

SylSmart Connected Pro

User Manual

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2. Glossary of key terms

Meaning		
An individual organisation, business or legal entity which may or may not have multiple sites/projects under one platform view where data from those sites is aggregated.		
A single physical location, typically a building within a campus or within a city.		
A visual change to the user interface which selects the dominant colour scheme to enable users to choose which colour palette is preferred and more visually comfortable.		
A bi-directional communication of data between sites and Sylvania's cloud server.		
An electrical object able to input, process or output data. A node is more commonly used to describe an internet or mesh connected device.		
Device located on site which facilitates communication of device data to Sylvania cloud		
E-mail communication of events important to users as configured in the notification engine		
Visualisation of data which shows information of all devices in all areas/zones of a given site		
Information for data used to characterise observable data and other assets in order to create new views/filters of that information.		
Maximum power consumed by a device in its operation when requested to operate at 100%		
An identifier of the type of device observed on the platform		
The globally unique identifier of a device		
Status indication of whether a device is currently reporting data and has been seen.		
Status indication of whether a device has failed to report data in past 10mins+		
The timestamp of last communication		
Number of hours of operation of a lighting device where dimming >0.1%		
A measure of whether a device in a space has seen motion		
A measure of the proportion of a space occupied in a given time		
A measure of the power consumed from the use of physical or chemical resources in order to provide work, especially in the form of light, heat or to work machines. Measured in Watt Hours		
Amount of energy transferred or converted I per unit of time, usually measured in watts.		
Measure of the amount of illuminance in a space, measured in Lux = lumens per square meter.		
The dimming level of a luminaire expressed in %.		
The Internet Protocol address usually in IPV4 format. E.g. 192.168.1.1		
Anything that has a current or future economic value to a business.		
Scale drawing which shows the relationship between rooms, spaces and physical features when viewed from above. Ideal to help people navigate through a space.		
A person who uses or operates something. Also used to define a low level access role.		
The function assumed or part played by a person or thing in a particular system. Used to provide and restrict access to system components.		
A form of the platform at different points in time with differing features		
Application programming interface. A set of functions allowing the creation of applications that access shared features or shared data across systems, applications and other services.		
The selected date range of data range in view for which the user seeks information		
Expression of the magnitude of a measured data point		

3. Key access links



The following website links are key to use the platform and require credentials to access them:

- https://connectedpro.sylvania-lighting.com
- Website address for SylSmart Connected Pro
- https://support.sylvania-lighting.com
- Website address for Sylvania Support

4. Project setup and prerequisites

Project setup

SylSmart Connected Pro requires the site/project to be commissioned by a qualified engineer. In this guide it is assumed that the following has been completed:

- SylSmart Connected Platform project with a valid Project ID*
- WebSockets enabled for SylSmart Connected Note: leadtime for activation of websockets is minimum 3
 working days. Projects may be imported/synchronised ahead of websocket activation but data will not flow
- Valid credentials for SvlSmart Connected*
- Floorplans in DWG, PNG, JPG or SVG with resolution >100dpi uploaded to SylSmart Connected*
- Fully commissioned SylSmart Connected Project complete with all devices provisioned, all profiles assigned, gateways located, scenes and schedules created and configured, all devices named as well as all areas and zones named.*
- Mesh quality test = 100%. Minimum 90%. *

If these are not completed, please refer to the installation guidance and complete these steps before proceeding or please contact SylSmart Support.

*Note: these may be not applicable if using non-SylSmart Connected Pro services.

SylSmart Connected Pro prerequisites.

To experience the most from the SylSmart Connected Pro platform, it is highly recommended to have the following:

- Ensure site is assigned to correct tenant
- Site image JPG 100dpi square format
- Site energy rates per Kwh
- Site/country CO2/Kwh conversion rate
- List of desired meta tags
- Site address, opening hours
- Site currency
- Site time zone
- Site owner e-mail address
- Luminaire wattage if connected to a Detached sensor kit or non-D4i luminaire
- Scheduling requirements list
- Notification requirements list
- Scenes requirements list

<u>Mandatory</u>: The SylSmart Connected Services must be enabled in order to function. Please contact SylSmart Support if you believe your service is not activated.



5. The link between SylSmart Connected & Connected Pro

SylSmart Connected Pro is an extension service of SylSmart Connected.

SylSmart Connected is the platform used for intelligent lighting control commissioning. This platform aims to make the setup of lighting infrastructure as quick and easy as possible and help you save energy through highly optimised lighting controls.

Once fully setup, SylSmart Connected project details are used to prepare SylSmart Connected Pro to provide centralised oversight, granular analytical data and enable connectivity to other systems.

The importance of SylSmart Connected to be fully configured is paramount. As the diagram below shows, it is the infrastructure which is managed through SylSmart Connected which provides the system architecture and enables the data flow to SylSmart Connected Pro.

The commissioning data is shared with SylSmart Connected Pro using an API request.

The live data is then shared through a bi-directional websocket interface between the Connected infrastructure and the Connected Pro services. Two websockets are maintained open at all times to ensure redundancy should one socket fail.

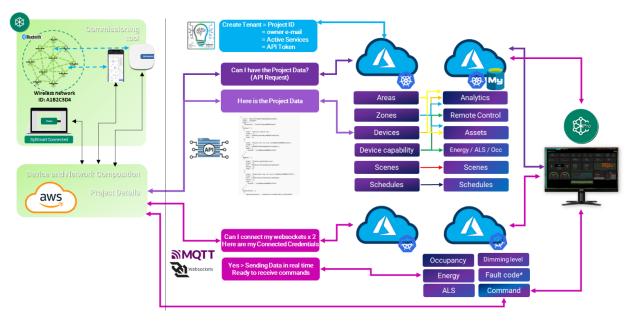


Fig.1 Intersection of SylSmart Connected and SylSmart Connected Pro and how data is shared amongst each

6. Platform Management Section

To manage the interface between the two systems, Sylvania SylSmart engineers use the SylSmart Connected Pro Client Management System (CLMS) to manage tenancies, manage allocated services, configure performance of the platform, and customise parameters for each site.

Most of the required set up of a new customer involves using the backend Management tools.

This part of the system is only accessible by Sylvania teams. If you have any specific requests, please contact sylsmart.support@sylvania-lighting.com via e-mail or through the support portal in the platform.

For Sylvania members, please refer to the Admin Manual for more details.

7. Features by service



SylSmart Connected Pro is a modular service which aims to deliver a variety of features based on different levels of service subscribed to. In this section you can find out which service offers which level of features.

Connected Pro Service Menu

Feature	Description	PRO	PRO+	PRO+ DATA	PRO+ API
Site Management	Managing placement of site and Lighting devices. Manage site details. Manage User access.	•	•		
Site Asset Overview	View location and details of all Lighting assets under project				
Dashboards	Dashboard for key data				
Assets Status (basic)	See which lighting asset is online and whether it is ON or OFF		•		
Assets Status (Advanced)	Complete oversight of all lighting assets including burn hours, power consumption, dimming level, connection status, lux level reading, meta tags, Filtering	-	•		
Floorplan navigation	Navigate your project using a floorplan				
Lighting Remote Control	Remote control of lighting assets		•		
Lighting Scenes (basic)	Recall existing lighting Scenes (Single building only)		•		
Lighting Scenes (Advanced)	Create and Recall Scenes across multiple buildings		•		
Lighting Schedules	Time based lighting control of Lighting Scenes		•		
Notifications and fault codes*	Pro-active notifications of customised warnings Device error messages to help in maintenance identification and planning	-	•		
Lighting Energy Analytics	Energy analytics service for Lighting devices. Per device power reading with fine grain data	-			
Occupancy Analytics	Occupancy analytics service based on luminaire sensor data. Per zone analytics of space use. Must have a motion sensor in the zone.	-	•		
High resolution data / Extended data	Additional data resolution and extended storage time of lighting data	-			
API access token	Client specific token to Access Connected Pro+ Database for third-party integrations.	-			
API access token Required	Client specific token to Access Connected Pro+ Database for third-party integrations. Available - Not available	-		•	SYLV

Note: Services are additive. i.e to have Pro+ you must also purchase Connected Pro

ALL SERVICES LISTED ABVE HAVE A DURATION OF 5 YEARS FROM THE DATE OF ACTIVATION. A NOTIFICATION WILL BE SENT TO PROJECT OWNERS 6 MONTHS BEFORE SERVICE END DATE.

For more information on Pro+ API and Pro+ Data please see sections XX and XX respectively.

8. Logging in and forgotten password

8.1 First sign-in process - Terms of use and Privacy Agreement

^{*} Service available later in 2023 - will be added automatically to service



Upon being invited as either the Owner, Manager, Installer or User of SylSmart Connected Pro, you will need to follow the below workflow to ensure the integrity and security of your account.

1. Receive Invitation E-mail – This e-mail contains an Invitation acceptance link and a one-time passcode (OTP).

Please COPY the one-time passcode and accept the invitation by clicking the button in the e-mail.



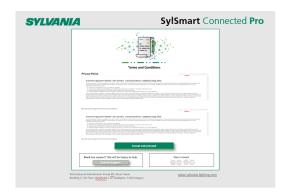
2. Create your unique password.

The following password complexity rules apply:

- 12-20 characters
- Must contain 2 or more of the following:
 - o Capital letter
 - o Special character
 - o At least one number
 - No spaces
- 3. Review and accept Terms of Use and Privacy Policy.

Note: you must scroll the whole text <u>and</u> tick each box to proceed to the next step.





The Terms of Use and Privacy Policy are available at any time after login by visiting the "About" section.



8.2 Sign-in - Language Selection

SylSmart Connected Pro will automatically detect your location based on your IP address and set the language to that local country. You can change the language as desired using the language selector.



The language selected will be stored in your cookies and in your account settings to ensure your language is available for you.



If you access the service with Cookies blocked or in Incognito mode, certain functions may not operate correctly.

8.3 Sign-in - Forgotten Password

If you forget your password, please use the "Forgotten your password?" button. This will start the initial invitation process again.

See section 8.1.



9. General navigation



9.1 Multi-tenant access

If your e-mail address is registered for access to more than one Tenant, upon sign in you will be requested to select <u>one</u> tenancy. It is not possible to access more than one tenancy at any time.

9.2 Sites navigation



- Vertical Navigation Based on the service subscribed, this bar enables access to:
 - Sites
 - o Dashboards Takes you back to the main Sites screen as above
 - o Global Scenes Connected Pro+ only Configure multi-site scenes. See section X.x
 - Lighting
 - Control
 - Scenes
 - o Schedule
 - Analytics
 - Assets
 - Settings
 - About
- Map navigation Visualise the location of all your sites. Each site pi can show extra basic information
- Site list List of your sites which you can access or edit.
- Sites dashboard data summary of key data from all your sites
- Search sites and export Quickly find the site you are looking for. Export a complete asset list of all devices on all sites
- Language selection. Access to help and support. Theme (light/dark) selection. Log out.

