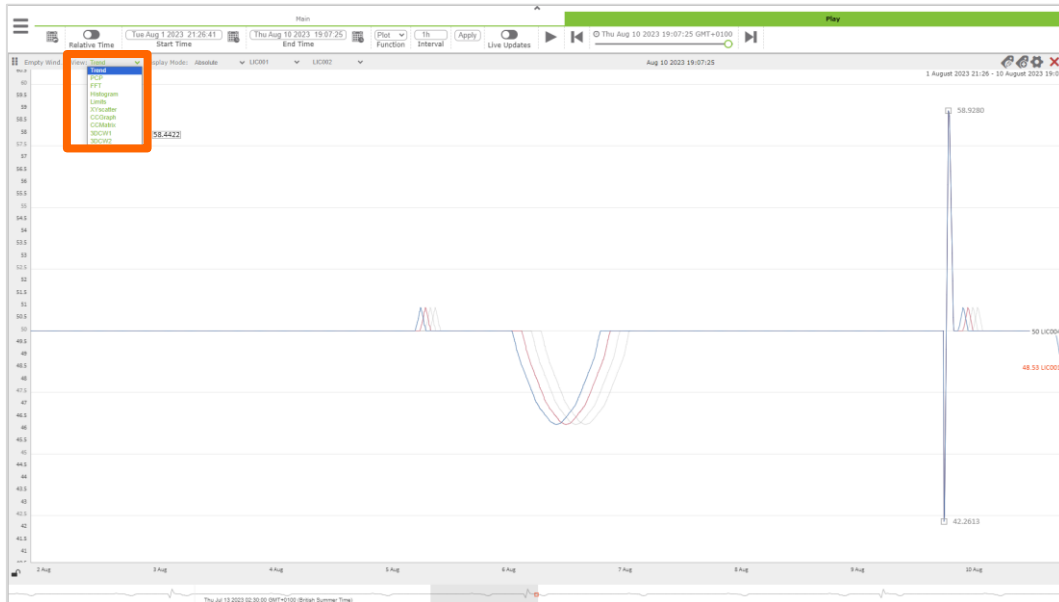


Figure 6-1 View Type Drop Down Menu

The drop-down menu that leads with Display Mode: Absolute, allows you to set different display modes. The options are Normalised, Enumerated, Deviation Normalised, Deviation Absolute.

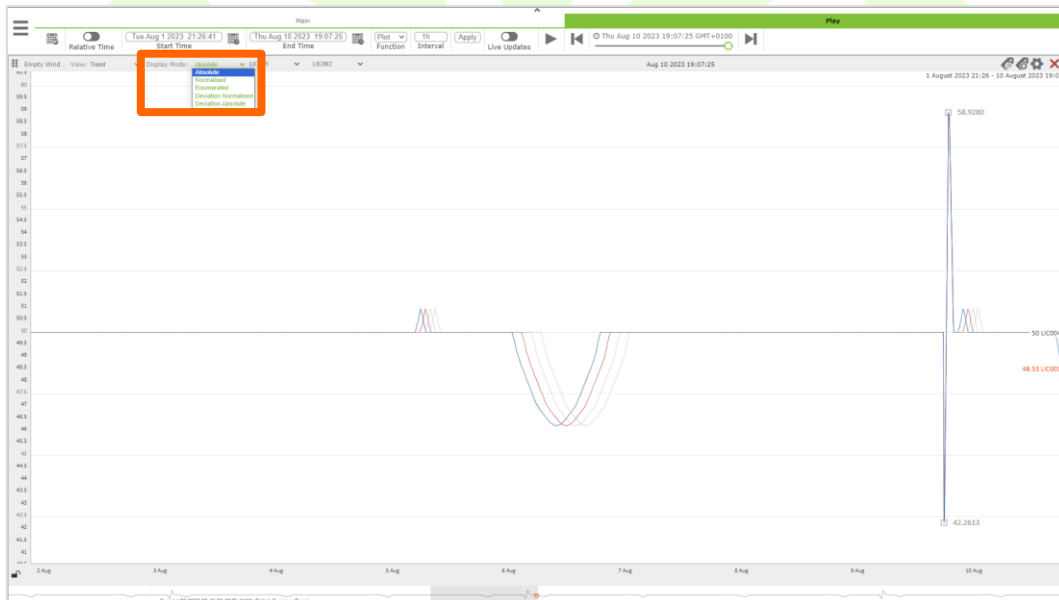


Figure 6-2 Display Mode Drop Down Menu

Lastly, the left-hand side has options for selecting a Primary Trend, and a Trend to compare (to the primary trend).

The right-hand side options from left to right allow you to Manage Tags, Add Tags, View and Edit Window Settings, and Close Window.

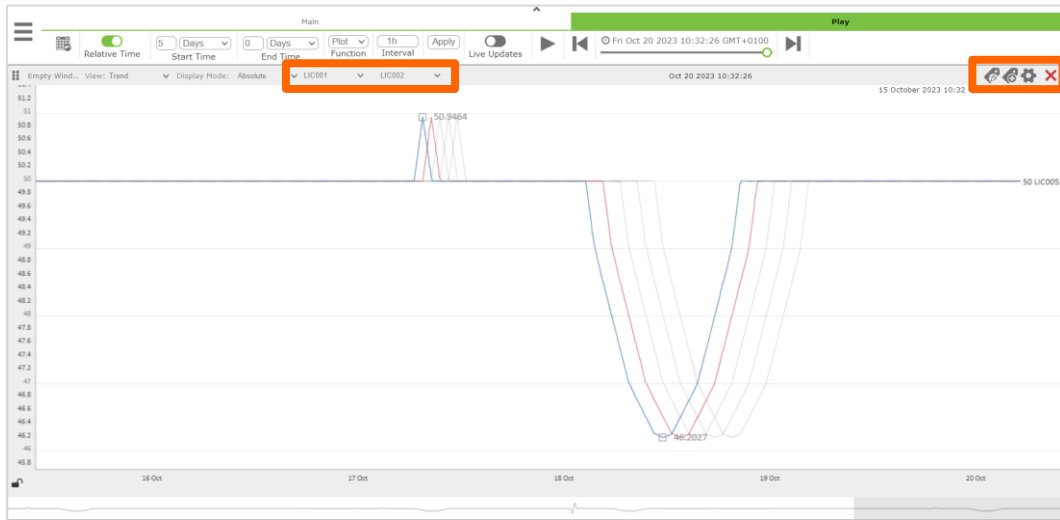


Figure 6-3 Primary Trend, Trend to compare, and right-hand side options

In order to set a Primary Tag, choose that tag from the Primary Trend list (left side drop-down list). Once selected you will see that tag move to the top of the list and it will be in view when the drop-down list is closed. Trend to Compare (right-side drop-down list) follows the same steps.

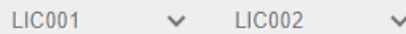


Figure 6-4 Primary & Secondary Trend Lists

Note:

Both tag lists contain the tags that are in your trend – the drop-down lists show the order they were added to your canvas. This allows you to compare two tags within the window. The behaviour of this will vary from view to view.

6.1 Window Settings

Select Window Settings Icon.

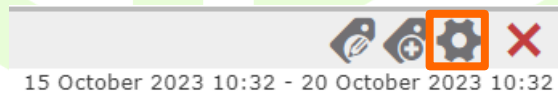


Figure 6-5 Settings Icon

By default, the Dashboard tab is in view.

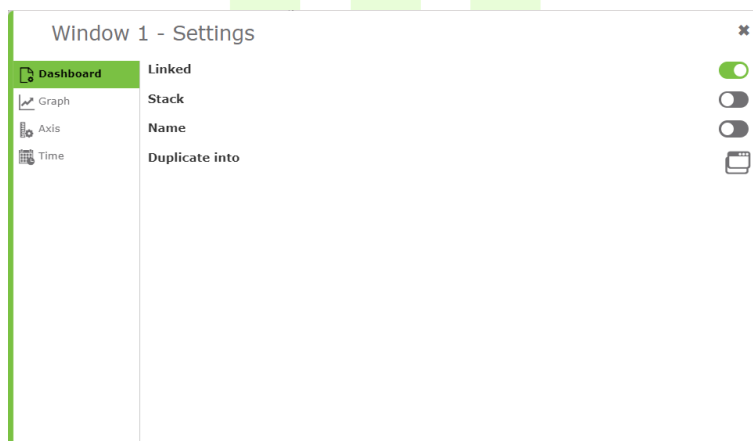


Figure 6-6 Settings Pop-Up

6.1.1 Dashboard Options

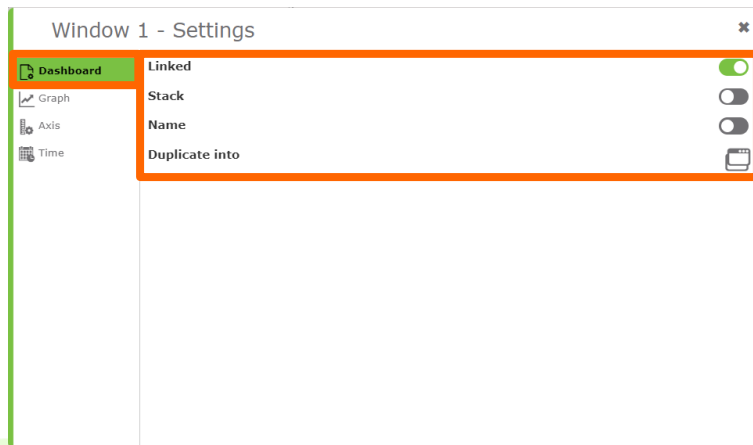


Figure 6-7 Settings Pop-Up – Settings Options

The options you can choose from here are:

- **Linked** – Enabling this setting means the respective window will be linked to the global context and will sync with the global time range. Changing the time in a linked window, or via the global time settings, will update the range for all linked windows
- **Stack** – By default this toggle button is off. If you have a lot of trends on your page that are on top of each other move the toggle button to the right to see each tag appear separately on the canvas
- **Name** – By default this toggle button is off. Move the toggle button to the right to see a name pop-up appear at the left side of the screen. Double click within the box and type your new name (This feature is useful if you have multiple windows in your trend that shows different asset information – this makes it clear to the user which part of the asset is in each window)
- **Duplicate Window (Duplicate Into)** – In order to use this feature, you need to select one window from the Main tab. The new empty window will appear below the existing one. Select 2 from the Duplicate into drop-down list, select the duplicate window icon. The information can then be seen in both windows

6.1.2 Graph Options

The graph options change depending on what display mode you have chosen.

If you have chosen either Absolute, Enumerated, Deviation Normalised or Deviation Absolute display mode (from the Settings panel) you will see the following in the graph area:

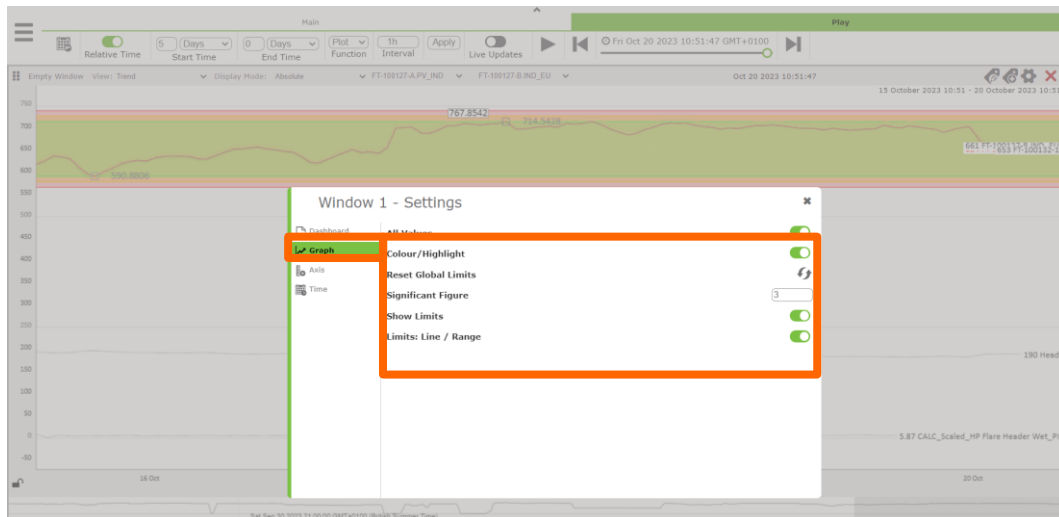


Figure 6-8 Graph Options – Absolute, Numerated, Deviation Normalised, Deviation Absolute

- All Values – By default the toggle button is set to on. This displays values for all tags present within the trend window for the currently selected data point. Moving the toggle button to the left will focus solely on the selected tag rather than trying to display all tags in the window
- Colour/Highlight– By default the toggle button is set to colour. Move the toggle button to the right to change from Colour to Highlight. The highlight changes the Primary Trend to black, the Trend to Compare stays as its original colour. All other trends will be greyed out
- Reset Global Limits – Select the refresh icon to re-instate previous limits
- Significant Figure – Specify how many significant figures you want tag values to show.
- Show Limits – By default the toggle button is set to off. Move the toggle button to the right to show the limits of the tag that appears at the top of the Primary Trend List
- Limits: Line / Range – If you have Show Limits set to on, this option will appear. By setting this option to on, the limits are coloured in on your dashboard.

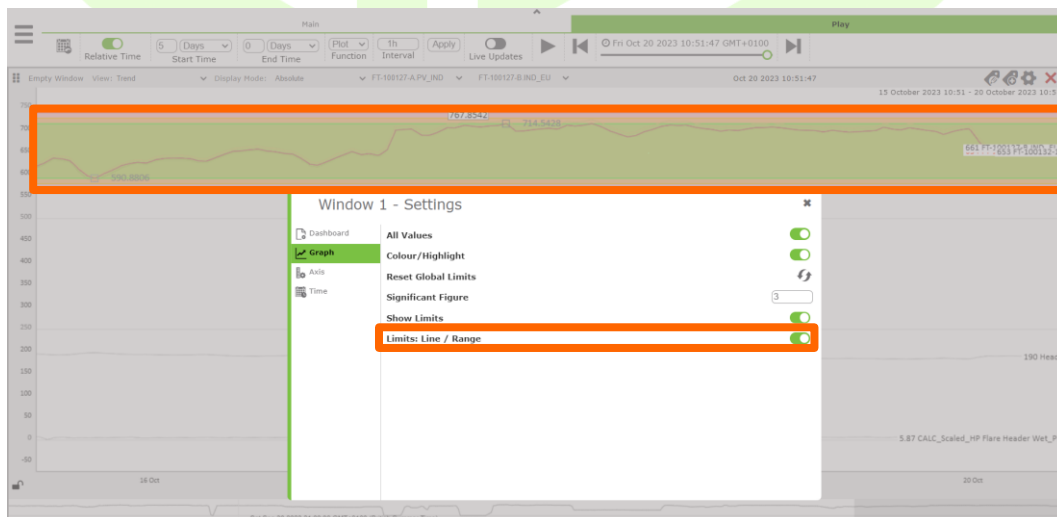


Figure 6-9 Limits: Line / Range toggled on

The Normalised display mode setting shows the following in the graph area:

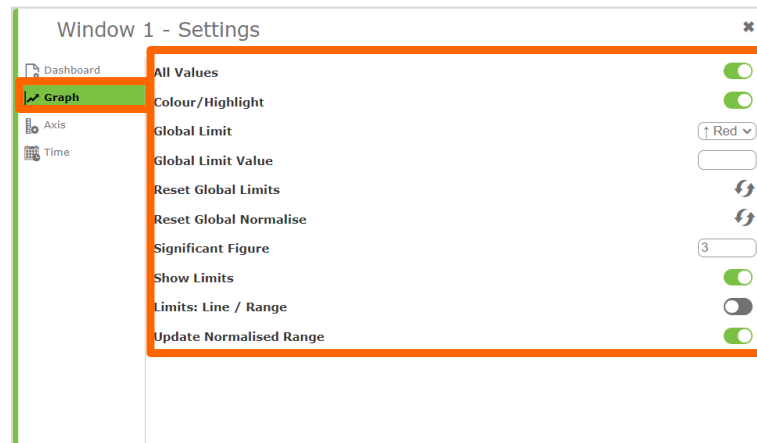


Figure 6-10 Settings Pop-Up – Graph Options – Normalised

The Normalised display mode option shows the following graph options:

- All Values – By default the toggle button is set to on. This displays values for all tags present within the trend window for the currently selected data point. Moving the toggle button to the left will focus solely on the selected tag rather than trying to display all tags in the window
- Colour/Highlight– By default the toggle button is set to colour. Move the toggle button to the right to change from Colour to Highlight. The highlight keeps the Primary Trend and Trend to Compare as their original colours, whilst all other trends are greyed out.
- Global Limits – From the drop-down menu choose either Upper Limits – red, yellow normal or Lower Limits – red, yellow, normal
- Global Limit Value – This will change depending on what is selected in global limits
- Reset Global Limits – Select the refresh icon to re-instate previous limits
- Reset Global Normalise – Select the refresh icon to re-instate the previous normalised setting
- Significant Figure – Specify how many significant figures you want tag values to show.
- Show Limits – By default the toggle button is set to off. Move the toggle button to the right to show the limits on your page
- Limits: Line / Range – If you have Show Limits set to on, this option will appear. By setting this option to on, the limit ranges are coloured in on your dashboard.
- Update Normalised Range – Toggle on for limits to update as you pan or zoom, toggle off for limits to remain the same when you pan or zoom.

6.1.3 Axis Options

The axis options change depending on what display mode you have chosen.

All display modes show the following in the axis area:

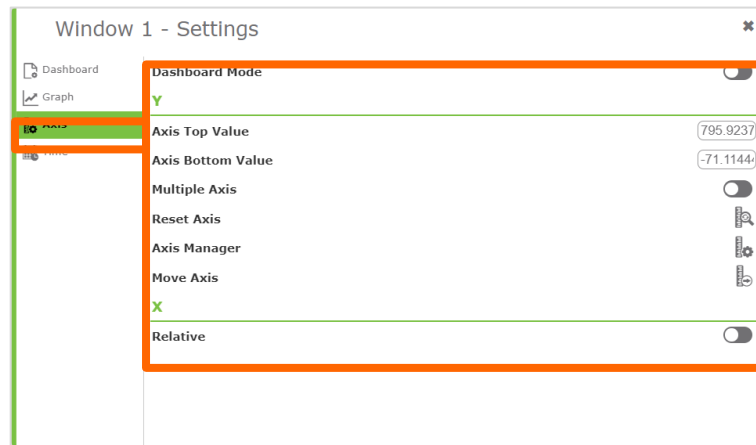


Figure 6-11 Settings Pop-Up – Axis Options

The options you can choose here are:

- Dashboard Mode – Move the toggle button to the right to remove the X and Y axis from the canvas
- Y
 - Axis Top Value – Enter in the maximum value you want on the Y axis
 - Axis Bottom Value – Enter in the minimum value you want on the Y axis
 - Multiple Axis – Toggle button by default is set to off. Move toggle button to the right to see a y-axis checkbox for each tag that’s on your canvas. Select a check box to enable an axis.
 - Reset Axis – If you’ve enabled an axis, select Reset Axis to return to the original axis state
 - Axis Manager – Select the icon to see a pop-up that allows you to fine tune control of what tag is on what axis, once updated, select close
 - Move Axis – Select icon to move axis to the right or left side of the canvas
- X

Relative – Whilst off time labels on the x-axis will be absolute dates (00:00:00) and when on labels will be relative to now (-00h etc.)

6.1.4 Time Options

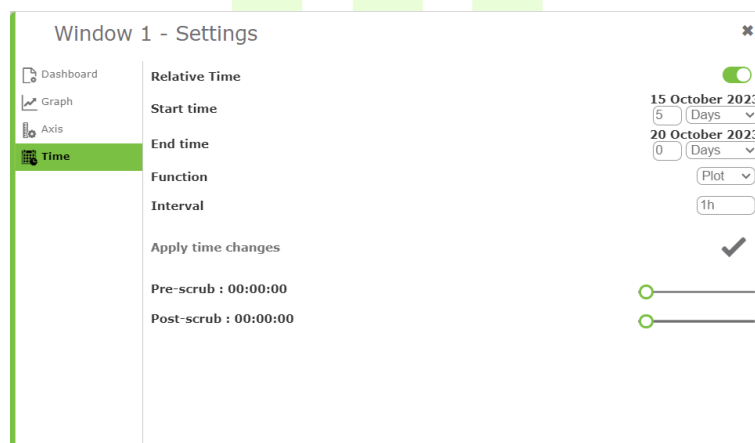


Figure 6-12 Settings Pop-Up - Time Options with Relative Time on

When Relative Time has been toggled on, the options you can choose here are:

- Relative Time – Toggle on to convert your Trend to show relative time, toggle off to convert your trend to follow set calendar dates. The figure below shows the difference between the time options, depending on whether this setting is toggled on or off.
- Start Time – Enter in oldest date that you want your Trend to show. You can use the dropdown box to switch between seconds, minutes, hours, days, months, and years. In the above figure, the Start Time is 5 days, which means the oldest data will be from 5 days before the present time.
- End Time – Enter in the newest date that you want your Trend to show. You can use the dropdown box to switch between seconds, minutes, hours, days, months, and years. In the above figure, the End Time is 0 days, which means the Trend will be showing the latest available data.
- Function – Use the dropdown box to choose which data aggregation you want to use. Available aggregations are Plot, Interpolated, Maximum, Minimum, Average, and Raw. [Our Wiki](#) provides an explanation for each of these aggregation types.
- Interval – Choose the time between data points. Examples include 1s (1 second), 1h (1 hour), and 1d (1 day).
- Apply time changes – If you have made any changes to the above settings, you can select the tick to apply changes to the current Trend.
- Pre-scrub – Point to an area of interest on the canvas. Open Settings Icon, the choose the time tab and move the pre-scrub slider icon to the right. You will see a grey layer appear to the left of the point chosen.
- Post-scrub – Repeat the same steps as pre-scrub, but this time move the post-scrub slider to the right

6.2 Tags Manager

Select Tags Manager Icon.



Figure 6-13 Tags Manager Icon

The change tag properties pop-up is now in view.

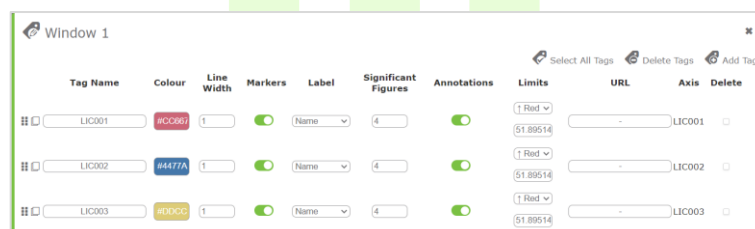


Figure 6-14 Change Tag Properties Pop-Up

From left to right:

- Select and hold the icon to move a tag and its properties to another place within this list
- Select the copy icon to copy the tag

- Change tag colour – Mouse click in colour box to view the pop-up colour options (alternatively type in a new hex number if known)
- Line Width – change the width of individual trends of tags.
- Markers toggle button by default is set to on. Move to left to switch off
- Label - Drop down list options are to show Name/Description or switch off tag information*
- Significant Figures - Specify how many significant figures you want tag values to show.
- Annotations toggle button by default is set to on. Move to left to switch off
- Limits – Shows limits info for a particular tag
- URL – Here you can associate a tag with a URL
- Axis - Lists the tags that appear on your canvas
- Delete – Select any box to delete that tag. Once all have been selected choose Delete Tags. A pop-up will appear asking if you want to remove the selected tag(s). Select OK

Along the top of the window, from left to right:

- Select All Tags – Selects all tags that have been added
- Delete Tags – Deletes all selected tags
- Add Tags – Select this icon to add new tags (search tags window will open – select data source name and tags you require)

Note:

*There may not be a description for every tag as descriptions are set on the tag at the data source.

6.3 Add Tag

Select Add Tag Icon.

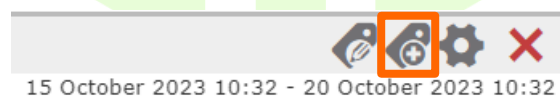


Figure 6-15 Add Tag Icon

The tag search pop-up is now in view. Select your data source from the drop-down menu and then either, add a wild card to search for a specific tag or if you can see that tag then select the (+) icon at the right side of the pop-up. As you select a tag the (+) icon will turn yellow (searching for the tag) and then green once the tag has been found and added to your page. When you have finished adding your tags, close the pop-up by selecting the (x) close icon at the top right of the pop-up.