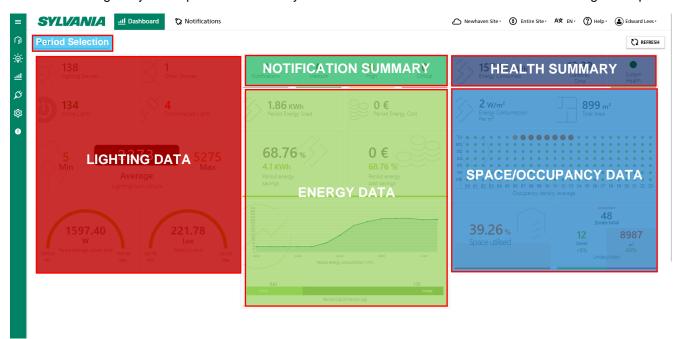


9.3 Site Navigation



- Dashboard access View site dashboard
- Notifications screen access View and manage notifications
- Site selector Switch quickly between sites
- Floor selector Select which floor to access/visualise or view entire building
- Main content window This area contains the content you wish to access
- 9.4 Dashboard Navigation Only available with Connected Pro+

The dashboard gives you a rapid overview of key observables for each site. The dashboard is designed to provide:



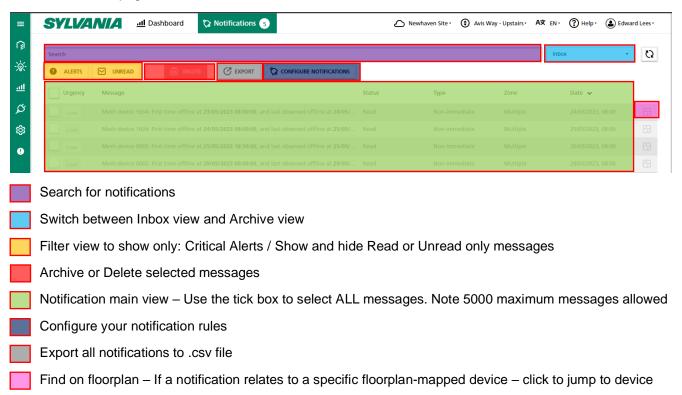
The period selection only updates fields marked as "Period" data.

9.5 Notifications Navigation - Only available with Connected Pro+

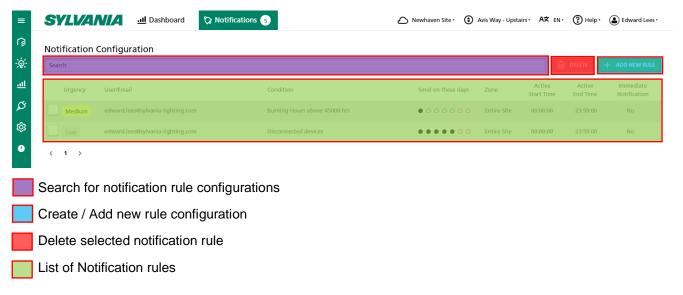


The notification engine is designed to help you configure the kind of alerts you wish to receive depending on what you wish to measure. It also helps you set how quickly and how frequently you want to be notified and set your own category of urgency.

Notifications main page

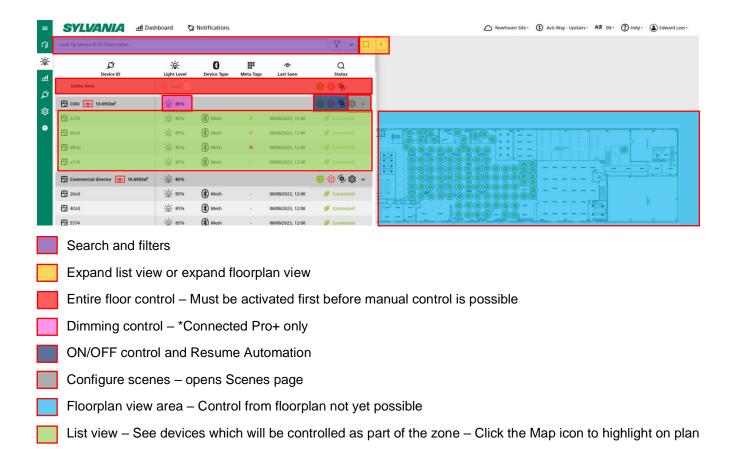


9.6 Notification Configuration page

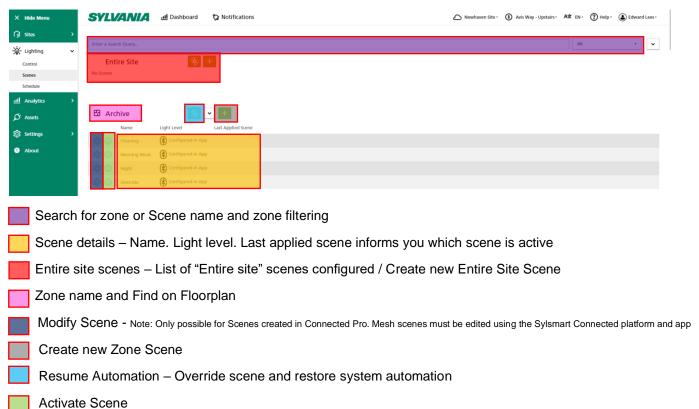


9.7 Lighting Control - Navigation



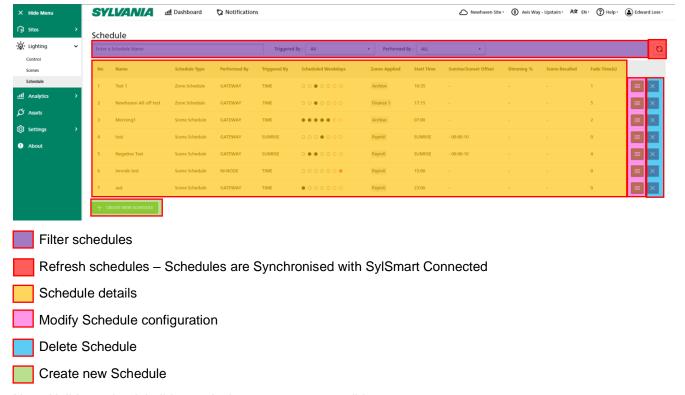


9.8 - Lighting Scenes Navigation



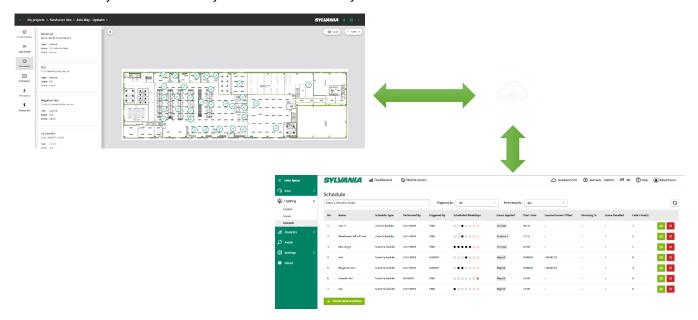
9.9 - Lighting Schedules Navigation





Note: Holiday or bank holiday exclusions are not yet possible

Schedules Synchronisation - SylSmart Connected > SylSmart Connected Pro





9.10 Analytics Navigation – Only available with Connected Pro+

Connected Pro+ Analytics enables the visualisation of acquired data to help you understand the usage of lighting performance, your lighting energy consumption and how your space is used. Connected Pro+ offers two visualisation methods:

- Graph view This view outlines your data in graph format as a time series This view also enables
 comparison views to help you compare two time frames against each other. Different time frames can be
 selected with different resolutions per time frame selected.
- Map view This view outlines your data in map format and enables you to visualise the data in context of your floorplan. This data is not represented as a time series but as a summary of the data within the time frame selected. Side by side comparisons of one time frame to another are not possible in map view.

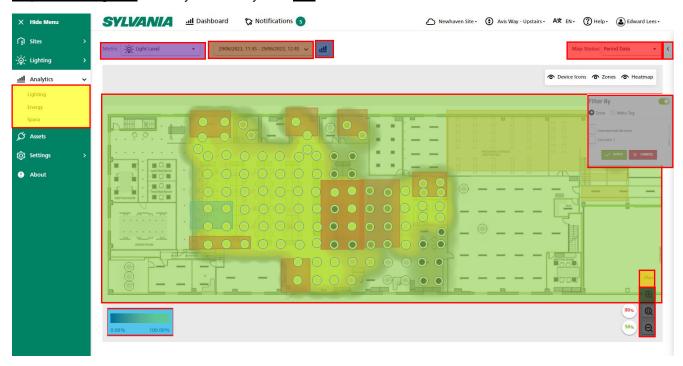
Graph View Navigation



- Analytics feature selection
- Graph view areas
- Sub metric selection Choose which observable you wish to visualise
- Time Resolution Select the definition of the time series data Please note that depending on the duration selected / time frame selected, different resolutions may not be available in the graph view window. Where this occurs, a warning window will prompt you to select a suitable resolution for the selected time frame.
- Primary time selection (Origin Data) This selection helps you select which data, over how long, to display.
- Comparative Time Selection (Compared data) This selection helps you compare the same time span from a selected date in the past to aid in comparing your usage patterns over time
- Weekend exclusion Remove weekend days (Saturday/Sunday) from visualisation which may distort results.
- Map View Move to map view (See next section navigation overview)
- Filters view Show/Hide the Filters tab This tab enables you to filter data visualised by Zone or Meta Tag



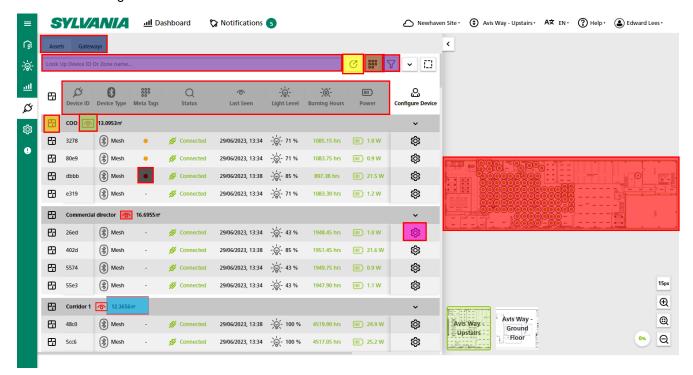
Map View Navigation - Note you can only view one area/floor at once



- Analytics feature selection
- Map view area
- Sub metric selection Choose which observable you wish to visualise
- Scale Helps explain the scale used to visualise the data and the associated colours.
- Time selection (Origin Data) This selection helps you select which data, over how long, to display.
- Node size control Change the size of the node icon 💿 🔘
- Period or Live data Select if you wish to see historical data or "Live" data (past 5 minutes).
- Map View Move to map view (See next section navigation overview)
- Filters view Show/Hide the Filters tab This tab enables you to filter data visualised by Zone or Meta Tag
- Map view controls Zoom in/Out/Fit to screen Move the map by click and drag on the map view area.
- Show/Hide Allows user to control which icons and visuals are applied to map view:
 - Device icons The icons of each placed device on the floorplan
 - Zones The zonal drawing of the placed zones on the floorplan
 - Heatmap Displays or hides the Heatmap visualisation of the data with interpolation between points*
- Zone drawing opacity control You can show/hide the drawn zones (red boxes as examples above)
- Heatmap Opacity Control Control the transparency of the heatmap visual



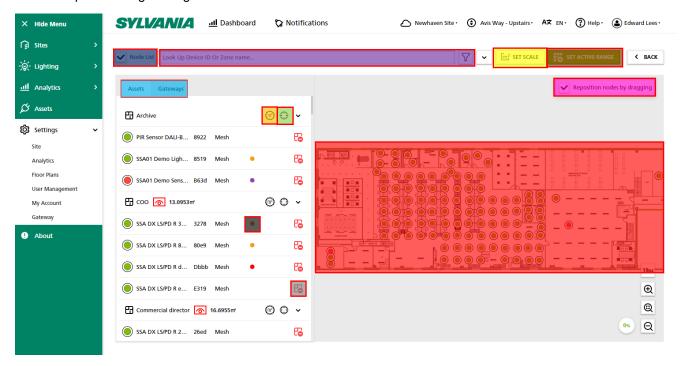
9.11 Assets Navigation



- Export Asset List to HTML
- Search and filter devices or zones
- Manage META tags
- Find on floorplan if devices are mapped to the floorplan, use this icon to find it quickly.
- Show/Hide zone outline Zone must be mapped on floorplan
- Surface area of zone Zone must be drawn and scale set for this feature to work
- Select Asset Type Switch between Lighting and Gateways Future new asset types will have own tabs
- Asset Observables Types of data available for each asset
- META tag assignment per device
- Floorplan view with location and status of asset (if mapped to floorplan)



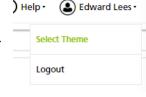
9.12 Floorplan Settings Navigation



- Set the scale of your floorplan important to ensure any space related analytics are at the right scale
- Filter / Search
- Set Active range Set the area of the floorplan which is active (removes white space from calculations)
- Draw Zone area
- Identify zone Triggers lighting asset to flash to help identify its real world location (per device indent coming)
- Asset type selection
- Show/Hide Asset List
- Enable/Disable repositioning of nodes by dragging. If disabled, reduces possibility of accidentally moving device
- META tag assigned
- Unmap device from floorplan To add a device simply drag it from the list. To unmap it, click this button
- Floorplan view

9.13 Choosing your Theme

SylSmart Connected Pro offers the option to view the platform in Light or Dark mode depending on your preference or visual requirements. This is selected by selecting your Username (top right of the screen) and select "Theme"



Select Theme





10. Platform Icons

The following icon types are used in SylSmart Connected Pro to express a device type, its status or to highlight any key messages about the condition of the device or the platform.

lcon	Meaning
Ø	Device related information
-\ \$ (-	Light related data - Typically used for Dimming %
- ; @(-	Burn hours - Number of hours of operation
(III)	Power consumption or Battery Level
·	Power consumption - Data from D4i
•	Total Power consumption all sites
Ø	Export data
000	Meta Tag
∇	Filter
~	Collapse View
[]	Expand
⋄	Show/Hide
(c)	Configure
<u>.111</u>	Analytics / Dashboard
\$	Notification
₿	Notification message count
③	Floor/Area Navigation
3	Help/Support
()	Site / Sites
ු	User Input / User Data (Occupancy)
¥a	Offline/Disconnected
1	Information
\mathcal{G}	Refresh
oxdot	Inbox unread / read Note: Marking a notification as read will impact the Site Health Indicator
₩	Archive Note: Archiving a notification as read will impact the Site Health Indicator
•	User Profile / Logout
A文	Language selection
\Diamond	CO2
⊹	Ambient Light (ALS) / Light Level
2	Cost (€/£/\$/RMB)
•••••	Weekday selection (weekend in red)
unknown	An EnOcean enabled device not seen online in 30 minutes

lcon	Meaning
ш	Delete
	Modify
×	Erase
33 px	Map view - Node size control
Q	Map Zoom Controls - Zoom in/out
@	Map Zoom Controls - Fit to page and centre
50%	Map Zone Drawing - Opacity Control
80%	Map Heatmap - Opacity Control
•	Sites Map View - Site Healthy
•	Sites Map View - Site Unhealthy
?	(<10 Critical Notifications)
•	Sites Map View - Site Unhealthy
7	(Entire Site offline or >10 Critical Notifications)
•	Device - Healthy - Last seen in past 10 minutes
	Device - Unhealthy - Disconnected - Not seen in past 10 minutes
	Device Notification - Alert activated on device (See notifications)
	Device not mapped to floorplan
©	Gateway device
(Application Prgramming Interface Configuration / Details
<u>ē</u>	Сору
©	Configure SylSmart Connected Credentials
\mathcal{O}	Synchronise SylSmart Connected Project
(iii)	Configure Zone area size
m²	Set Scale / Area size
(}	Visually Identify device (E.g Light blink)
E	Find mapped device on floorplan
	Device not mapped on floorplan Multiple Devices in Notification
6	Unmap device from floorplan
**	Active Area
CRITICAL	Notification Urgency Rating - Critical Impacts Site Mappin colour and Site Dashboard Health Indicator
High	Notification Urgency Rating - High Does not impact Site Map pin colour and Site Dashboard Health Indicator
Medium	Notification Urgency Rating - Medium Does not impact Site Map pin colour and Site Dashboard Health Indicator
	p. Transfer and p. Transfer and an area and a real and



11. Sites Dashboard 📦

The sites dashboard is the first place you will see once logged in to SylSmart Connected Pro.

It provides a complete overview of all sites which you have access to, as well as key indicators of the performance of all your sites.

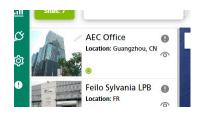
1. Sites

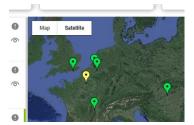
Each site you have access to is shown on the left side by name.

The site can be viewed/found on the map by clicking . It is possible to change the order of the sites by dragging the site up or down.

If mapped to the map, the site's location is also shown on the map. Each coloured Pin represents a site location.

It is also possible to search sites using the Search Sites bar.





2. Key Observables

The Sites dashboard provides key metrics which are visualised on the top bar and on the map:

- Sites Count How many sites you are monitoring
- Critical Errors/Disconnected Devices Highlights if urgent actions are needed
 Number of Critical Errors reported by the Notification Engine. These are managed and configured in Notifications.
- Current Energy Consumed/Current Savings Real-time energy consumption/saving
- Total Watts/m2 Energy Density overview <10W/m2 is good. <4W/m2 is excellent.
- Space Occupancy % and Space Utilisation A measure of how well your spaces are used
- Pin Colour (Map view) The pin colour for each site indicates the current health state of each site

601.2Wh/0.05€ 2kWh/0.15€ 2kWh/0.15€ 1 0.00 W/m² 1 tora worn 67.82% 67.82% 67.82% Current Surrent 68.592% Current Aurrange

A 39 Critic



3. Map observables

Clicking on a Site pin reveals key information for that site including:

- Connection Status Measured by data connection and number of errors
- Number of Areas / Floors
- Total Number of Devices in scope
- Number of Zones
- 2 Key site specific observables:
 - Burning Hours (Average operating hours of devices)
 - o Critical Errors Count of Critical rated errors as configured in Notifications



4. Site selection



Hopefully the Dashboard should give you the insight you need at-a-glance. However, if you need to access a specific site, these can be selected in one of two ways:

- List view Click the site on the left
- Map view Click the Site Pin and then click the Site image

5. Exporting Sites and Site Data

If you need to have a complete download of all the information all Sites including Site names, locations, floorplans, Area and zone details, device

locations and full asset list download, then click the



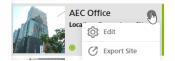
. ..



If you wish to download the data for a specific site, click the button on the site of your choicer and select Export Site.

6. Edit Site configuration

Sites are configured by your SylSmart commissioning engineer on the first setup of your setup. To reconfigure the details of your site such as Site name, site image, click on the button and click "Edit". This will open a new configuration window where you can edit:



- Building name
- Site Image Click on the image section to upload a new image File types accepted: *.jpg *.jpeg *.png Image size: 960 x 600 pixels – 72dpi. Max file size: 1mb
- Address
- Country
- Time zone
- Citv
- Post Code
- Site Currency (if you have multiple sites with multiple currencies, your SylSmart Engineer will ask you which currency is your primary currency for Sites reporting.
- Total square area: Only applies if you do not map the individual areas later in configuration
- Location Longitude and latitude For pin placement. Note: the site location can be placed on the map
- Key contact details

Edit Building Name: Acc Office Address: Country: Co

7. (Re-)Positioning sites

Your site should be positioned by you SylSmart engineer by simply dragging the site into place from the Sites List. Should you need to move a site, this can be done by enabling "Reposition Site" by ticking the Reposition Site box.

It is recommended to zoom in on the map location as far as possible when placing ore moving pins.

NOTE: Do not forget to untick the Reposition Site box once finished.



12. Site Dashboard 쁘

The site dashboards offer a view of how your assets are performing at a glance, enabling you to quickly check if your building is performing optimally and focus on your business, OR rapidly identify issues and take make quick, informed decisions on what needs attention.

As shown in section 9.4, the Site dashboard is split into 4 key areas: Status, Lighting, Energy and Space analysis. In this section you can learn about each "widget", how it works and what it helps you see:

CONTROLS			
Control Image	Control Name	Purpose	How it can help you
Today	Period Selection	Allows the visualisation of key data for preset time periods. This only changes widgets with PERIOD titles	Quickly see key data that matters to you on different time periods
₹ REFRESH	Refresh	Forces a refresh of all the data in all widgets	Only needed if you want the very latest data

	STATUS				
Widget Image	Widget Name	Meaning	How it can help you		
- 146 Lighting Devices	Lighting Devices	Number of lighting devices linked to this building	Understand how many lighting devices in total you are monitoring		
1 Other Devices	Other devices	Number of other, non-lighting devices you have in this building	Understand how many non-lighting devices in total you are monitoring		
O O O O O O O O O O O O O O O O O O O	Notifications	Number of notifications of each Severity level active in your Notification Inbox The severity level is set in the Notification Configuration.	Quickly see how many warnings, Issues and messages you have		
		Notification messages which are marked as "Read" or "Archived" are not counted in this dashboard			
14:17 Gateway Time	Gateway Time	The local time of the building	If you are monitoring remotely, and in particular from a different time zone, this is to help add local time context to information		
System Health	System Health	Summary Traffic Light of the System Health. Note: Same rule used for Sites Map pin colours • Green: Online AND No Critical Unread Notifications • Orange: Online AND more than 0 Critical Unread Notifications • Red: Offline OR more than 10 Critical Unread Notifications ONLINE = - Websocket connection open - Data received in past 10 minutes	Quickly see if your system is suffering any issues and if any action is required to be taken		



	LIGHTING			
Widget Image	Widget Name	Meaning	How it can help you	
141 Active Lights	Active Lights	Number of lights which are ONLINE and reported data in the past 10 minutes	Compared to the number of Total Lighting devices you can see the extend of any failures on site	
5 Disconnected Lights	Disconnected Devices	Number of lights which are OFFLINE and have NOT reported data in the past 10 minutes	Highlight the number of Lighting device with issues which need resolving	
3 2898 5668 Max Average Lighting burn hours	Average Burn Hours	Number of hours of recorded operation. Average of a devices as well as Minimum and maximum value	Like an Odometer in your car, this help you understand the remaining life left in your lighting products	
1414.12 W 1414.12 Period average power level Max	PERIOD Average Power Level	Sum amount of power being consumed by all devices in that period Min and Max level in that period also shown	See how much power your lighting is Consuming on average in that period to help you understand the opportunities f energy savings	
286.60 Lux 286.60 Min Period lux level 286.60 Max	PERIOD Lux Level	Average of reported lux levels across site Min and Max level in that period also shown	Understand if you are maintaining a safe and comfortable level of light in your building and monitor lumen depreciation of your luminaires.	

	ENERGY				
Widget Image	Widget Name	Meaning	How it can help you		
158.95 MWh Energy Consumed	Energy Consumed	Total recorded amount of energy consumed by all monitored devices since system was put into service	Understand the scale of the energy use this building consumes. Can be useful for comparing the Energy use of your different buildings		
1.77 kWh Period Energy Used	PERIOD Energy Used	Amount of energy consumed by the monitored devices in the period specified	Understand your energy usage. Especially useful if you have an energy use target		
0.42 £ Period Energy Cost	PERIOD Energy Cost	Cost of energy consumed by the monitored devices based on your electricity rate for the building	Understand the cost of your energy Usage.		
66.72 % 3.54 KWh Period energy savings	PERIOD Energy Savings	The estimated savings generated by having SylSmart Connected Networked Lighting Controls. Saving is calculated against the energy the site would have consumed IF non-controlled lighting was installed	Visualise the benefits of the intelligent Lighting controls installed and help justify the Return On Investment		
0.85 £ 66.72 % Period energy cost savings	PERIOD Energy Cost savings	The estimated cost savings generated by having SylSmart Connected Networked Lighting Controls. Saving is calculated against the energy the site would have consumed IF non-controlled lighting was installed	Visualise the benefits of the intelligent Lighting controls installed and help justify the Return On Investment		
The state of the s	PERIOD Power Consumption	Graphical overview of the energy consumption of the Monitored devices	Visualise your energy consumption over time. Understand patterns of energy use at-a-glance		
6.58 STF Sany Final Proof Col Stream's (A)	PERIOD CO2 emissions	Illustration of the amount of CO2 generated and the amount reduced through intelligent controls	Understand the carbon impact of your consumption		



	SPACE				
Widget Image	Widget Name	Meaning	How it can help you		
2 W/m² Energy Consumption Per m²	Energy Consumption per m2	Energy density measurement of the total energy consumed by all devices since the system was put Into service and divided by the Active m2	A key performance indicator known as LENI (Lighting Efficiency Numeric Indicator) can be shown using this observable		
899 m² Total Area	Total Area	Total square meters of active floorspace being monitored	Helps you judge the size of the Building and helps in space utilisation calculations		
M	Occupancy Density Average	Overview of the occupancy density on average for Each day of the week	Visualises how the use of the building changes each day and over the course of a day		
40.31% Space utilised	Space Utilised %	The % of the space used	Understand how well the space in your building is used and make strategies to maximise the efficient use of space		
48 20nes total 12 8987 20nes 48 63% Underutlised	Under-utilisation	How much space is under-utilised	Help you understand how much of your space needs optimisation or redeployment		

NOTE: The Dashboard refreshes automatically every 5 minutes. The dashboard cannot be customised at this time.