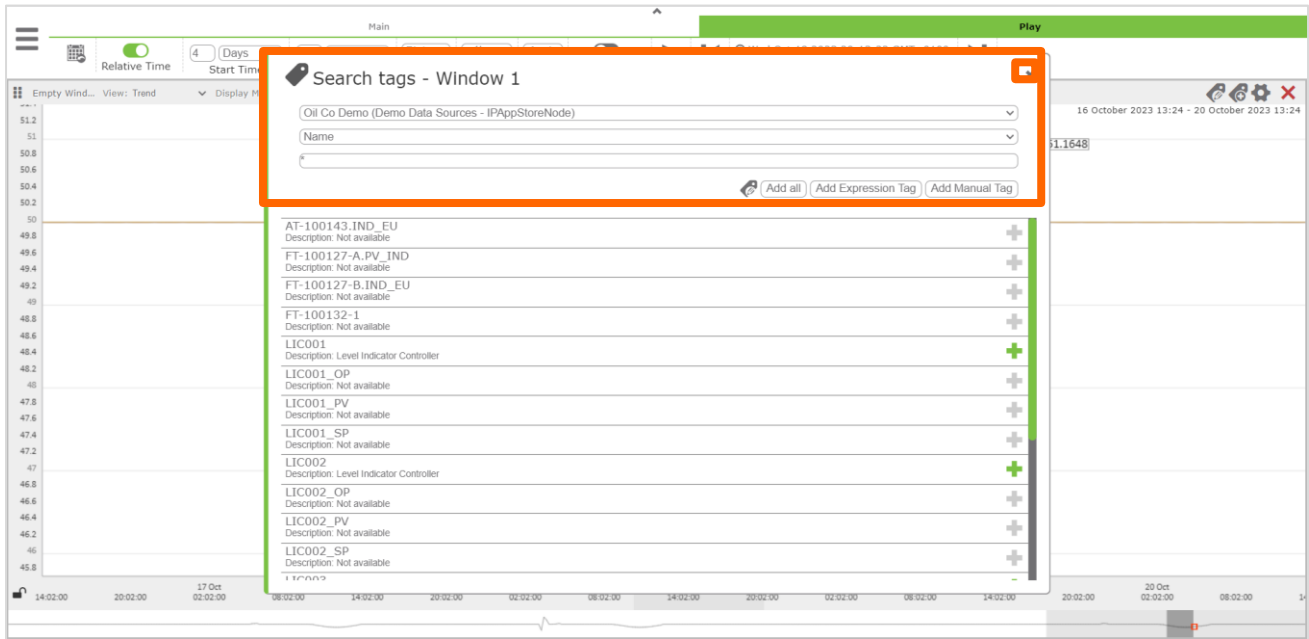


Figure 6-16 Data source and Tag Search Pop-Up

Additional options with in the window:

- Add all – Adds all tags that are visible on the list.
- Add Expression Tag – This opens up the Expression Evaluator, where you can create a calculated tag.
- Add Manual Tag - manually add tag names to a dashboard.

6.4 Lock Axis

On the bottom left of your window, there will be a padlock at the origin point of your Trend.



Figure 6-17 Lock/Unlock Icon

When the icon is unlocked, as is shown above, the Y axis will adjust accordingly as you pan and zoom. When the icon is locked, the Y axis will remain at it's currently set min/max values when you pan.

6.4.1 Additional Info - Normalise

- When the Normalise option is chosen from the drop-down menu in Settings, the scale changes at the left-hand side of your trend. The scale changes from a numerical scale to a percentage scale. This displays the data that has been normalised to the minimum and maximum values in the dataset

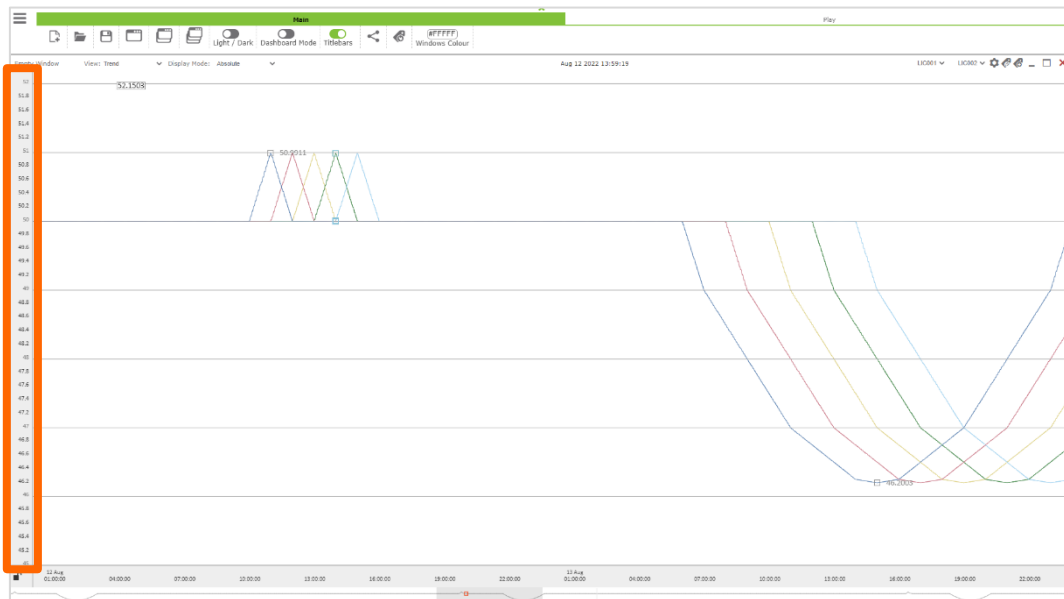


Figure 6-18 Normalise Not Selected

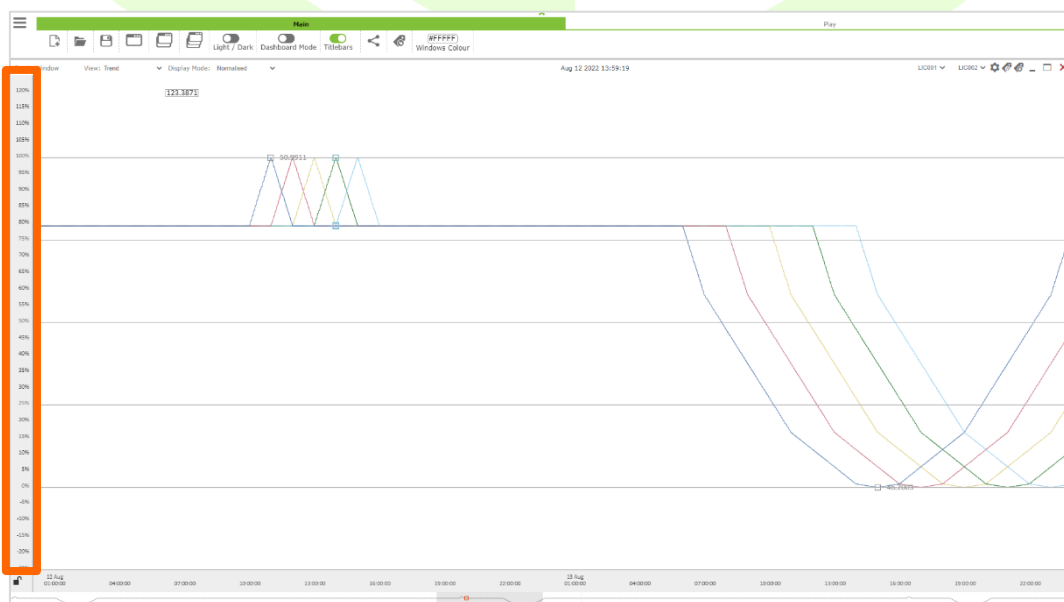


Figure 6-19 Normalise Selected

6.4.2 Additional Info – Global Limits

- Limit Type - Drop down list that gives you the option to choose operating limits:
 - Red - Safe Design Limits (Upper)
 - Yellow – Safe Operating Limits (Upper)
 - Green - Normal Operating Limits (Upper)
 - Green - Normal Operating Limits (Lower)
 - Yellow – Safe Operating Limits (Lower)
 - Red – Safe Design Limits (Lower)

Limits are automatically set to the range of data in your trend. There is normally a 10% deviation from the green to the yellow and red ranges.

- Limit Value – A default setting will appear in this box. This can be changed to another limit value
- Reset Limits – Select the reset limits icon to reset to the last setting

*Limits can be dragged on the canvas but in order to set limits for all tags we can do this with a simple process.

6.4.3 Additional Info – Limits

To show limits in your trend, select the setting icon at the top right side of the canvas.

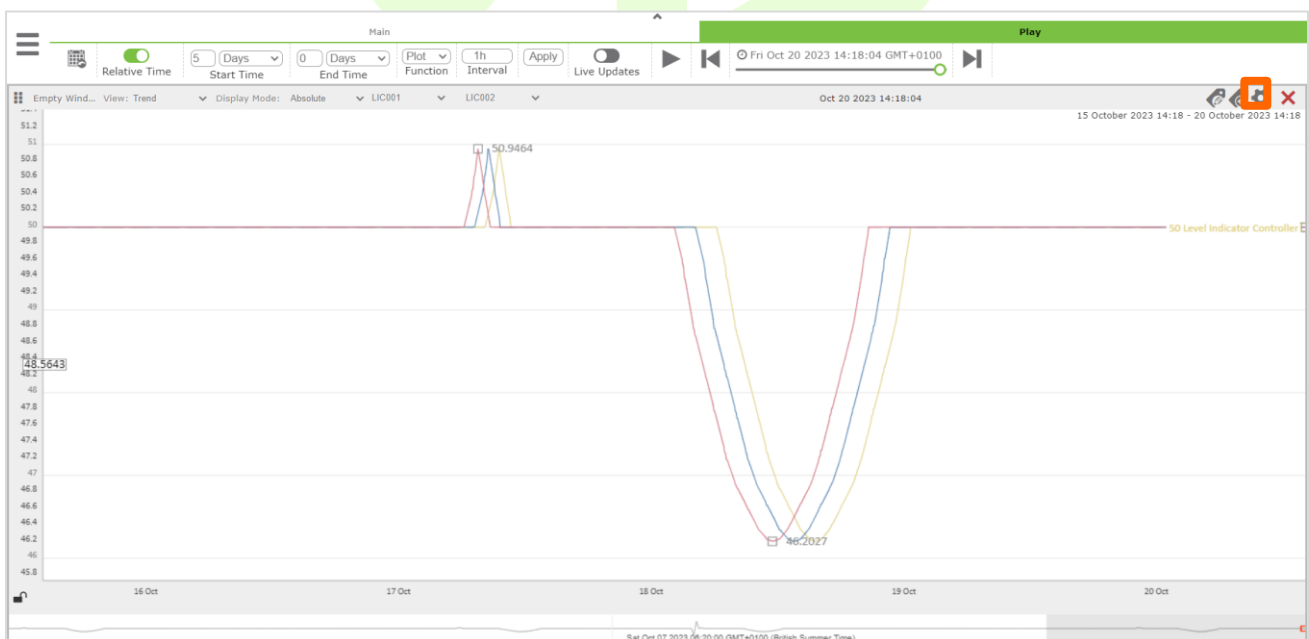


Figure 6-20 Settings Icon

To view the limits on this page, move the Show Limits toggle button to the right.

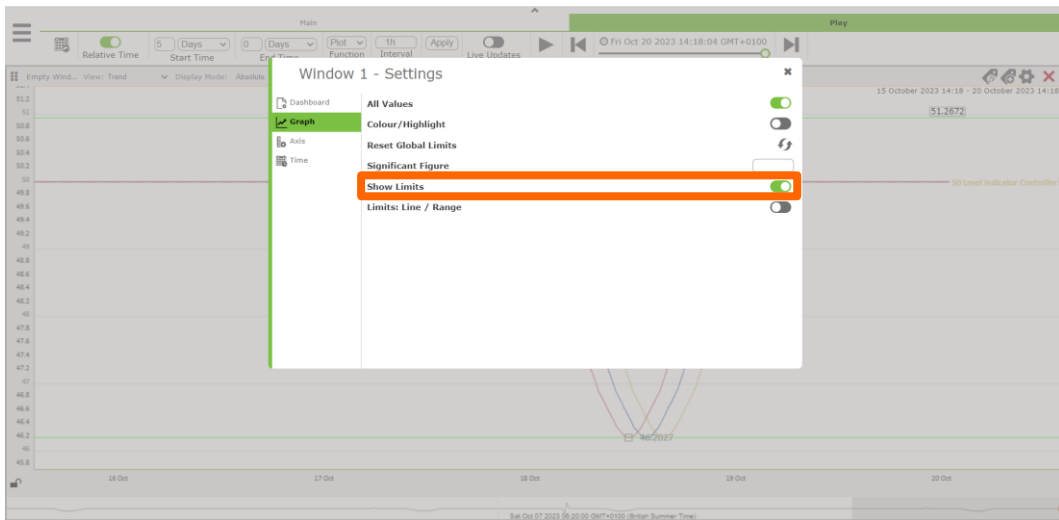


Figure 6-21 Graph – Show Limits Toggle Right

You can then see the limits have appeared on your screen. Close the settings pop-up.

In the Play tab the Relative Time is selected and the limits are set to a five-day period.

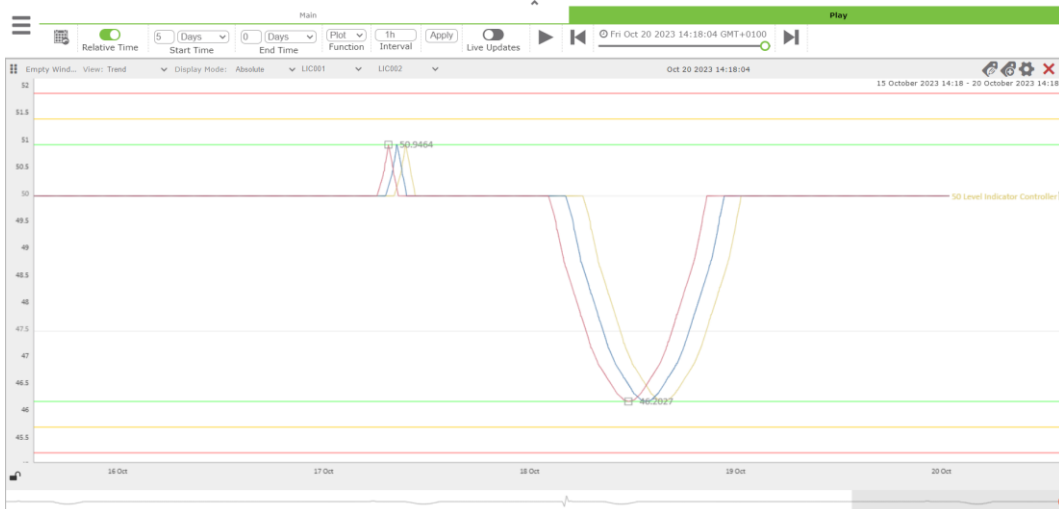


Figure 6-22 Graph – Limits on Page

A reminder of the operating limits:

- Red - Safe Design Limits (Upper)
- Yellow – Safe Operating Limits (Upper)
- Green - Normal Operating Limits (Upper)
- Green - Normal Operating Limits (Lower)
- Yellow – Safe Operating Limits (Lower)
- Red – Safe Design Limits (Lower)

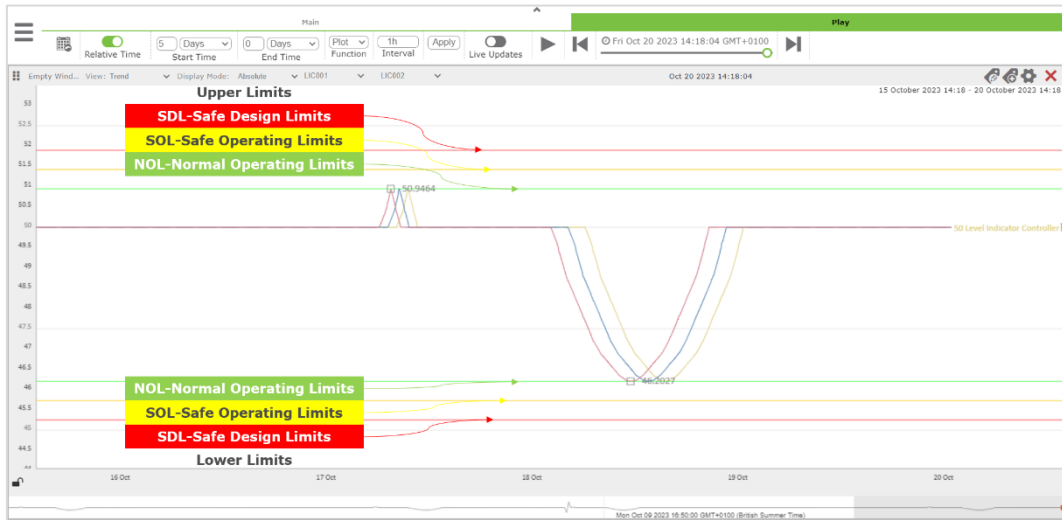


Figure 6-23 Limits Selected – Upper and Lower Limits

You can also view the limits for the trend in the tag manager. The limits in this pop-up show that the red upper limit is set at 51.89514.

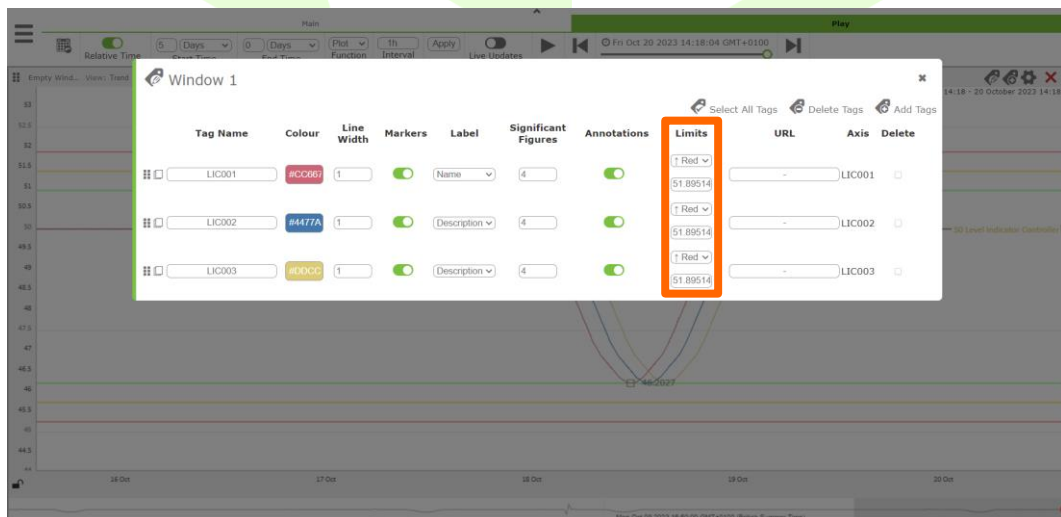


Figure 6-24 Limits – Upper Limit Setting

Now, if you change the display mode to Normalised, and have the Show Limits toggle button set to show the limits on the page.

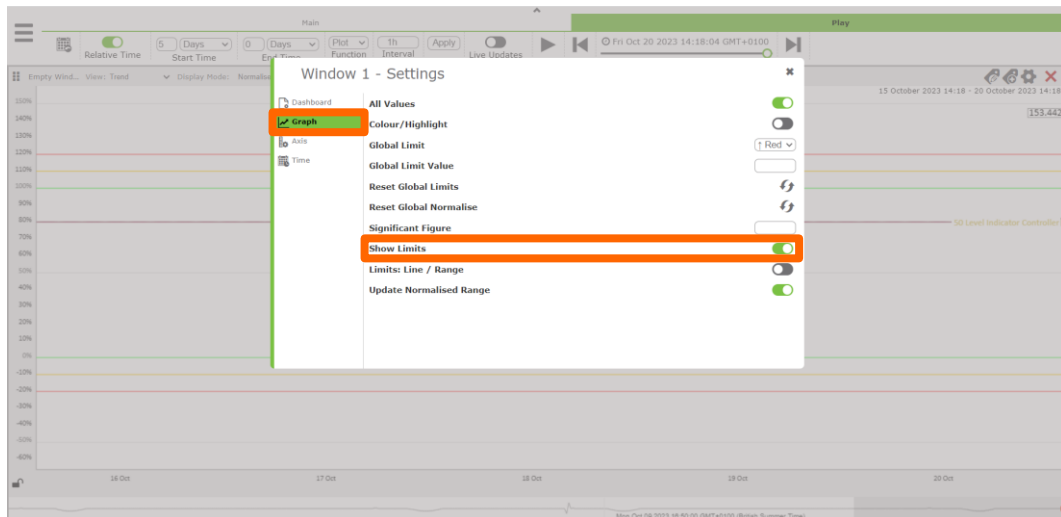


Figure 6-25 Settings – Display Mode Normalised with Show Limits On

The upper limit is set at 120%.

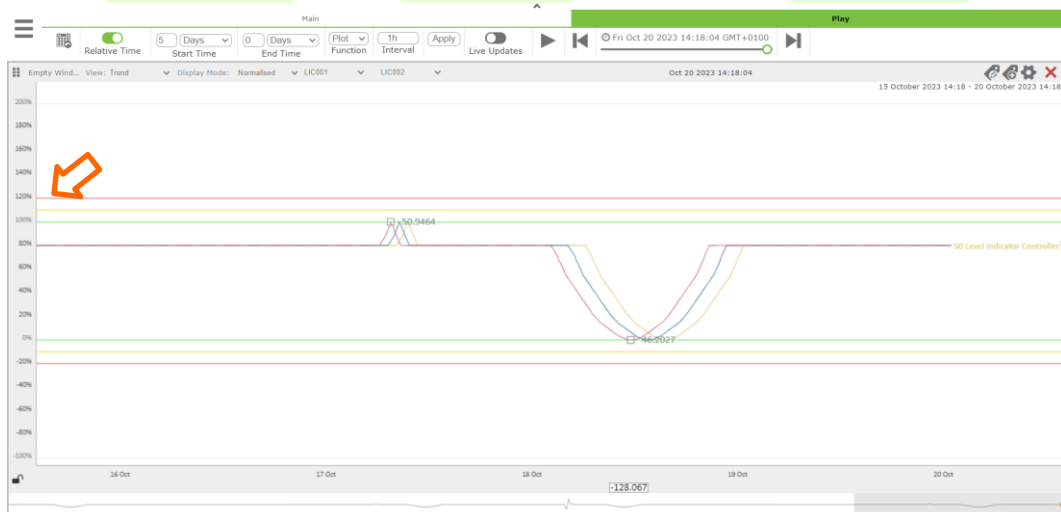


Figure 6-26 Settings – Normalised – Show Limits

Change the global limit value to 130 then hit enter on your keyboard.

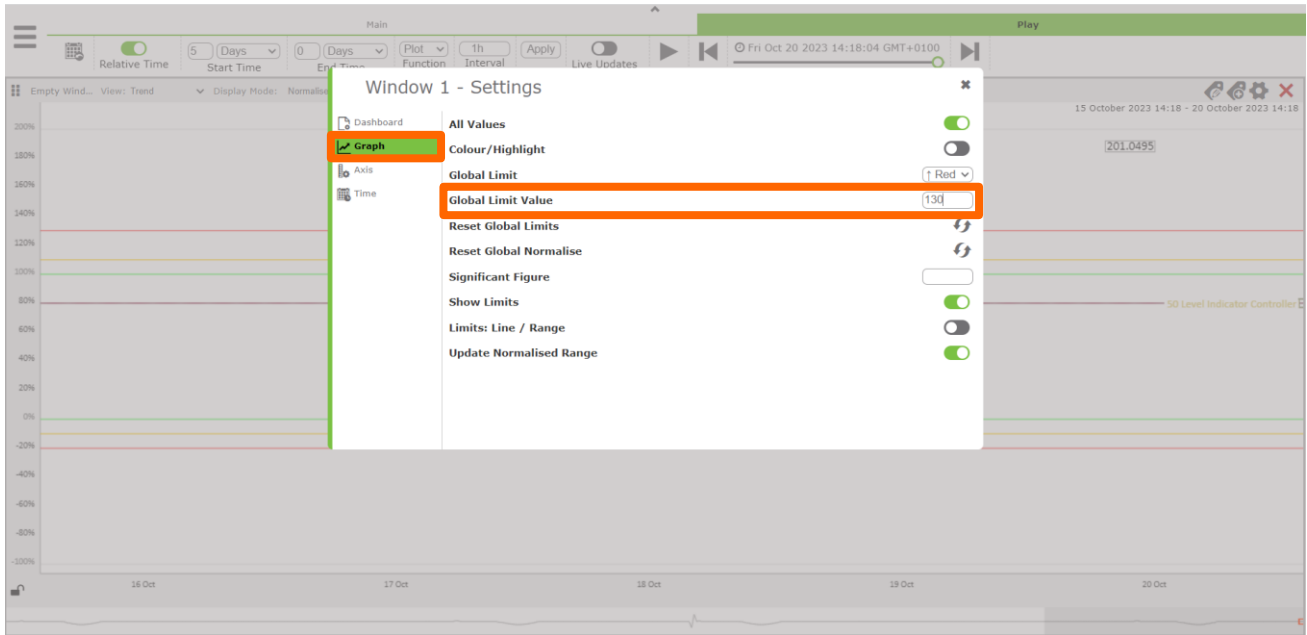


Figure 6-27 Settings – Display Mode Normalised – Set New Global Limits

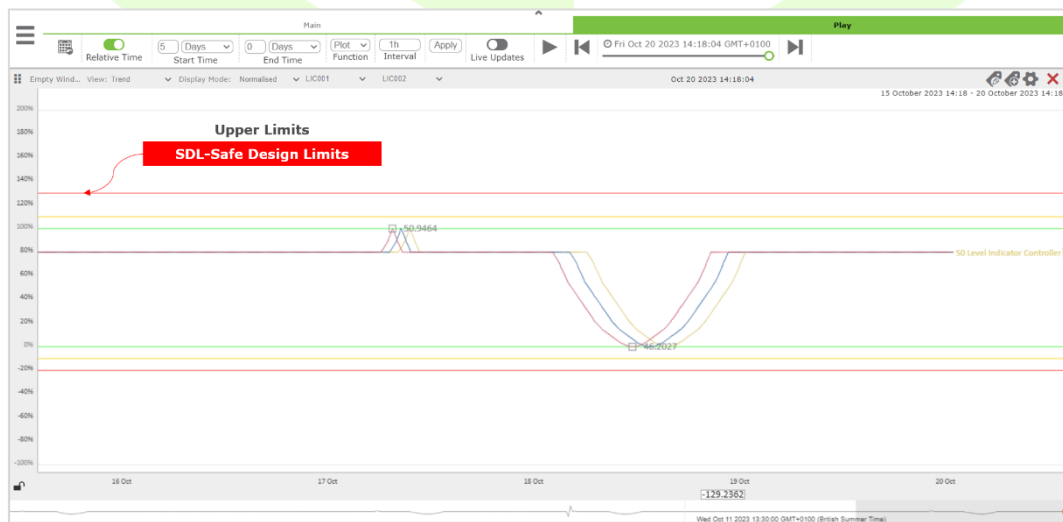


Figure 6-28 Settings – Upper Limit Changed

To revert back to the previous setting select the Reset Global Limits icon.