IMPORTANT: FOR ANY DATA USING AREA (m2) MEASURES, IT IS CRITICAL TO MAP THE SCALE OF EACH FLOORPLAN AND OUTLINE THE SHAPE AND SIZE OF EACH ZONE.

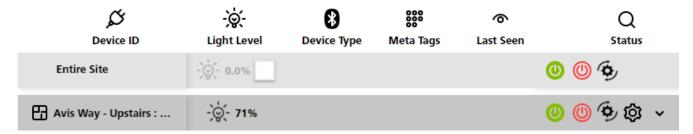


13. Connected Pro - LIGHTING -><

The Lighting section of SylSmart Connected Pro allows you to access many aspects of controlling your lighting in your building including:

- Remote Control
- Scene management and activation
- Scheduling of lighting.

13.1 Remote Control – Lighting



Depending on your level of service (See section 7), Remote control of Lighting assets is possible with different levels of control. Remote control is accessed on the left navigation bar by selecting "Lighting" and then selecting "Control".

The below table explains the possible options for remote control of lighting, based on your service level.

Control Type	Connected Pro (Basic)	Connected Pro+
Entire Site (All zones)	Available (must be enabled manually to avoid accidental control) Not available Control Types:	
(All Zolles)		ON / OFF / DIMMING RESUME AUTOMATION
Zone level Control	ON/OFF Only	ON / OFF / DIMMING RESUME AUTOMATION

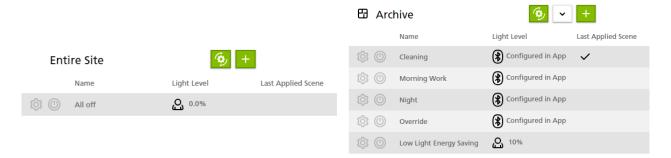
Control Description

Entire Site - 0.0%	Enable Entire Site Control	(1)	ON / OFF Control
- ৣ ं 71%	Dimming Control slider (0-100%) Note: If zone is configured with a high-level trim less than 100%m this controller will not be able to dim above this. Connected Pro+ only	\$	Resume Automation A manual control overrides automation in the system. The autonomy of the system (typically Motion detection) can be reset by pressing this. This is especially important where no Exit Delay is applied to a zone. Configure Scenes

⁽i) For more information on Lighting Control Hierarchy, please see Application Note: SN-211 - Lighting control guide on the SylSmart Connected Help Centre



13.2 Scenes – Lighting



Depending on your level of service (See section 7), Scene control of Lighting assets is possible with different levels of control. Lighting Scenes is accessed on the left navigation bar by selecting "Lighting" and then selecting "Scenes".

Uniform Zone Scenes vs Tailored Zone Scenes

- Uniform Zone Scenes means all luminaires in the zone will have the same light level at the same time.
 - Scenes created in SylSmart Connected Pro Uniform Zone Scenes only.

These are shown in SylSmart Connected Pro as:

- Tailored Zone Scenes are more flexible with different levels across different luminaires within a zone.
 - Where Tailored Zone Scenes with different light levels per luminaire are needed, these must be created as "Mesh Scenes" in SylSmart Connected before being used in SylSmart Connected Pro.

These are shown in the platform as:

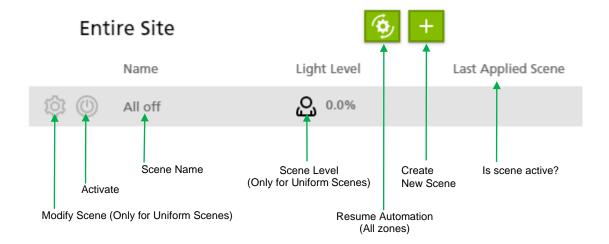
The below table explains the possible options for remote control of lighting, based on your service level.

Scene Type	Connected Pro (Basic)	Connected Pro+		
Entire Site (All zones)	Not available	Available		
Zono lovol Control	Tailored Zone Scenes from SylSmart Connected Only	Tailored Zone Scenes and Uniform Zone Scenes		
Zone level Control	Configured in App	Configured in App		

(i) Entire Site Scenes must be created <u>before</u> GLOBAL SCENES can be used. Global Scenes are configured using Entire Site Scenes.



Managing "Entire Site Scenes"



Creating New Entire Site Scenes

To create a new Entire Site Scene, Click

- Enter Scene Name
- Enter % Light level you want the luminaires in all zones to go to
- Press "Save Scene"



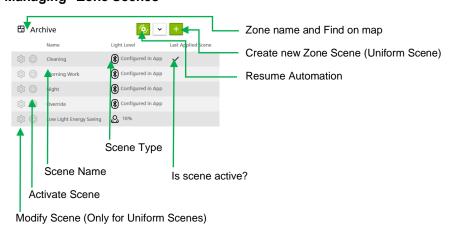
Editing and Managing Entire Site Scenes

To Modify or Delete an Entire Site Scene, Click on the scene you wish to edit

- Modify name in "Scene" name
- Modify % Light level you want the luminaires in all zones to go to
- Press "Save Scene"
- If you wish to Delete the scene click "DELETE SCENE"



Managing "Zone Scenes"



Only Connected Pro+ allows new zones to be created

Creating New Zone Site Scenes (Connected Pro+ Only)



To create a new Zone Scene, Click in the zone needed

- Ensure Zone selected is correct
- Enter Scene Name
- Enter % Light level you want the luminaires in all zones to go to
- Press "Save Scene"



Editing and Managing Entire Site Scenes

To Modify or Delete an Entire Site Scene, Click on the scene you wish to edit

- Modify name in "Scene" name
- Modify % Light level you want the luminaires in all zones to go to
- Press "Save Scene"
- If you wish to Delete the scene click "DELETE SCENE"



13.3 Global Scenes - Lighting

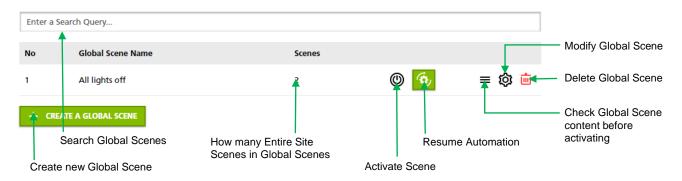
Depending on your level of service (See section 7), Global Scenes is accessed on the left navigation bar by selecting "Sites" and then selecting "Global Scenes". Global Scenes is only available with SylSmart Connected Pro+.

Global Lighting Scenes allows users to action multiple Entire Site Scenes across multiple sites in one single action.

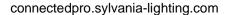
(i) Entire Site Scenes must be created <u>before</u> GLOBAL SCENES can be used. Global Scenes are configured using Entire Site Scenes.

Managing "Global Scenes"

Global Scenes



Creating New Global Scenes (Connected Pro+ Only)







To create a new Global Scene, Click + CREATE A GLOBAL SCENE

- Enter name of Global Scene
- Select Site from which an Entire Site Scene should be taken
- Select the Entire Site Scene to add to Global Scene
- Click "CREATE"

Editing and Managing Entire Site Scenes

To Modify or Delete a Global Scene, Click 🕸

- Modify name in "Global Scene name"
- Add new Enire Site Scenes using the Select a Site drop box and select new Entire Site Scene
- Remove unwanted Entire Site Scenes using X for scene to remove
- Press "UPDATE"
- If you wish to Delete the scene click "DELETE SCENE"



Deleting Entire Site Scenes

To Delete a Global Scene, Click in for the scene you wish to delete.



(i) Global Scenes can only be recalled and managed by Manager or Owner level access accounts to prevent misuse. It is recommended that Global Scenes be only used for extreme cases and in a very controlled and well managed manner.

If in ANY doubt, use the RESUME AUTOMATION button to restore autonomy to your sites.



13.4 Schedules - Lighting

SylSmart Connected Pro – Lighting offers you the ability to recall a preset light level as a scene at a set time. This automation enables greater efficiencies to be gained. Lighting Schedules is accessed on the left navigation bar by selecting "Lighting" and then selecting "Schedule".

Schedule origins (Performed By)

Building on the underlying intelligent, de-centralised lighting control system, SylSmart Connected offers Scheduled Lighting Controls in two ways. Both of which have benefits and it is important to adequately plan your controls strategy:

Origin	Schedule details stored where	Actioned by	Time keeping	Editing Possibility
Gateway Scheduling	In SylSmart Connected cloud	Gateway If gateway offline then schedule cannot be actioned	NTP – Cloud Time is always synchronised	Remote editing
In-Node Scheduling	In SylSmart Connected Bluetooth mesh device memory	Device Schedule can be actioned even if gateway offline	In-Node Time Keeper If power is lost to device, time needs to be re-synchronised Daylight savings time needs resynchronisation	Remote editing possible but needs on premise sync

(i) In-Node Schedules can be configured via the SylSmart Connected Platform without the need for SylSmart Connected Pro. Gateway schedules are also possible via the SylSmart Connected Platform without the need for SylSmart Connected Pro. Once a gateway is added to a project, a new Scheduling option is available. SylSmart Connected Pro synchronises Scheduling settings from SylSmart Connected to offer you a single view of your lighting system.

in-Node Schedules are stored inside the mesh devices installed. Changes to in-node schedules will require on-site configuration using the SylSmart Connected app.

(i) Gateway Schedules are stored in the cloud and can be changed remotely without need for on-site re-configuration. Changes may take up to 10 minutes to update. If internet connection is lost, schedules will not be activated.

Schedule Type

Schedules work on the concept of setting light levels based on one of two schedule types which are available depending on the Schedule Origin you select – Scene Schedule or Zone Schedule:

Origin	Schedule Type	Schedule Available	Synchronisation
Gateway Schedule	Scene Schedule – Recall a preset scene*	Possible	Yes
Galeway Schedule	Zone Schedule - Recall a light level for a zone	Possible	No
In-Node Schedule	Scene Schedule - Recall a preset scene*	Possible	Yes
in-Noue Schedule	Zone Schedule - Recall a light level for a zone	Not Possible	No

(i) * For Scene Scheduling, zones must be configured in SylSmart Connected as "Multiple Scenes". Only Multiple Scene zones will be available for selection in both gateway and in-node scheduling.

Zones not configured for Multiple Scenes can only use Zone Light Level setting and the specific zone must be specified.

Zone Schedules are not synchronised to SylSmart Connected.

(i) Control Hierarchy



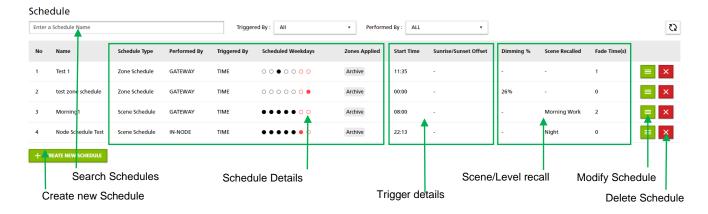
Control hierarchy describes which control element has a higher or lower priority than another. For example a push of the switch (manual control) has the highest priority and overrides other control types such as schedules.

Schedules operate on a "last action wins" basis. This means that any schedule triggered will override the last action, including any switch button presses.

Recommendation: Only use Schedules where there are <u>NO</u> manual controls such as wall switches unless carefully planned.