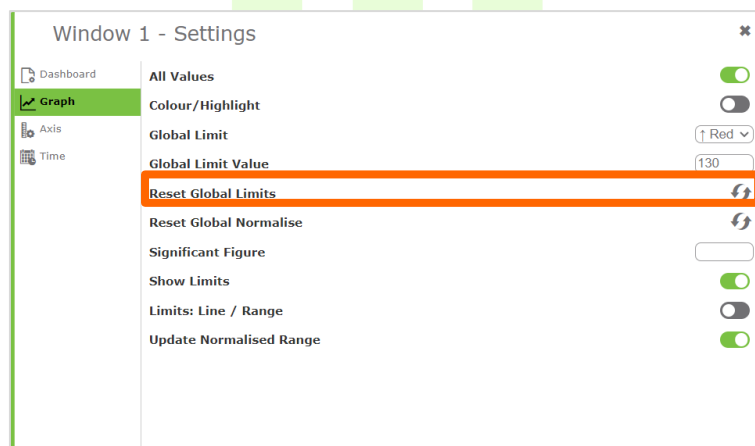


Figure 6-29 Settings – Graph – Reset Global Limits

Limits for all tags have been set with normal operating limits that binds all the existing data in the trend and will highlight any data outside this. Limits are automatically set to the range of data in your trend. There is normally a 10% deviation from the normal to the safe operating and safe design ranges. The original limit settings have been restored.

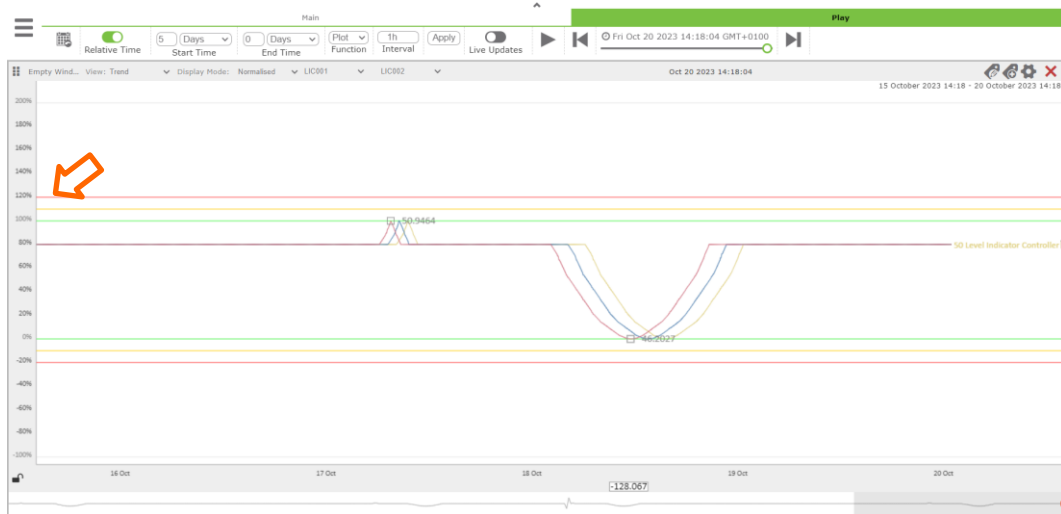


Figure 6-30 Original Limits Restored

Note:

If there are many tags in your trend, the limits will change for the tag that is at the top of the Primary Trend list. Should you wish to repeat the new limits for another tag, select it from the Primary Trend drop-down list and it will show at the top of the list of tags.

6.4.4 Additional Info - X-Axis Zoom

Place your cursor on the x-axis, then using your mouse, scroll forward to zoom in and condense the time range, and zoom out to expand the time range (right to left). Scroll back to Zoom out.

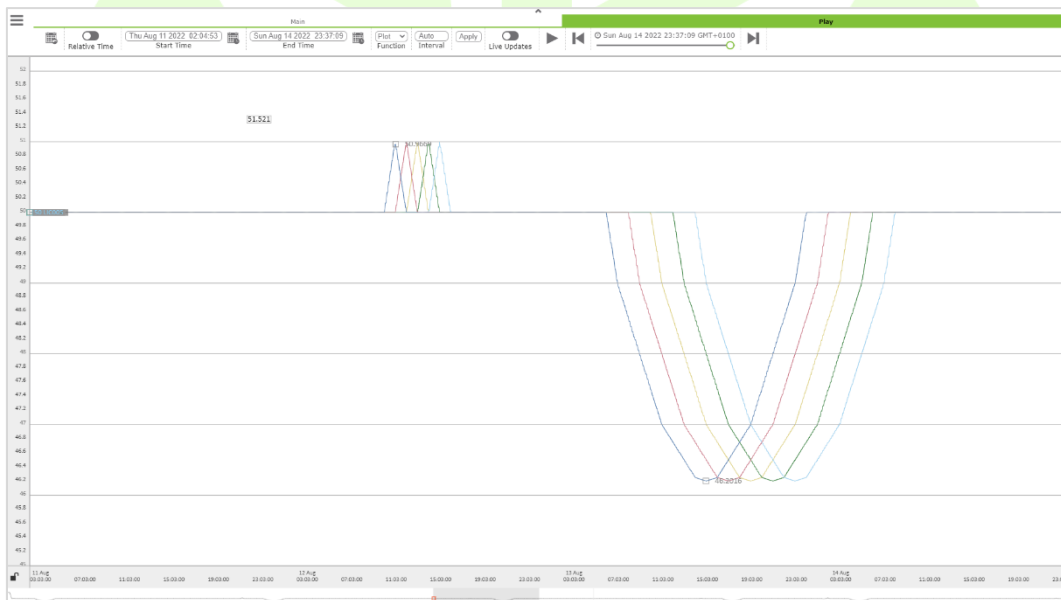


Figure 6-31 X-Axis Zoom

6.4.5 Additional Info - Preview Zoom

At the bottom of the trend view, below the x-axis is the trend preview.

You can zoom into another part of your trend out-with your date and time setting. Select anywhere in the preview area to get a close-up view of the data in your workspace.

The grey area shows the range that has been selected to be viewed in your workspace.

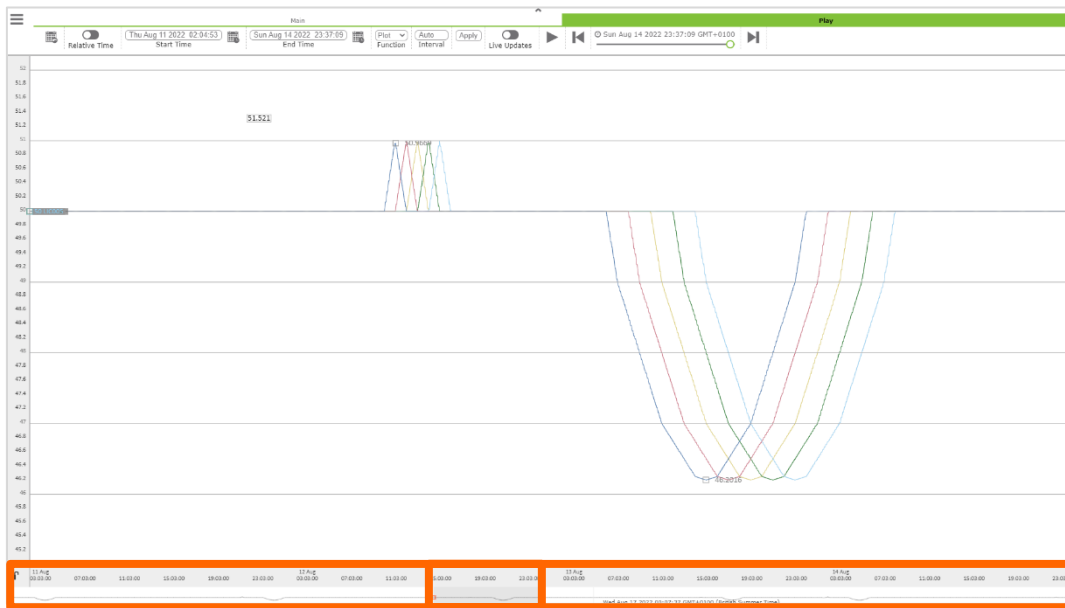


Figure 6-32 Preview Zoom

6.4.6 Additional Info - Mouse Tips

Move the scroll wheel forward to extend the height of the trend in your workspace in portrait mode (top to bottom). Move the scroll wheel backwards to shrink the trend in your workspace. Left click, hold and select an area with your mouse to zoom in to a particular spot in your workspace. Right click to pan right or left, or up and down in your workspace.

6.4.7 Additional Info – Pre-Scrub & Post-Scrub

- Select a point on a trend
- Select the Settings Icon at the right side of your canvas
- Choose Time tab from the Settings pop-up window
- Select the Pre-Scrub circle icon and as you move the sliding scale to the right you will see a grey layer appear to the left of the point you chose initially

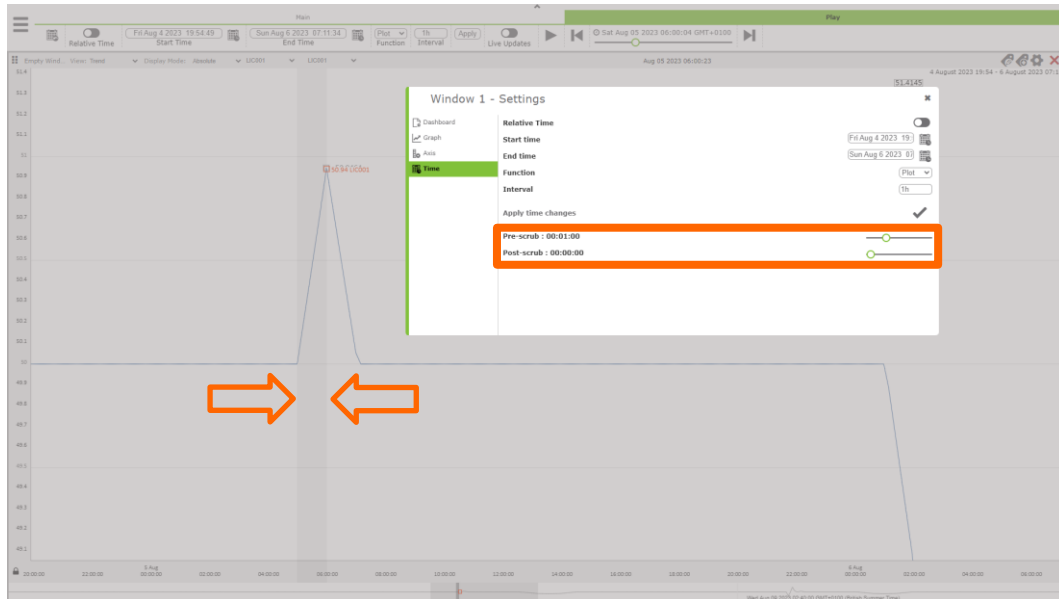


Figure 6-33 Set Pre-Scrub

With the pop-up still open select the Post-Scrub circle icon and as you move the sliding scale to the left or right, you'll see the grey layer decrease or increase in width from the size of the Pre-Scrub.

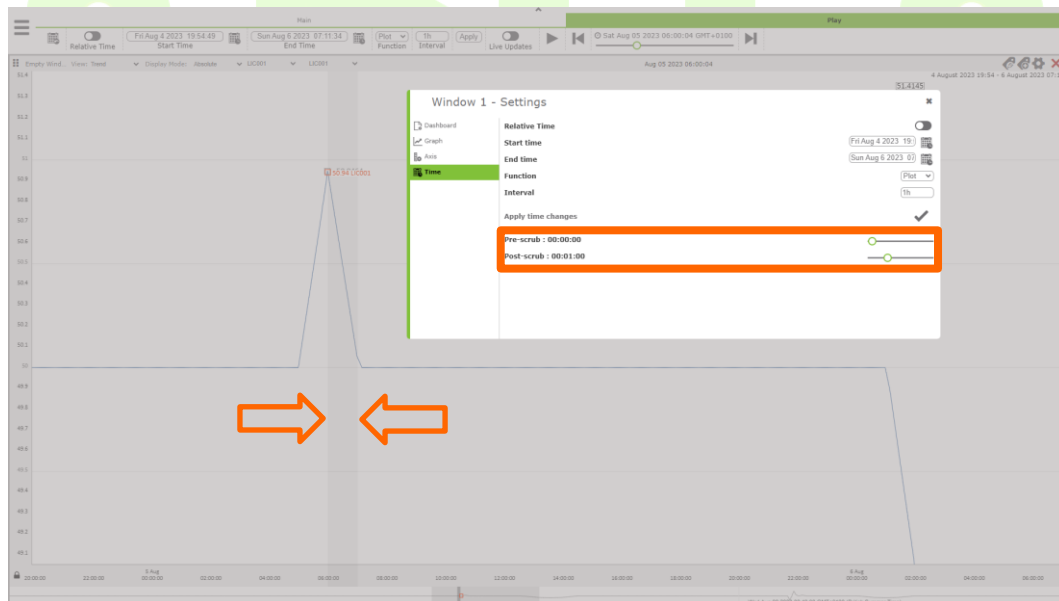


Figure 6-34 Set Post-Scrub

You can view a specific area (Pre-Scrub & Post-Scrub) in a different view type. To set the view to XY Scatter, firstly go to the Settings tab and in the Graph area move the All Values toggle button to the left.

Go to the View tab. Select XY Scatter from the drop-down menu, the view now shows the details in XY Scatter mode.

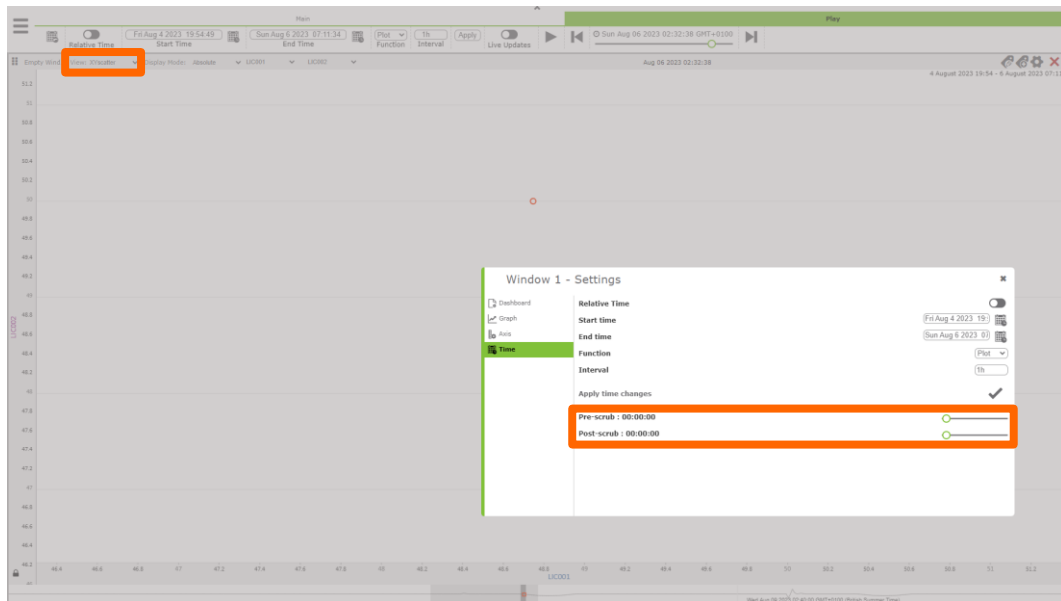


Figure 6-35 X-Y Scatter with All Values toggled off, and no pre/post scrub

With no pre/post scrubbing applied, and All Values toggled off, the X-Y Scatter shows only the point at which you have selected on the Play bar.

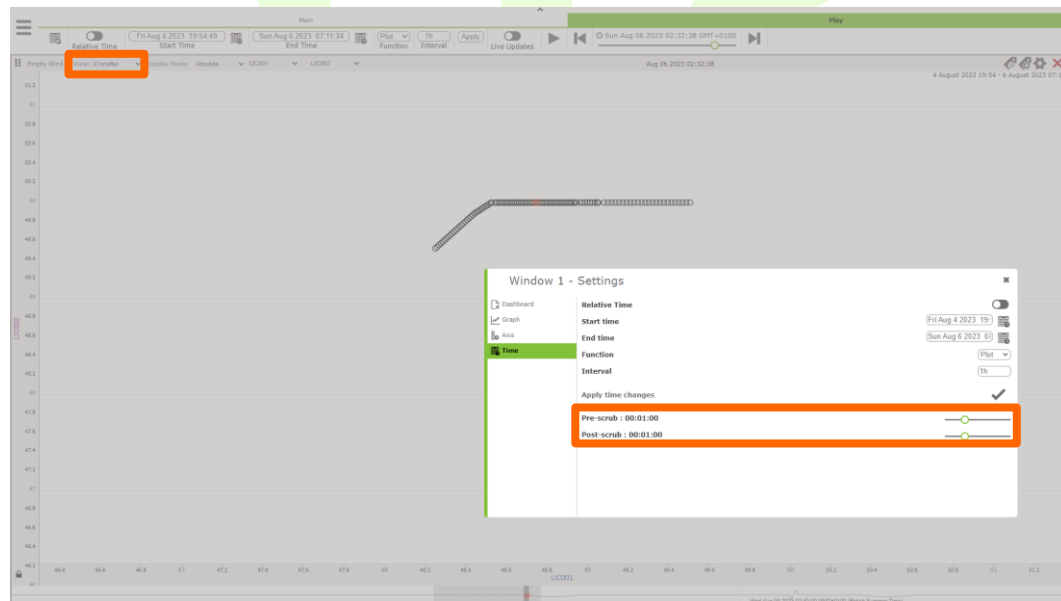


Figure 6-36 X-Y Scatter with All Values toggled off, but with pre/post scrub applied

This time around, we have included pre/post scrubbing. The X-Y scatter now also shows where the point has been, and where it is moving to.

You can change Pre-Scrub & Post-Scrub ranges at any time by going back to the Time tab and moving the Pre-Scrub & Post-Scrub sliding scales.

7 Examples

On the left-hand side of the canvas the drop-down menu that leads with Trend allows you to set a different type of view of your trends.

The options are Trend, Parallel Co-ordinate (PCP), Fast Fourier Transform (FFT), Histogram, Limits, XY Scatter, Cross Correlation Graph (CCG), Cross-Correlation Matrix (CCM), Calm Waters (3DCW1 & 3DCW2).

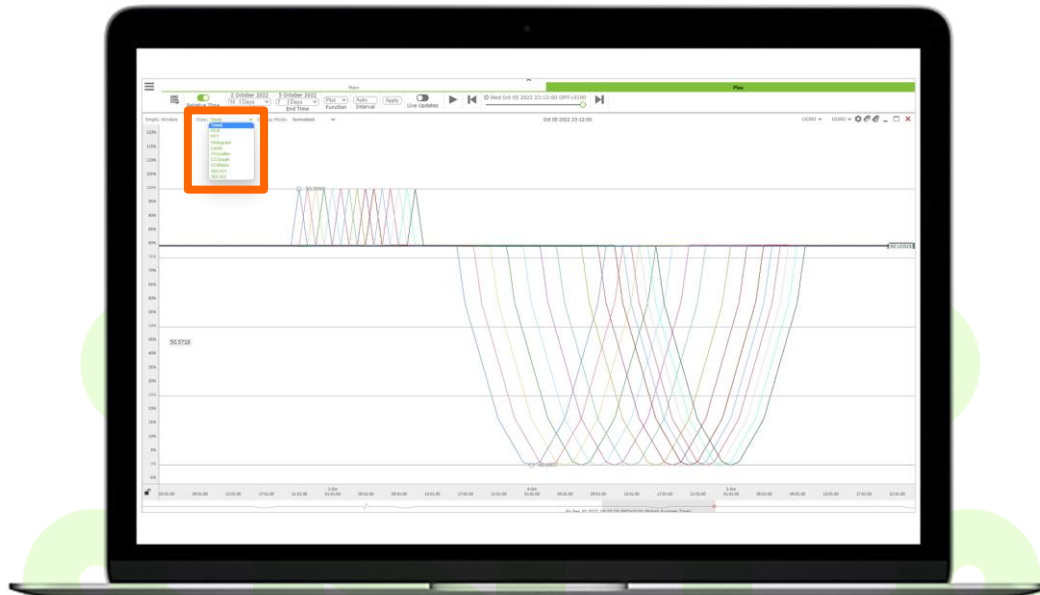


Figure 7-1 View Types

7.1 Trend

Trend is the default view type in drop-down menu.

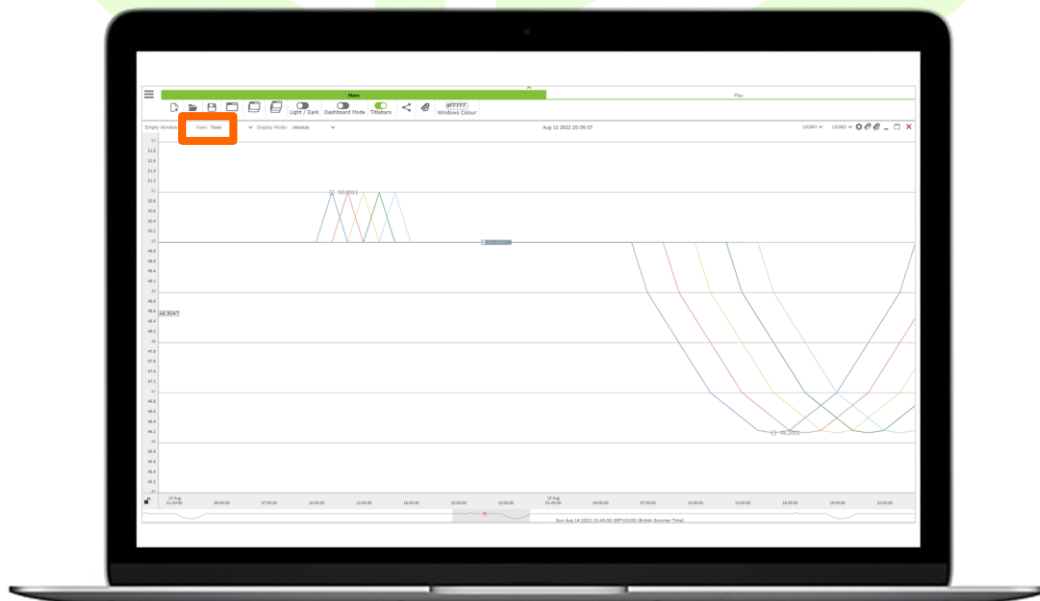


Figure 7-2 Trend

A simple trend with four tags. You can set this trend to have multiple axes, which will appear on the left-hand side and will match the colour of each tag. As the bottom three tags are quite close together you can select Stack which will separate the tags and they will appear individually on the canvas.

7.2 Parallel Co-ordinate (PCP)

Select PCP from the drop-down menu.

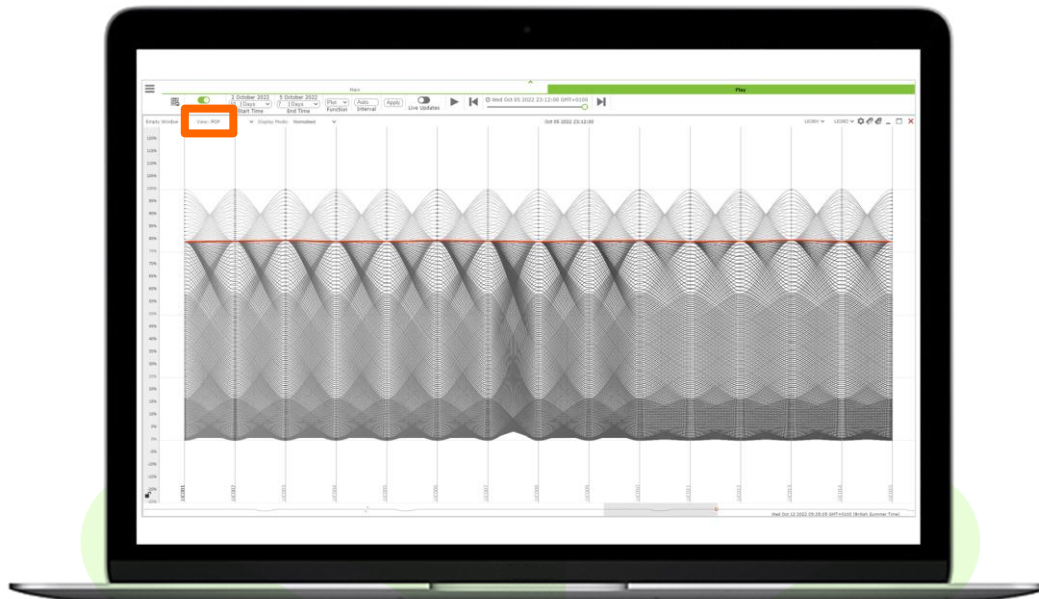


Figure 7-3 Parallel Co-ordinate (PCP)

The tag name appearing at the top of the available trends list will appear black on the workspace. All other tags are greyed out. To change tag order, either select the tag you want to appear at the top of the available trends list from the drop-down list or select the actual tag name that appears beside the vertical line. You can also re-order the tags in the workspace, just left click and hold your mouse on a tag name that's near the vertical line and move to another area on the workspace.

7.3 Fast Fourier Transform (FFT)

Select FFT from the drop-down menu.