(i) If a Zone Schedule is configured to a zone with no ability to Resume Automation (No Manual override timeout), the lights will remain in the last state indefinitely until a user presses Auto/ON or an automatic Scene is recalled or the next Schedule activates an automated scene.

Managing "Schedules"



Creating New Schedules

To create a new Schedule, Click



- 1. Enter your new Schedule Name
- 2. Decide which Schedule origin performs the schedule (Schedule Origins
 - Gateway or In-Node) and note the requirements and limitations listed for each type.

Depending on which Schedule origin you choose, different configurations options are made available to configure your schedule:

,	Add New Schedule	
Schedule Name:		
Performed By:	GATEWAY	٠
for on-site re-configuration	stored in the cloud and can be changed remotely without. Changes may take up to 10 minutes to update. If interion is lost, schedules will not be activated.	
Schedule Type:	Scene Schedule	٠
Scene Selection	HR Office (Occupancy)	٠
	Select A Scene	٠
Schedule Trigger:	SUNRISE	٠
Days of the Week:	Mo Tu We Th Fr Sa Su	
Time offset:	00:00:00 × + Negative Value	
Fade Time (s):	0	
More information	ADD NEW SCHEDULE CANCEL c: https://astral.readthedocs.io/en/fatest/index.html	

Schedule Origin	Schedule Type	Scene Selection	Zone Selection	Trigger	Days of week	Start Time	Offset	Lightness	Fade Time	Site Re- configuration
In-Node	Scene Recall a preset Scene	Multiple Scene profiles	Applied via SylSmart Connected	Time	Yes	Yes	No	No	Yes	Yes - Needed
	Scene	Multiple Scene profiles (Check Connected)		Time	Yes	Yes	No	No	Yes	No
	Recall a preset Scene			Sunrise* Sunset*	Yes	No	Yes +/-	No	Yes	No
Gateway	Zone		Yes, multiple	Time	Yes	Yes	No	Yes	Yes	No
	Recall a Light Level for an entire zone	No		Sunrise* Sunset*	Yes	No	Yes +/-	Yes	Yes	No
	If a Zone Schedule is configured to a zone with no ability to Resume Automation (No Manual override timeout), the lights will remain in the last state indefinitely presses Auto/ON or an automatic Scene is recalled or the payl Schedule activates an automated scene						itely until a user			

(i) *More information: https://astral.readthedocs.io/en/latest/index.html

Editing and Deleting Schedules



To Modify a Schedule click: each to the Schedule to be modified.
To Delete a Schedule, click
(i) Any changes to In-Node based schedules will need to be re-configured on the device on site



14. Analytics 业

The Analytics section of SylSmart Connected Pro is your portal to understanding how your building is used and how it is performing. This section offers graphical analysis of data collected from your devices over a wide range of observable data points. The platform enables you to analyse historical data, observe near real time data and dive deeper using filters, meta tags and time period controls to gain deeper insights and give you the power to make informed decisions to take proactive actions to help improve the efficiency of your building and help reduce operational costs.

Analytics is available for:

- Lighting
 - Lux Levels Lux levels Check your spaces are compliant to delivering safe working spaces
 - o Burning Hours Number of hours of operation Pro-active understanding of product life remaining
 - On/Off Ratio of time lights are ON or OFF
 - Light Levels Lighting dimming levels Check energy is not wasted
- Energy
 - Energy How much energy (kWh) is consumed by your monitored assets
 - CO2
 How much CO2 does this consumption represent
 How much cost does this consumption represent
- Space
 - Occupancy Based on Lighting motion sensor data % of time a space is occupied
 - Utilisation Based on Lighting motion sensor data % of a space is used

② SylSmart Connected Pro analytics processes a large amount of data. Depending on the quantity of devices in your project, the complexity of the floors, zones and devices. processing time may be longer than expected.

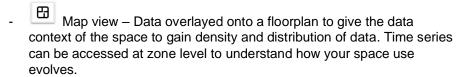
Selecting which observable you wish to analyse is always selected using the "Metric" selection drop box



14.1 Graph view vs Map view

SylSmart Connected Pro enables you to interrogate and visualise data in two main ways:

- Graph view – Data shown in chart view. Ideal for visualising timeseries data and enabling comparisons of one time frame vs another







14.2 Analytics Graph view details

14.2.1 Time frame selection - (Origin)

The time selection drop down box enables you to select the time frame of data you wish to view. When using a comparison timeframe, this selection is the primary time frame and is known as the "Origin" time.



Calendar Time frame selection:

It is possible to select the time frame you wish by clicking on: Start date and click on End Date.

Depending on the total time span selected, you may also be able to select the start hour and minute (in increments of 5). Please see section 14.2.7 for more details on resolution limitations.

Preset Time frames:

To facilitate a rapid selection, the following preset time frames are available on the right of the drop-down box:

- Last 24 Hours Rolling last 24 hours from the current time
- Last 7 days Rolling last 7 days from the current date (00:00 to 23:59)
- Last 30 Days Rolling last 30 days from current date (00:00 to 23:59)
- Last Year Rolling last year from current date (00:00 to 23:59)

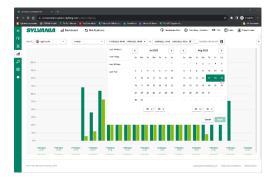


14.2.2 Comparison selection (Compared Data)

The time Comparison drop-down box enables you to select the time frame of data you wish to view as a comparison vs the Origin data. When using a comparison timeframe, this selection is the secondary time frame and is known as the "Compared Data" time.

Calendar Time frame selection:

It is possible to select the time frame you wish by clicking on: Start date and click on End Date.



Depending on the total time span selected, you may also be able to select the start hour and minute (in increments of 5). Please see section 14.2.3 for more details on resolution limitations.

Preset Time frames:

Where a Preset Time frame is selected, in Compared Data you will only set the start date from which to look back from:



- Last 24 Hours Last 24 hours from the date selected
- Last 7 days Last 7 days from the date selected (00:00 to 23:59)
- Last 30 Days Last 30 days from the date selected (00:00 to 23:59)
- Last Year Rolling last year from the date selected (00:00 to 23:59)

The Compared time frame will be shown alongside the Origin data. The X axis will show you which Origin date/time aligns to which Compared Data date/time.





14.2.3 Detailed Data - Hover over

In graph view, it is possible to see the exact value reported for each bar by hovering over the bar with your cursor.



14.2.4 Data Export

At present it is not possible to export the data from this view.

14.2.5 Weekend Exclusions

By selecting , data from Saturdays and Sundays is hidden. This may help to remove data which may otherwise alter the perception of the important information as many buildings are used less on weekends.

(i) Working hours exclusion is not yet possible and will be added in future releases.

14.2.6 Filtering by Site, Floor, Zone or META tag

To aid in understating your building better and enable you to dive deeper into the operational efficiency of your building, it is possible to filter the data in the view by:

Entire site – Complete overview of the data for the whole building
 Use top bar navigation to select "Entire Site"

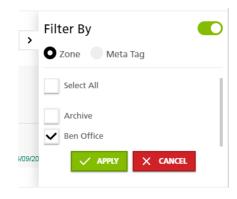
- € Entire Site
- Floor Select which floor to visualise the data for subset of Site data
 Use top bar navigation to select the Floor/Area to filter



- Zone Select a subset of Floor data by only looking at the data of selected zones
- Meta Tag Filter data by the Meta Tags you created. Create views which are important to you.

To Access Zone and/or Meta Tag:

- Select the button on the right side of the Analytics Screen.
- 2. Enable "Filter By" by turning On the radio button
- 3. Select Zone or Meta tags you wish to filter by
- 4. Press "Apply"



14.2.7 Graph view - Resolution selection and limitations



Too much data on one screen would cause platform performance issues and yield little additional insight.

Sylvania has implemented the ability to change the time resolution between:

- 5 minute
- Hourly
- Daily
- Weekly
- Monthly

> Resolution limitation:

Depending on what time span of data you select, we restrict the lowest resolution that can be displayed to ensure we do not process too much data or render the graph view illegible. The limits are set as follows:

Time Frame Selection:

Duration of selected timespan	Resolution	Comment
Less than 8 hours	5 minute	
More than 8 hours Less than 120 hours (5 Days)	Hourly	
Greater than 5 days but less than 92 days (3 months)	Daily	
Greater than 3 months but less than 12 months	Weekly	
Greater than 1 year	Monthly	Max 60 months

(i) In future releases it will be possible to view more than 1 year at quarterly and annual resolution

Preset Time Frames:

Preset Time Frame selected	Resolution	Comment
Today	Hourly	
Last 24 hours	Daily	
Last 30 days	Daily	
Last Year	Weekly	

(i) In future releases it will be possible to view Year To Date on a monthly granularity

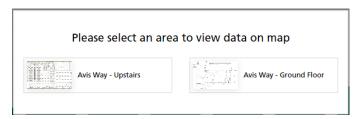


14.3 Analytics - Map View

14.3.1 Area/Floor selection

Map view is only possible when looking at a specific Floor/Area. It is not possible to visualise a complete building or multiple floors concurrently.

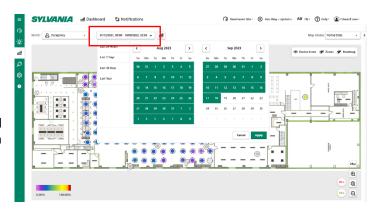
When selecting Map View, you will be prompted to select an area to view on map.



14.3.2 Time frame selection

It is possible to select any time frame possible. Please note that the larger the time span, the longer it may take to compile the data to create the view.

The map data displayed based on the time selected is calculated/aggregated data. The manner in which data is aggregated over devices, zones and floors and depending on time span selected, is detailed in the Data Aggregation Policy section of this document.



② Always check which time frame resolution you are using. If you select Hourly resolution you will not be able to select sub-divisions of an hour, only a full hour. Equally if the Daily resolution is selected, you cannot select which hour in a day to start from, it will take a whole day.

14.3.3 Comparison selection

Side-by-side Comparisons are not possible in map view.

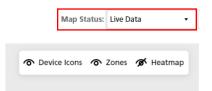
14.3.4 Resolution selection and limitations

Map views do not show time-series data and so the data resolution is not as visible. However, depending on the time span selected, the data displayed is created based on the data resolution as per section 14.2.7.

14.3.5 Period vs Live data

It is possible to switch the map view from Period Data (Historical data based on time span selected) to Live Data (Data reported in past 5 minutes).

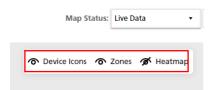
To select this, please use the "Map Status" selection box.

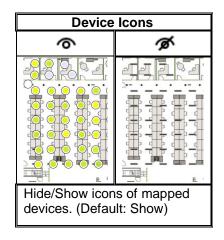


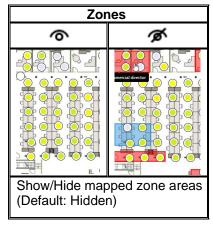


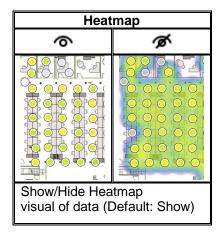
14.3.6 Hide/Show Device icons, Zone drawing and Heatmap visualisation

SylSmart Connected Pro enables different layers of visualisation which can be either shown or hidden based on your needs. These are controlled by the Toggles in the top right corner of the map view.









14.3.7 Filtering by Zone or META tag

To aid in understating your building better and enable you to dive deeper into the operational efficiency of your building, it is possible to filter the data in the view by:

Entire site – Complete overview of the data for the whole building
 Use top bar navigation to select "Entire Site"



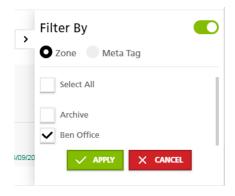
Floor – Select which floor to visualise the data for – subset of Site data
 Use top bar navigation to select the Floor/Area to filter



- Zone Select a subset of Floor data by only looking at the data of selected zones
- Meta Tag Filter data by the Meta Tags you created. Create views which are important to you.

To Access Zone and/or Meta Tag:

- 5. Select the button on the right side of the Analytics Screen.
- 6. Enable "Filter By" by turning On the radio button
- 7. Select Zone or Meta tags you wish to filter by
- 8. Press "Apply"



14.3.8 Map view - Scales by observable



The map view will show you in content of the space, the values observed by analysis. In order to help visualise the data, SylSmart Connected Pro applies a colour scale for each reporting device based on the scales shown below.

This is further used to help render the Heatmap visualisation.

Observable	Scale Value	Metric	Method	Scale Meaning	
Lighting > Lux	0-Max	Av. Lux	Average over timespan. Empirical values per point	0 Max RED = Greater than baseline (Future feature)	
Lighting > Burning Hours	0-Max	Hours	Average over timespan. Empirical values per point	0-10p th 25p th Median 75p th Max Dark RED = Greater than baseline (Future feature)	
Lighting > ON/OFF	0-100	Av. %	Average over timespan. Empirical values per point	0 Median Max	
Lighting > Dimming Level	0-100	Av. %	Average over timespan. Empirical values per point	0 Median Max Dark RED = Greater than baseline (Future feature)	
Energy > Energy	0-Max	(K)Wh	Average over timespan. Empirical values per point		
Energy > cost	0-Max	Kg	Conversion of Wh. Empirical value per point	<10p th 25p th Median 75p th >90p th	
Energy > CO2	0-Max	Currency	Conversion of Wh. Empirical value per point	Top 25p Median 75p 250p	
Space > Occupancy	0-100	Av. %	Average over timespan. Empirical values per point	+ + + + + + + + + +	
Space > utilisation	0-100	Av. %	Average over timespan. Empirical values per point	0-4 ♥ 16-30 ♥ 46-60 ♥ 76-90 ♥96+ 5-15 31-45 61-75 91-95	
If there is no data available, A device will be shown as Grey which means the device reported no data for that time frame. This may be because a device was offline or the device does not have the necessary					

capabilities to report a value.

14.3.9 Weekend and non-working hour exclusions

With Map data, it is not currently possible to exclude weekends or non-working hours.

Disclaimer: Although every effort has been made to ensure the accuracy in the processing, compilation and visualisation of the technical detail within the SylSmart Connected Pro platform, and the in the compilation of the technical details in this publication, specifications and performance data are constantly changing and subject to statistical and rounding errors as well as issues of data availability and issues beyond Sylvania's control. Feilo Sylvania International Group shall not be held liable for any direct or indirect losses in connection with the aforementioned. E.&.O.E.

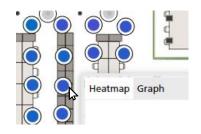
 $[\]widehat{m{U}}$ The method of data aggregation over time and over space is detailed in section 14.6: Data Retention, Aggregation, Backup Policy



14.4 Map View Zonal Chart and Heatmap data

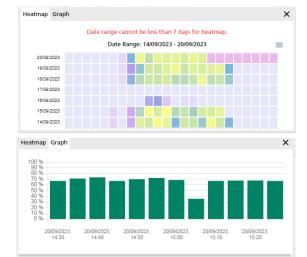
The map view can also be interrogated in more detail by zone to help you pinpoint key insights about selected areas of your building. SylSmart Connected Pro enables you to visualise Time Series data at a zone level to understand how your space use evolves.

To access this data, select the timespan to enquire using the Time selection drop box, then simply click on a device icon on the floorplan and you are presented with a modal window and offers you two visualisation options:





Graph



14.1 Limitations applied to Zonal Data visualisations

Too much data on one screen would cause platform performance issues and yield little additional insight.

For the Zonal charts and heatmap views, the following limitations are applied:

Time span / Preset Selection	Data shown		
Less than 1 day / TODAY	Data from the actual day		
LAST 24 HOURS	Last rolling 24 hours		
Less than 1 week	1 Full week shown (Monday to Friday)		
	If actual Day = Monday start on present day		
	If actual day = Not Monday – Start on preceding Monday		
LAST WEEK	Last rolling 7 day data		
Greater than 1 week but less	2 weeks data average from nearest preceding Monday to next		
than 2 weeks	proceeding Sunday. i.e Could be 17 days of data to ensure 2 full weeks		
	are shown		
LAST 30 DAYS	Last rolling 30 days		
Greater than 2 weeks but less	Specified date range data average from nearest preceding Monday to		
than 3 months	next proceeding Sunday		
	Shown as averages of 30 day periods.		
(i) Heatmans, are limited to a maximum of 31 days in a single view. Please select a time span of 31 days or			

Heatmaps are limited to a maximum of 31 days in a single view. Please select a time span of 31 days or less for heatmaps. If you need more than 31 days, please use the Graph view.



14.5 Analytics - Data Aggregation accuracy

Sylvania takes the utmost care to process data to the highest reasonable standards. The methods of aggregating data by physical space (Device > Zone > Floor > Site) and by time (5 Minute > 1 Hour > 1 Day > 1 Month) will contain a degree of rounding error and observation error.

(i) For Energy Data, please note that 1 hour data energy data and costs are average values of the 5min data and will have an amount of error as the measure of energy consumption is Wh not W/5mins. Therefore you may see a discrepancy between the sum of 5min data and the actual hourly data. The actual hourly data is observed in Wh and reported in Wh are is therefore more accurate.

14.6 Analytics – Target Data Frequency

In this section we outline how frequently different observables are targeted to update SylSmart Connected Pro from the respective device types.

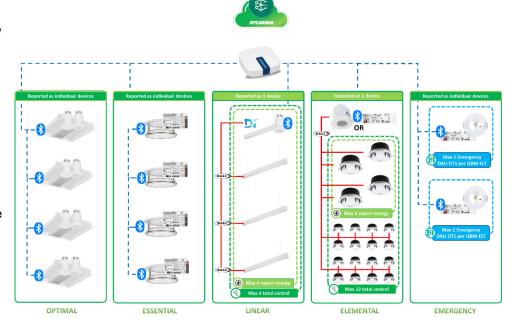
14.6.1 Bluetooth qualified mesh (QBM) devices with on Board processing.

① Devices connected to a QBM device on a DALI line may report their data as a consolidated value. Only devices with individual Bluetooth controllers can independently report independent values.

Observable	Frequency
Light Level status	every 60s + on any change
Generic statuses	on any change
Sensor status	every 60 minutes + on any change
(Ambient Light / Occupancy)	(any change above 3% for ALS)
DALI 252 (energy)	Every 60s - max 2 minutes

This diagram illustrates how different device topologies can yield different data resolutions per device depending on which hardware option route you choose when installing SylSmart Connected.

The more controllers available per device and the more sensors per device (Optimal) results in the richest experience in Connected Pro.



14.7 Data Retention, Aggregation, Backup Policy



SylSmart Connected Pro retains device data in its secure database following the retention policy below depending on the service you have subscribed to. Sylvania does not keep highest resolution of data ad infinitum to reduce database size, ensure optimal performance and provide meaningful data.

14.7.1 Data Retention and aggregation policy

14.7.1.1 SylSmart Connected Pro

Connected Pro as a foundation lighting service has a limited set of available data.

14.7.1.2 SylSmart Connected Pro+

SylSmart Connected Pro+ offers the following data retention and aggregation:

	Time Resolution	For how long	Space resolution
	5min	14 days	
Connected Pro+	1 hour	2 years	per luminaire/ reporting
	1 day	5 years +	device
	1 Month	10 years +	

The optional add-on Lighting Data service, Pro+ Data, enables a higher resolution of data to be retained for a longer period. This add-on is particularly useful where a subsidy requires additional data granularity.

	Time Resolution	For how long	Space resolution
	5min	720 days	per luminaire
Pro+ Data	1 hour	5 years	per luminaire
	1 day	5 years +	per luminaire
	1 Month	10 years +	per luminaire

14.7.2 Long term data retention policy

Project/Tenancy Inactivity:

If a Project or Tenant is inactive for 1 year (no activity/access by any user), SylSmart Connected Pro will send a warning communication to the account owner that data may be deleted in 60 days.

A final reminder will be sent 7 days before data and account deletion begins.

Subscription expiry and not renewed:

Data retained for 1 year post service term. Warning 60 days before end, final warning 7 days.

14.7.2 Data backup

The following backup policy is in operation to ensure the database data is recoverable with minimum loss.

Back Up Frequency	Type of backup and task				
Daily	Full database backup (Rolling 7 days backup)				
	Optimisation of 5 minute data				
Weekly	Database optimisation 1 hour data				
	Database optimisation 1 Day data				
	Database optimisation 1 month data				

15. Assets 💆

connectedpro.sylvania-lighting.com



The Assets section of SylSmart Connected Pro is your window to seeing all your monitored assets in a single place. Whether it's a lighting asset, a gateway or any future monitored asset, this tool gives you complete oversight.

A very versatile tool, Assets will enable proactive maintenance and help you see what needs attention, where and what resolution steps are needed.

To aid in any analysis or filtering, Assets also enables you to add META tags to supplement device information with additional layers of extra information.

The assets feature is due to be upgraded in 2023/2024 to become a search engine. The information in this section is subject to change. The Assets feature enables you to see the following observables in both a list format and/or map view format and organised by zone to help you visualise their location easily:

15.1 Lighting Assets

Observable	Meaning	Comments
Device ID	Unique identifier of each device	
Device Type	Technology of device	
META Tags	Additional device information	
Status	Online/Offline status	Standard Mesh Device
		 Online if last seen = less than 15 minutes. Online if last seen = more than 15 minutes.
		EnOcean enabled Device
		 Online if last seen within last 30 minutes Unknown if last seen >= 30mins < 3 days Offline if last seen > 3 days
Last Seen	Last timestamp of any data received by a device	See section 14.6.1 for more details on expected data frequency
Light Level	% Dimming level	Note: A device may be in a zone with restricted dimming
Burning Hours	Cumulative number of hours of operation	Note: Calculated where dimming % is greater than 0.0%
Power	Amount of energy consumed by device in Kwh	Value is in Green if the data is from D4i Driver Black if value is not available or calculated from Manual entry (Configure device) multiplied by Light Level %.
Occupancy	A device with a motion sensor sees motion	Note: A device without a motion sensor shows as "-"
Lux Level	A device with a Lux sensor	Note: Only one device per zone is able to report a value. Devices without an ALS sensor shows as "-"
Offline Hours	Cumulative Number of hours a device is reported as offline	
Configure Device	Configure additional functional Parameters of a device	Manually set Maximum Wattage of a device. Power consumption will be calculated based on this value multiplied by Light Level %.
Additional Data on se	electing a device:	
Device Name	Human Readable name given to the device	
Identify	Make the device visually identify itself through blinking	

15.2 Gateway Assets



• Please note that Gateway Assets must be created in: Settings > Gateway before appearing on the assets list or being able to be mapped to a floorplan. The Assets feature enables you to see the following observables in both a list format and/or map view format and organised by zone to help you visualise their location easily:

Observable	Meaning	Comments			
ID	Unique identifier of each device	Typically serial number			
Gateway Type	Technology of device				
Model	Model name/Number of the gateway				
Physical location	Where is the gateway physically located in the building (Area/Floor)				
Areas Served	This gateway connects to devices in these areas/floors				
IP Address	Allocated IP Address	Only applicable if DHCP is set to manual			
Installation date	Date of installation				
To find the connection status of your gateway please visit SylSmart Connected					

15.3 Lighting Assets – Energy metering

This section is best read having read 14.6.1 Bluetooth qualified mesh (QBM) devices with on Board processing.

15.3.1 OPTIMAL/ESSENTIAL:

SylSmart Connected Lighting devices have the ability to record their energy consumption in real time to an accuracy of 0.1W if they are D4i enabled. Each device reports its Energy values Automatically. The Assets page reports their values in **GREEN**.

15.3.2 LINEAR/ELEMENTAL:

Where a device is not D4i enabled but is DALI-2 compliant with Energy Data (Part 252), SylSmart Connected is able to extract Energy Data from the luminaire asset.