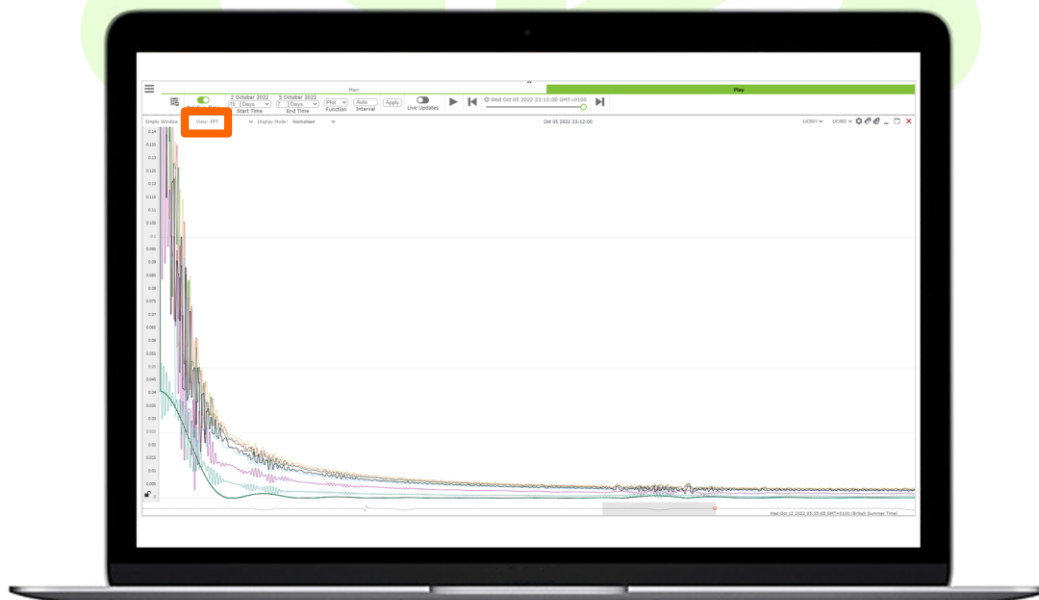


Figure 7-4 Fast Fourier Transform (FFT)

This shows frequencies in the data – it can be helpful to find the cause of oscillations in a process by identifying tags that have variations at the same frequency, or to highlight repeating patterns that might not be obvious on a trend.

The x axis on this chart shows the frequencies where the y axis is the amplitude at that frequency. The FFT is always for the full-time range, so playback does not affect the FFT chart. It may be helpful to use Colour/Highlight toggle button (**Ctrl+Click**) to highlight individual tags on this chart.

The Colour/Highlight toggle option allows your tags to be shown in black and white or colour. If the toggle button is at the left then the trends will be in colour. If you move the toggle button to the right, then the tag that is shown first in the Primary Trend and Trend to Compare drop-down lists will be in colour and the remaining tags will be greyed out.

7.4 Histogram

Select Histogram from the drop-down menu.

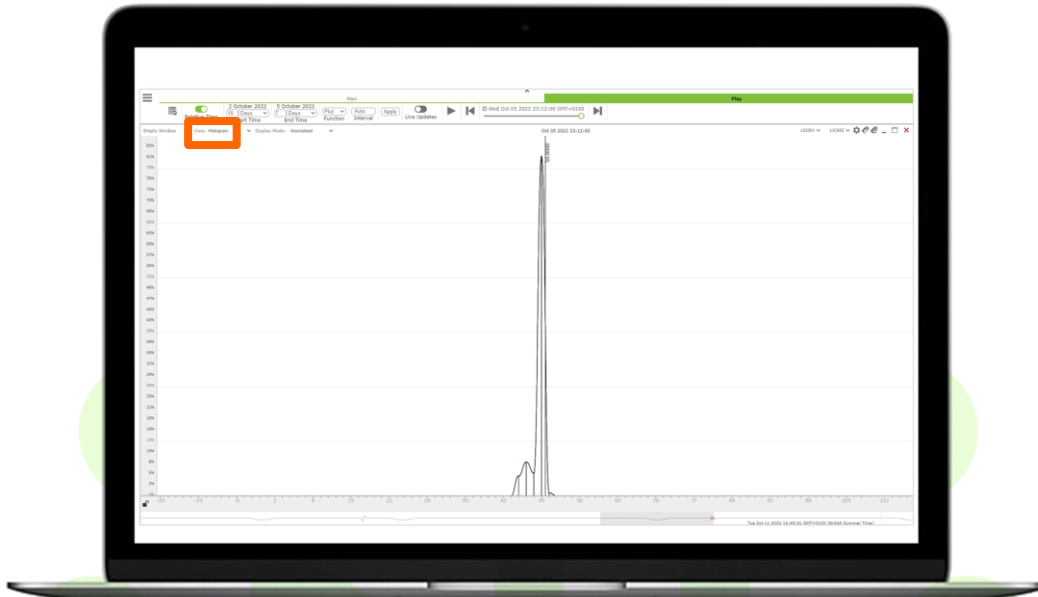


Figure 7-5 Histogram

The histogram chart shows the distribution of values for tags – this can help when assessing limits for alerts/alarms.

It may be helpful to use Colour/Highlight mode (**Ctrl+Click**) to highlight individual tags on this chart.

7.5 Limits

Select Limits from the drop-down menu.

SQL Upper				SQL Lower			
Tag	Value	Limit	Tag	Value	Limit	Tag	Value
LC0001	50.0000	50.0000	LC0001	50.0000	50.0000	LC0001	50.0000
LC0002	50.0000	50.0000	LC0002	50.0000	50.0000	LC0002	50.0000
LC0003	50.0000	50.0000	LC0003	50.0000	50.0000	LC0003	50.0000
LC0004	50.0000	50.0000	LC0004	50.0000	50.0000	LC0004	50.0000
LC0005	50.0000	50.0000	LC0005	50.0000	50.0000	LC0005	50.0000
LC0006	50.0000	50.0000	LC0006	50.0000	50.0000	LC0006	50.0000
LC0007	50.0000	50.0000	LC0007	50.0000	50.0000	LC0007	50.0000
LC0008	50.0000	50.0000	LC0008	50.0000	50.0000	LC0008	50.0000
LC0009	50.0000	50.0000	LC0009	50.0000	50.0000	LC0009	50.0000
LC0010	50.0000	50.0000	LC0010	50.0000	50.0000	LC0010	50.0000
LC0011	50.0000	50.0000	LC0011	50.0000	50.0000	LC0011	50.0000
LC0012	50.0000	50.0000	LC0012	50.0000	50.0000	LC0012	50.0000
LC0013	50.0000	50.0000	LC0013	50.0000	50.0000	LC0013	50.0000
LC0014	50.0000	50.0000	LC0014	50.0000	50.0000	LC0014	50.0000
LC0015	50.0000	50.0000	LC0015	50.0000	50.0000	LC0015	50.0000
LC0016	50.0000	50.0000	LC0016	50.0000	50.0000	LC0016	50.0000
LC0017	50.0000	50.0000	LC0017	50.0000	50.0000	LC0017	50.0000
LC0018	50.0000	50.0000	LC0018	50.0000	50.0000	LC0018	50.0000
LC0019	50.0000	50.0000	LC0019	50.0000	50.0000	LC0019	50.0000
LC0020	50.0000	50.0000	LC0020	50.0000	50.0000	LC0020	50.0000
LC0021	50.0000	50.0000	LC0021	50.0000	50.0000	LC0021	50.0000
LC0022	50.0000	50.0000	LC0022	50.0000	50.0000	LC0022	50.0000
LC0023	50.0000	50.0000	LC0023	50.0000	50.0000	LC0023	50.0000
LC0024	50.0000	50.0000	LC0024	50.0000	50.0000	LC0024	50.0000
LC0025	50.0000	50.0000	LC0025	50.0000	50.0000	LC0025	50.0000
LC0026	50.0000	50.0000	LC0026	50.0000	50.0000	LC0026	50.0000
LC0027	50.0000	50.0000	LC0027	50.0000	50.0000	LC0027	50.0000
LC0028	50.0000	50.0000	LC0028	50.0000	50.0000	LC0028	50.0000
LC0029	50.0000	50.0000	LC0029	50.0000	50.0000	LC0029	50.0000
LC0030	50.0000	50.0000	LC0030	50.0000	50.0000	LC0030	50.0000
LC0031	50.0000	50.0000	LC0031	50.0000	50.0000	LC0031	50.0000
LC0032	50.0000	50.0000	LC0032	50.0000	50.0000	LC0032	50.0000
LC0033	50.0000	50.0000	LC0033	50.0000	50.0000	LC0033	50.0000
LC0034	50.0000	50.0000	LC0034	50.0000	50.0000	LC0034	50.0000
LC0035	50.0000	50.0000	LC0035	50.0000	50.0000	LC0035	50.0000
LC0036	50.0000	50.0000	LC0036	50.0000	50.0000	LC0036	50.0000
LC0037	50.0000	50.0000	LC0037	50.0000	50.0000	LC0037	50.0000
LC0038	50.0000	50.0000	LC0038	50.0000	50.0000	LC0038	50.0000
LC0039	50.0000	50.0000	LC0039	50.0000	50.0000	LC0039	50.0000
LC0040	50.0000	50.0000	LC0040	50.0000	50.0000	LC0040	50.0000
LC0041	50.0000	50.0000	LC0041	50.0000	50.0000	LC0041	50.0000
LC0042	50.0000	50.0000	LC0042	50.0000	50.0000	LC0042	50.0000
LC0043	50.0000	50.0000	LC0043	50.0000	50.0000	LC0043	50.0000
LC0044	50.0000	50.0000	LC0044	50.0000	50.0000	LC0044	50.0000
LC0045	50.0000	50.0000	LC0045	50.0000	50.0000	LC0045	50.0000
LC0046	50.0000	50.0000	LC0046	50.0000	50.0000	LC0046	50.0000
LC0047	50.0000	50.0000	LC0047	50.0000	50.0000	LC0047	50.0000
LC0048	50.0000	50.0000	LC0048	50.0000	50.0000	LC0048	50.0000
LC0049	50.0000	50.0000	LC0049	50.0000	50.0000	LC0049	50.0000
LC0050	50.0000	50.0000	LC0050	50.0000	50.0000	LC0050	50.0000

Figure 7-6 Limits

This particular Limits view allows you to see the limits of all tags in value format.

7.6 X-Y Scatter Plot

Select XYscatter from the drop-down menu.

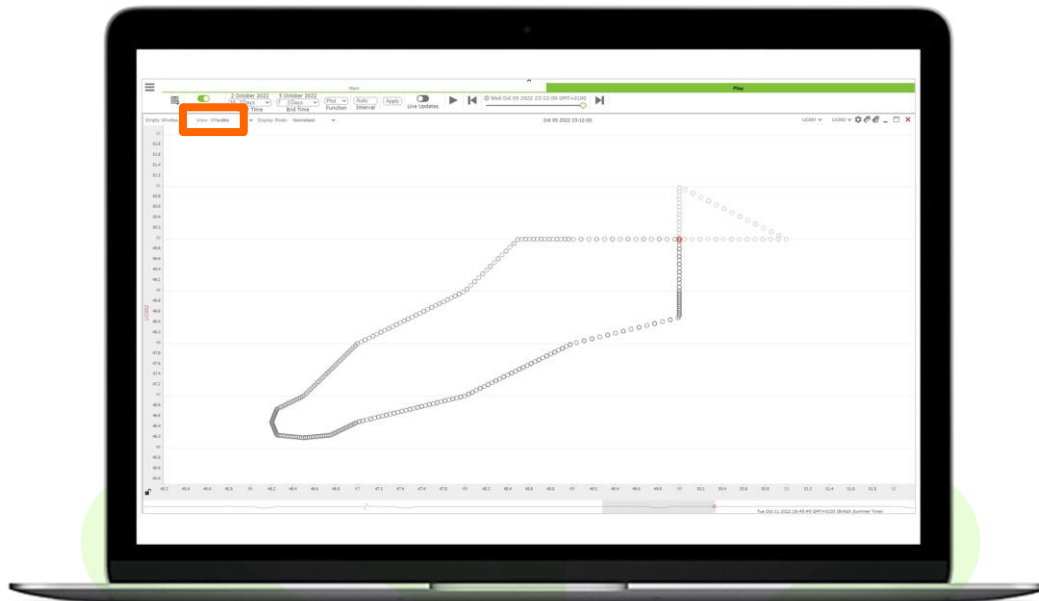


Figure 7-7 X-Y Scatter Plot

Equipment performance can often be quickly analysed with an x-y scatter of key variables. Instances of the equipment operating out of spec can be selected, and switching back to a trend view, it can be seen when this happened in time.

In an x-y scatter plot the available trends is the x-axis and trend compared is the y-axis. Again, the order of tags can be changed. You can select any of the circles individually and see that particular one change to red. You can right click your mouse to move the view around your page and use your mouse wheel to zoom into your page.

7.7 Cross-Correlation Graph (CCG)

Select CCGraph from the drop-down menu.

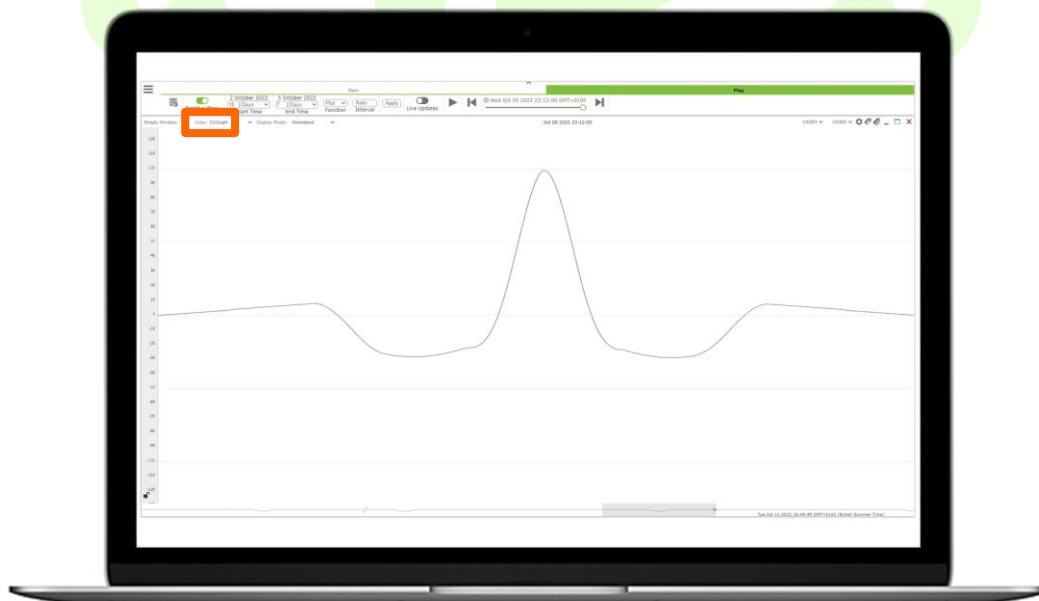


Figure 7-8 Cross-Correlation Graph (CCG)

The cross-correlation graph shows how one tag varies in relation to another tag over time. For example, if a pressure takes 2 minutes to affect another pressure, then a peak will be shown at 2 minutes on the scale. Hovering with the mouse shows the time in the tooltip that is at the pointer.

7.8 Cross-Correlation Matrix (CCM)

Select CCMatrix from the drop-down menu.

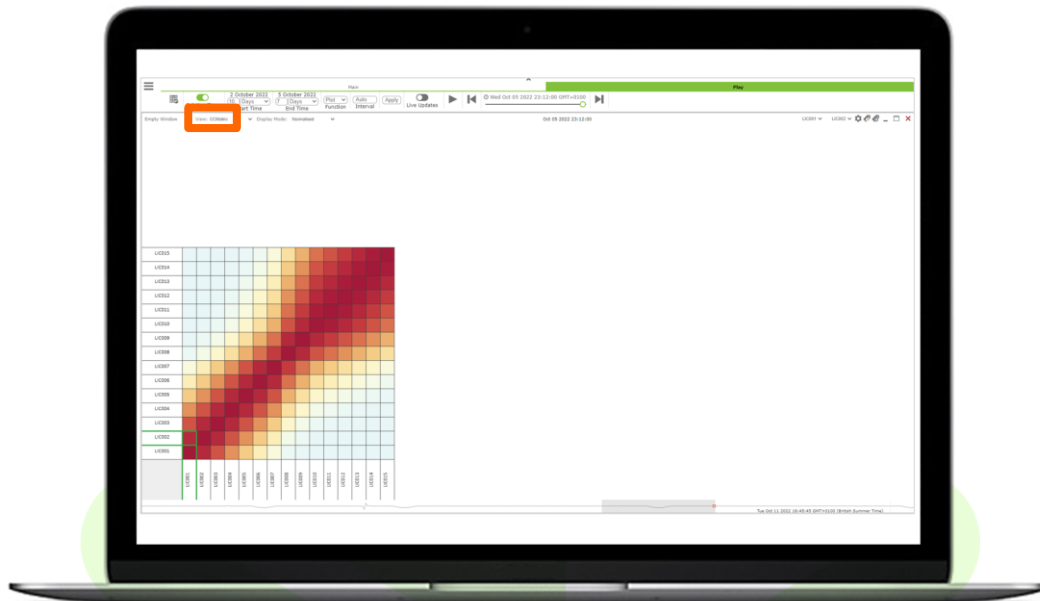


Figure 7-9 Cross-Correlation Matrix (CCM)

This identifies if tags go up and down at the same time, or if one goes down whilst the other goes up (coloured squares). Clicking all values zooms the matrix to fit in the space if it is too large. Clicking on a square selects the two tags and shows the cross-correlation graph – you can then navigate to an XY scatter plot of the tags for confirmation.

7.9 Calm Waters (3DCW1)

Select 3DCW1 from the drop-down menu.

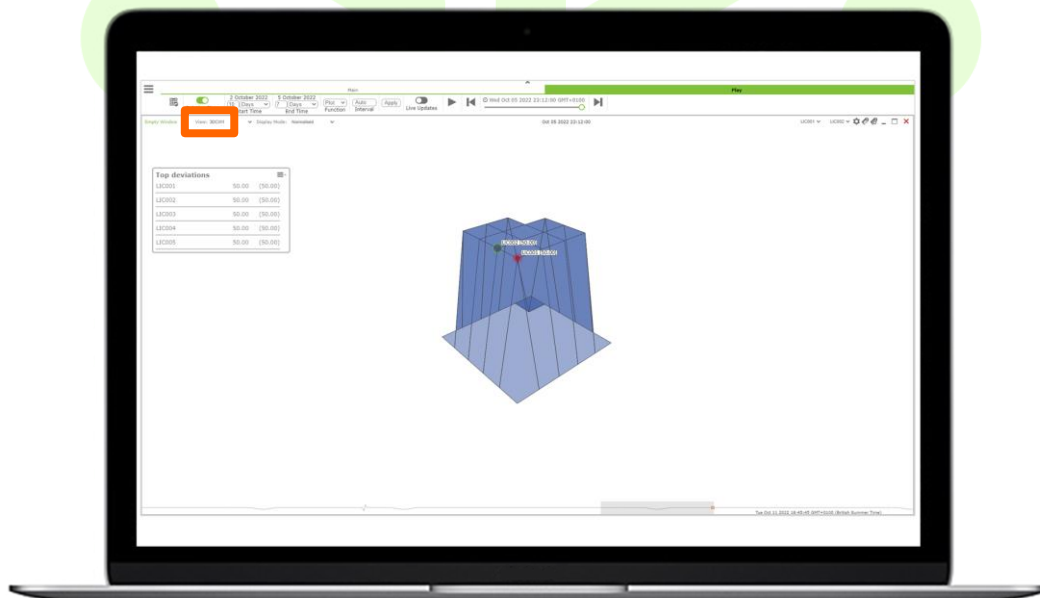


Figure 7-10 Calm Waters (3DCW1)

Calm waters is a way of showing deviations from normal, for hundreds of points simultaneously.

In this view moving the mouse wheel forward and back increases the view vertically. Left click the mouse and hold to see the view rotate clockwise and anti-clockwise. Right click the mouse and hold to see a particular view move slowly up and down vertically. Note that you can set the tag order in a PCP view and it will be applied to the calm waters view.

Top Deviations are shown by default in a drop-down box. To minimise, select the icon at the top right of this box.

7.10 Calm Waters (3DCW2)

Select 3DCW2 from the drop-down menu.

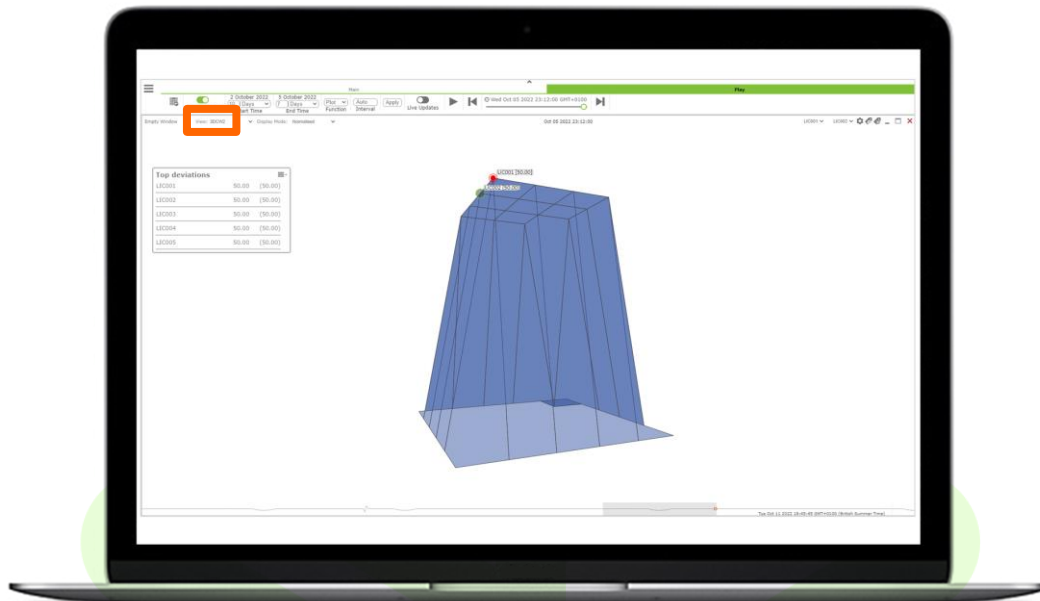
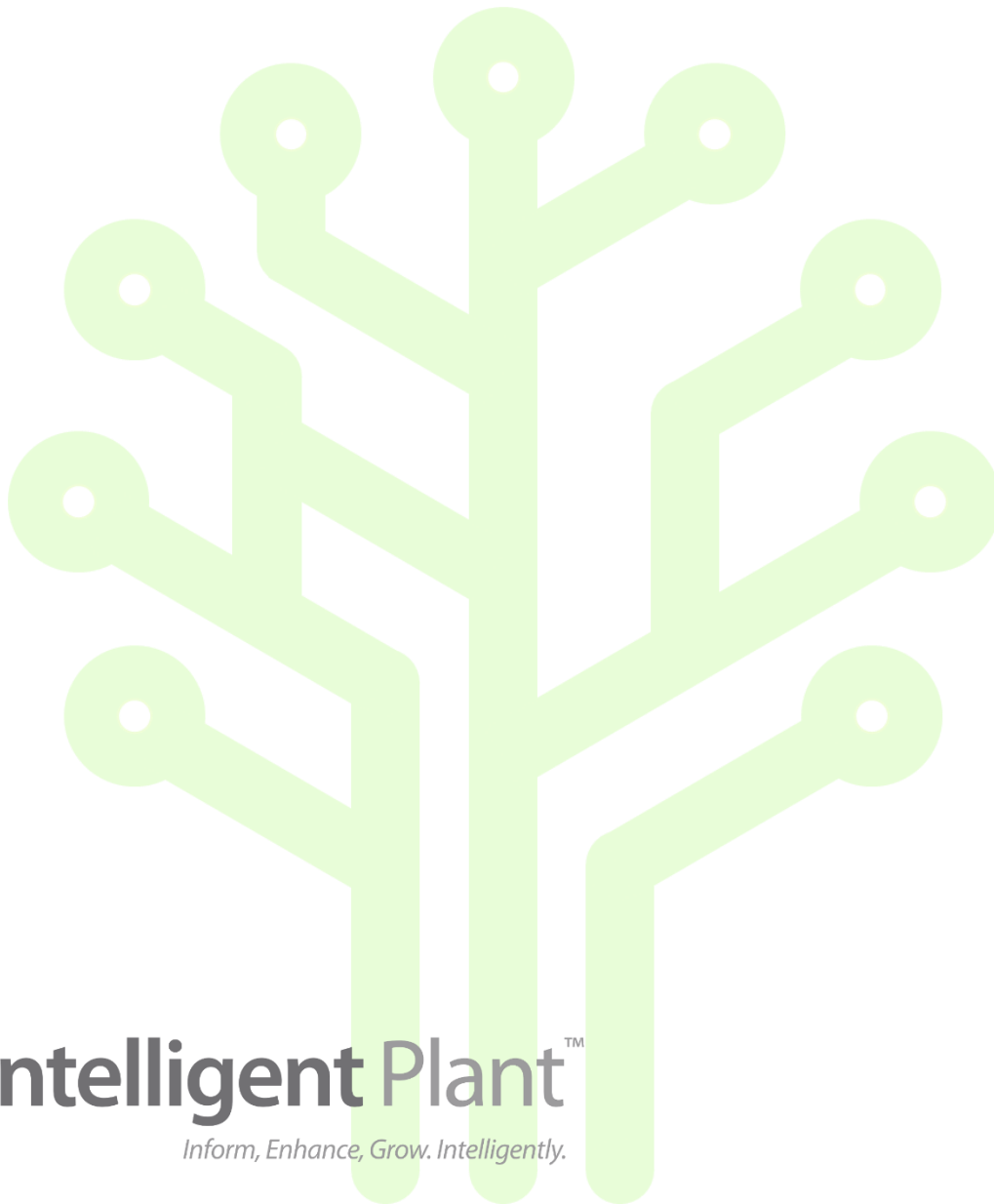


Figure 7-11 Calm Waters (3DCW2)

A different option that follows the same steps as previous calm waters (3DCW1).



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