If multiple DALI-2 compliant devices are connected to one reporting device, the Energy Data of up to a total of FOUR devices is aggregated and reported to SylSmart Connected Pro.

The Assets page reports their values in **GREEN**.

15.3.3 OTHER:

If a device is not D4i enabled nor DALI-2 Compliant, it is still possible to estimate power consumption per device by manually entering the Maximum Power/Wattage of the device. See section 15.4 for more details.

15.4 Manually Configure a Device's Wattage

For "Other" devices as described in section 15.3.3, you can manually set the maximum wattage of devices.

1. Identify device which is not automatically reporting energy values (Power value = Black)

2. Click on "Configure Device" button to for that device

Connected

3. Enter Maximum Wattage of the device / devices connected to that reporting node and press Save.

03/10/2023, 14:09 - - 85 % 1954.25 hrs -

i This value is available on the datasheet of the device. If multiple devices are connected, please remember to add the total wattages together.



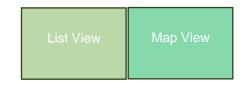
15.5 Assets - Map vs list view





The assets feature shows you all your assets in two ways:

- 1. List View
- 2. Map view



It is possible to control the split of the screen using either:

1. Drag centre Screen – Position your cursor on the intersection of the split between list and map view and drag the centre line as desired to the split of screen you wish

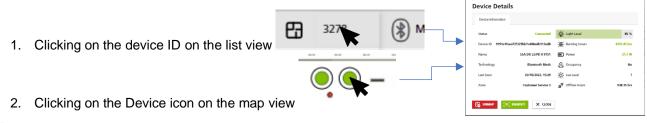


2. Expand/Minimise controls – There are two control buttons which enable you to maximise/minimise the map view or the list view



15.6 Assets - Expanding Device details

It is possible to see more details about a device by either:



(i) In a future release of SylSmart Connected Pro, it will be possible to see the DALI fault codes by expanding the device details.

15.7 Assets - Finding devices and zones on plan

If devices are mapped on a floorplan, it is possible to find the device or the zone quickly on the floorplan simply by clicking the icon next to a Zone name or next to a device ID.

Clicking on this icon will centre the device/zone in the map view and visually highlight the device/zone to draw your attention to its precise location.



If a device is not mapped or no devices for a given zone are mapped, the icon will be greyed out.



15.8 Assets - Filtering views



To help clearly see the assets you wish to view, there are three main ways to filter:

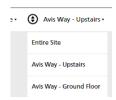
1. Device/Zone Search Filter - Text search to reduce view

Look Up Device ID Or Zone name...

- 2. Floorplan Filter / Navigation filter
 - On the map view, select a floor to narrow the list to shown only devices for that floor



b. The top navigation bar, select a floor to narrow the list to shown only devices for that floor. To view the whole site list, select "Entire Site"



- 3. Filter Sub selection Use the button to open the Filter selection box which enables
 - Sort By Choose which observable to sort the devices by in each zone
 - Zone Filter Which zone to show
 - META Tag Filter Show only devices with a particular META Tag
 - ON/OFF Filter Only show devices which are in an ON State



(i) If a Filter is applied, you will see a count of Filters applied on the Filter Icon



To clear applied filters, open the Filters menu and click "CLEAR FILTER".

15.9 Assets - Exporting Assets list

It is possible to export a complete list of all your assets into a HTML file ready for printing to PDF or ready for filing. The output report will create an overview of the entire contents of the building including:

- Location of devices
- Full list of zones
- Count of devices per zone
- Number of EnOcean switches per zone
- Output all observables per device

This report is ideally suited to be combined with a SylSmart Connected Commissioning Report.

CONTROL OF THE CONTRO

15.10 Assets - Managing Meta Tags



Adding extra information to assets using META Tags helps you easily identify assets which may have a common type of use or a specific characteristic important to you. For example, "Emergency", "Maintenance Phase 2".

With SylSmart Connected Pro it is possible for you to create, manage and assign META Tags to devices as you need, and make those META Tags available in different screens such as Analytics to create view of information important to you.

15.10.1 Managing META Tags

To use META tags you must first create the. This is done by clicking which opens the META Tag Management window.

- Create a META Tag
 - Click "ADD NEW META TAG"
 - Name your META Tag
 - Choose the Colour for your META Tag. Use a preset colour or open the colour selection palette. Once selected, press OK.
 - Ensure to Click to save your META Tag
 - Add other META Tags by again clicking "ADD NEW META TAG
 - Once finished Click CLOSE
- Modify a META Tag
 - In the META Tag Management window, make the
 needed changed and click to save your changes
 Once finished Click CLOSE

Delete a META Tag

- o Click the x next to the META Tag you wish to delete
- Once finished Click CLOSE

15.10.2 Assigning META Tags to devices

To assign a META Tag to a device:

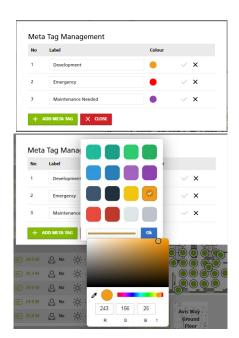
- Expand the Device Details (see section 15.6) for the device you wish to META Tag.
- 2. In the META Tags section, click on "Select Meta Tags" and select the META Tags you wish to allocate to that device. It is possible to allocate more than one META Tag to a device.
- 3. Once selected, click off the selection area and close the Device Details
- 4. The Assets list will show your META tags as a coloured circle in the META tags column and be added to the sites export as well as Filter lists.





16. Notifications







Notifications offer you the ability to be proactively informed about any issues or incidents that may occur with your monitored assets, enabling you to take effective actions quickly and efficiently to resolve them.

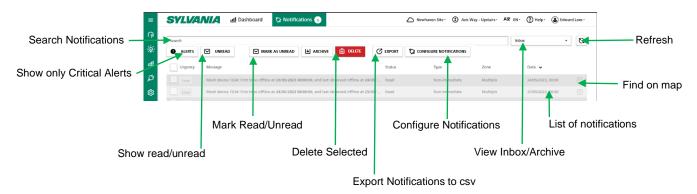
Notifications can be accessed on the top navigation bar by selecting:



SylSmart Connected Pro's Notification feature is a rules engine which enables you to:

- Craft your own notification criteria based on the available observables
- · Choose when and how frequently you receive different types of notifications
- Select a Severity rating for your notification helping you to prioritise actions
- Manage notifications received like you do your inbox (mark as read, archive, delete)

16.1 Managing Notifications



16.2 Configuring Notifications

SylSmart Connected Pro Notifications employ RULES to observe certain set conditions and trigger an event based on that condition.



To configure your own Notification rules to your needs, click on "CONFIGURE NOTIFICATIONS". This will open a new screen showing all your Configured Notifications and enabling you to ADD NEW RULE or DELETE rules.

The overview page will list all configured notifications and give you an overview of the set conditions for that rule including:

- the Urgency of the Rule set
- who is notified?
- the Condition observed for the rule
- which day is the notification active
- which Zone is observed for this rule
- what time frame in the day/night is this rule active on the days defined
- is the rule set to Immediate (high frequency) notification

16.3 Create a new Rule

To create your own rule, start by clicking "+ ADD NEW RULE". This will open a new window to start configuring your rule.



Please enter your requirements based on:

Rule Entry	Sub Requirement	Meaning	Threshold Range	Unit
Recipient				
recopioni				
			Range	
	Occupancy Detected	Enter email address Select existing user ls a device offline? d Occupancy detected? No motion detected for how long? % Is Dimming % above X? 1-99 % Is Dimming % below X? 1-1000000 Is lux level above X? 1-100000 ls lux level above X? 1-100000 Has a device operated for longer than X hours? hrs) Has a device switched on? Has a device switched off? Has a device switched off? Has a device switched off? Has a device consumed more than X wh? Select day of week Monday — Sunday You will receive a notification every hour for this rule You will receive an immediate notification. Choose your "Throttle" to decide how often to be renotified if rule continues to be broken. Rule applies to all zones Rule Impacts the System Health rating and dashboard Select the language for your notification to be published Which roles can see the See Roles and		
	Recipient E-mail Enter email address Select Existing user Disconnected Device Is a device offline?	1-10000000	sec	
		Is Dimming % above X?	1-99	%
		Is Dimming % below X?		%
Condition	Lux level above (lux)	Is lux level above X?	1-100000	lx
Channa 1	Lux level below (lux)		1-100000	lx
condition per	Burning hours above (hrs)	longer than X hours?	1-999999	hrs
	Offline hours above hrs)		1-999999	hrs
	On Detected	Has a device switched on?	=	
	Off Detected	Has a device switched off?	-	
	Energy Above			wh
Active Times	Day of week	Select day of week		
	Start Time / End Time	Select Start and End time		
	Once a day		00:00 > 23:59	
Notify me	Every hours	notification every hour for		
Choose one	Immediately		Throttle:	Minutes
condition per rule		decide how often to be re- notified if rule continues to be broken.	10 min. 15 min.	
Zonoo	Entire Site	Rule applies to all zones		
Zones		Rule		
Urgency	Critical			
Choose one	High			
condition per	Medium			
rule	Low			
Language				
Visibility		Which roles can see the		
* (i) You'll only be	e notified between the times of	lefined by Active Hours.		



Once finished crafting your rule, click SAVE.

16.3 Modify and Delete Notifications

MODIFY - To modify an existing rule, simply click on the Rule you wish to edit from the Notification Configuration list. Once finished, click SAVE.

DELETE – To DELETE an existing rule, simply click on the Rule you wish to delete from the Notification Configuration list and then click DELETE.

16.3 Exporting Notifications

To export the list of notifications, click on $^{\mbox{\it C}}$ EXPORT. This will export the list of notifications in your present view (INBOX or

No	Id		Message	Urgency	Status	Date	
	1	13166	Mesh dev	critical	Unread	19/07/202	3, 00:00
	2	13195	Mesh dev	critical	Unread	20/07/202	3, 00:00
	3	13220	Mesh dev	critical	Unread	21/07/202	3, 00:00
	4	13246	Mesh dev	critical	Unread	22/07/202	3, 00:00
	5	13272	Mesh dev	critical	Unread	23/07/202	3, 00:00
	6	13299	Mesh dev	critical	Unread	24/07/202	3, 00:00



Archive) and enable you to save this list to a .csv file which can be opened in MS Excel.

16.4 Link between Critical Notifications, Read/Unread/Archive, Severity rating and Site Health

SylSmart Connected Pro uses a number of rules to help you manage your notifications inbox count, your dashboard display and your site health indicator based on the notification severity and its read/unread state.

- Critical Notifications The count of critical notifications will be counted towards the calculation of Site Health.

 See section 12 for more details on the rule to trigger different health indicators.
- Read/Unread/Archive Only messages which are in your INBOX and marked as UNREAD are counted as
 part of the Notifications Count or used for the Site Health calculation. The system
 considers a notification marked as Read or Archived as ACTIONED and therefore
 not required to be counted to prompt action.

16.5 Data retention policy for Notifications

Notification data retention policy is as follows:

- Maximum 5000 notifications per site
- Unread notifications in INBOX are archived after 30 days.
- Archived notifications are deleted after 60 days.

16.6 Maximum notifications

Per Site, there is a maximum of 5000 notifications allowed.

When a Site reaches 4000 notifications in the database, an E-MAIL warning is sent to the Site Owner.

Further to the E-MAIL Warning, If the Site maximum of notifications is reached, a Warning Message is also displayed on SylSmart Connected Pro in red.



16.7 E-mail server and E-mail notifications

SylSmart Connected Pro uses Feilo Sylvania e-mail servers to send e-mail notifications. It is important to ensure that Site Owners check their IT systems to not filter e-mails from sylsmart@sylvania-lighting.com

Using your own e-mail server is possible upon special request. Please contact support.sylsmart@sylvania-lighting.com or your local Sylvania representative for more information.

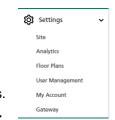


17. General Settings 🥸

The settings section of SylSmart Connected Pro is where you can customise many aspects of the operation of the system and manage different elements such as user access, floorplans, platform synchronisations and analytics.

The Settings section is accessed on the left side vertical navigation bar and select [©] Setting

Settings can only be accessed by users with the correct access levels. Please see section 17.7 for more details.



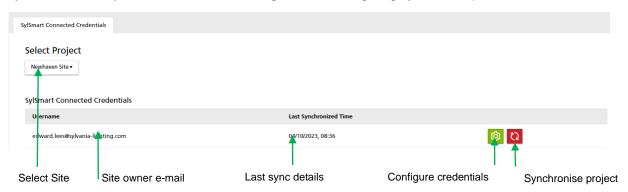
17.1 Site Settings

On this page you can manage the integration of SylSmart Connected Pro to other donor systems. Each donor system will be managed on its respective tab.



17.1.1 SylSmart Connected

As described in Section 5, SylSmart Connected Pro is able to import data from SylSmart Connected in order to help you expand your Lighting system to deliver new insights and capabilities. The SylSmart Connected Project must be synchronised to SylSmart Connected Pro to get the latest Lighting system setup.



- if the Project is not correctly setup or No SylSmart Connected system is connected to this project, a warning message will be shown. If you believe this is an error, please contact SylSmart Support.
- ① Only the OWNER of a SylSmart Connected Project can use their credentials to link to SylSmart Connected Pro.

17.1.1.1 Input SylSmart Connected Project Credentials.

To securely synchronise the data between both systems, the Credentials for SylSmart Connected must be given to SylSmart Connected Pro. To do this you must:

- 1. Click on 🧐
- 2. Enter E-mail address and Password of the SylSmart Connected Owner account
- 3. Click SUBMIT

The platform will begin to download all the settings of your SylSmart Connected project and setup your SylSmart Connected Pro project. This may take several minutes. You have the option to wait on the platform until complete or we can e-mail you once the process is complete.



17.2 Analytics Settings

These settings will help customise how data is displayed for analytics features and establish conversion factors.

- Baseline settings Defining a baseline will provide a visual aid, to compare the historical data in the analytics section against the chosen value.
- Expected Lifetime Lighting Only as of 2023. The standard expected lifetime of a luminaire in Hours. As other device types are added, these may have different expected lifetimes. SylSmart Connected Pro can help you with preventative maintenance by knowing the expected life of a product.
- Conversion Factors Local to the site selected, what are the conversion factors for different metrics.

17.2.1 Baseline Settings

The following metrics can be set as a baseline to aid in understanding the run-rate of consumption or to set visual targets on different screens:



- Burning Hours Number of hours per year you expect your lighting to be used. This may also be the value used for any Return on Investment (ROI) calculations. Using this value, you are able to see if your system is delivering more or less than what was forecasted.
- Dim Level % Average light output Target dimming level to achieve safe light output. Set a baseline of the light output value you target to deliver safe lighting levels and assess if your lighting system is delivering the light you need for MORE or LESS power and see if it is saving you more energy.

Once you enter a value on each line, please click the SAVE button: <

17.2.2 Expected Lifetime

This baseline sets the standard expected lifetime of luminaires, defined in Hours. As other device types are added, these may have different expected lifetimes. SylSmart Connected Pro can help you with preventative maintenance by knowing the expected life of a product.



Example: As the burning hours of luminaires approaches 90% of the baseline Expected Life Time, the system notifies you to start considering actions to replace devices.

Once you enter a value on each line, please click the UPDATE button.

17.2.3 Conversion Factors

To enable the display of costs for given use of different resources, we must use conversion rates specific to that site.



Enter the conversion rates relevant to your site for:

- Energy price Cost Per Kwh value
- CO2 conversion factor Kg per kWh

Once you enter a value on each line, please click the SAVE button: <

17.3 Floorplan management



This section of settings enables the setup and management of a wide range of spatial elements including:

- Setting the scale of a floorplan image To help assess the efficiency of your building in m2 terms, we must know the scale and size of the building by floor.
- Setting the Active area of a floorplan image Floorplan images may have empty white space or areas not applicable to floor space being monitored
- Draw Zones on your floorplan SylSmart Connected enables zonal lighting management. Visualise these areas on a floorplan and build enable a deep understand of the size of each sub-space such as closed office, meeting rooms so as to help you understand the usefulness of your floor in detail.
- Device Placement Map the exact location of each asset on each floorplan
- (i) SylSmart Connected pro employs rules to determine the total surface are of a site:
 - If no zones are drawn > Active Area size is used per floor and the sum of each floor used for Site
 - If no Active Area is set > Total Site value is used from Site Settings

You can manage only one floorplan at a time. First, select the floorplan you wish to manage:

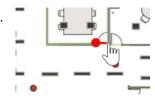


17.3.1.1 Set Scale of Floorplan

It is important to set the scale of floorplans so that we can evaluate data in context of the right size of your building to maximise the insights.

- 1. Press the SET SCALE button to access the scaling menu
- 2. Use two known points on the floorplan to help establish the scale of the floorplan.

Select Point 1 and then select Point 2 of a known distance in real life application that corresponds on the drawing. **Example**: Door widths are typically 80cm.



- ① It is recommended to ZOOM IN as far as possible to get the best accuracy.
- A window will open to enter the actual distance (in meters) between the two points: e.g 0.80m
- Press SAVE



Once this is done, a TOTAL FLOORPLAN AREA is calculated at the top of the page:



Floorplan Scale Settings (2055.66m²) SAVE Reset

 ${f @}$ This is the total m2 calculated for the whole floorplan image including any white space.

17.3.1.2 RESET DISTANCE



If you are happy the two points selected are correct but wish to change the distance value, you can reset the distance between the two points selected by clicking "RESET DISTANCE" Reset DISTANCE"

Press **SAVE**

17.3.1.3 CLEAR SCALE

If you wish to start the scale entry again, you can clear the scale saved and enter a new set of points + scale value by clicking "CLEAR SCALE" [Clear Scale]

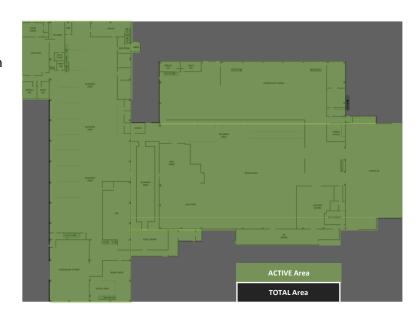
Press **SAVE**

17.3.1.4 CLOSE

Close the Scale setting Screen by clicking CLOSE.

17.3.2 Set Active Range of Floorplan

TOTAL AREA OF A FLOORPLAN VS ACTIVE AREA. The TOTAL Floorplan area encompasses the whole surface of the floorplan image including any white space. Active area setting enables us to remove the white space from floorplan calculations making space estimates more accurate.



To set the ACTIVE RANGE:

1. Click on SET ACTIVE RANGE button ** SET ACTIVE RANGE

2. A new window opens and click "ADD NEW AREA"

Select the active area by clicking and dragging a rectangle.





You can add multiple rectangular shapes to cover the entire active area. For each new rectangle you wish to add, click ADD NEW AREA again.

Individual rectangles can be selected and resized using the corner holders.

Active Areas Setting

ACTIVE AREAS

ACTIVE AREAS

ACTIVE AREAS SITUATE: 626 04850m²

Once the whole ACTIVE AREA is covered click:

SAVE ACTIVE AREAS



Floorplan Area : **8256.11**m² Active Areas Square : **5229.48927**m²

To DELETE individual rectangle Zones, select the rectangle to delete and click DELETE AREA.

To CLEAR ALL rectangle areas from a floorplan, click DELETE ALL AREAS

① At the bottom of the Active Area Setting scree, you will see a summary of the calculated TOTAL Floorplan size in m2 vs the Active Area m2.

6



(i) DID YOU KNOW?

According to AMA Research, meeting rooms are used only 39% of the time to 19% capacity.

17.1.3 Draw Zone Areas

We can help visualise and calculate the surface area of each zone on a floorplan. This is especially important if you wish to understand the utilisation efficiency of your building. In turn we can help estimate space savings and space redeployment strategies to make better use of your spaces or save on rental costs.

To draw the individual zone areas:

- 1. Select the zone from the Node list you wish to map
- Click the on that Zone's line. A new window opens.
- Select a Zone Colour This will be the colour which is used to visualise that zone on the floorplan
- 4. Click the ADD NEW ZONE AREA button
- 5. A new Same as with Active Areas, use a series of rectangles to draw the zones. For each extra rectangle needed, click ADD NEW ZONE AREA again.
 - (i) Recommended to Zoom in as far as possible to maximise accuracy of the zone mapping and zone surface calculation.
- Once done, click **SAVE ZONE AREA**



SSA D4I LS/PD HB ... 8357

Machine Centre SSA DALLS/PD HR

SSA D4I LS/PD HB ... Badf Mesh

Zone Area Settings (Machine Centre) Zo

Individual rectangles can be selected and resized using the corner holders.

To DELETE individual rectangle Zones, select the rectangle to delete and click DELETE ZONE AREA. To CLEAR ALL rectangle areas from a floorplan, click DELETE ALL AREAS ON FLOORPLAN

(1) ONCE A ZONE IS MAPPED, IT CAN BE VISUALISED ON THE FLOORPLAN USING THE ICON ON THE LIST VIEW. COLOURED IN THE ZONE COLOUR.



17.4 Device placement

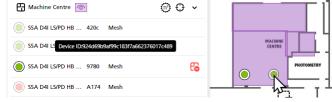


The power of SylSmart Connected Pro is to give a high level of detail per device on your floorplan. By placing each device precisely, you know exactly where your assets are and can easily visualise their location quickly.

17.4.1 Placing a Device

To place a device, simply:

- 1. Click and hold on the asset to be placed
- 2. Drag the asset into the position on the plan
- Let go of the cursor and the device is mapped



Once a device is mapped, its icon appears on the floorplan and the unmap icon is shown in the list view.

- 4. Repeat for each device
- ① Devices added in SylSmart Connected Pro are not automatically mapped when (re-)sychronising the project. New devices must be placed manually.
- (i) RECOMMENDED: To help place the correct device in the correct place, use the SylSmart Connected App to blink identify each luminaire

17.4.2 Moving a placed device

To move a placed device, simply ensure "Reposition nodes by Dragging" is enabled, click and hold the device on the map view and move it to its new location.



Ensure to de-select "Reposition nodes by Dragging" once done.

17.4.3 Find a mapped device

Once a device is mapped, you can find it on the floorplan from the List view by clicking the SHOW of icon next to the device you wish to find. This will centre and highlight (blink) the device on the map view.



17.4.3 Unmapping a placed device

To unmap a device from the floorplan, simply click the Unmap icon heat to the device you wish to remove from the floorplan.

1 Devices deleted in SylSmart Connected are automatically deleted when re-sychronising the project.

17.5 User/Access Management



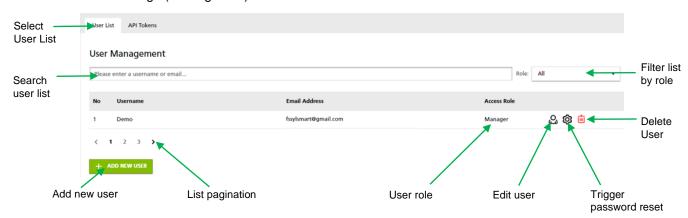


SylSmart Connected Pro offers you the ability to work with collaborators on your platform.

The User Management feature helps you invite new users and manage their access levels. This section also manages the access rights for different areas of the site (coming soon) and helps you control API Integrations access. This is accessed under Settings and each tab helps you manage either Users or API Tokens.

17.5.1 User Management

The User management Page enables you to control access to your Tenancy. You can control which users gain access to which buildings (coming soon) and which level of access each user has to which features.



(i) A designated Site Owner is always created by Sylvania Administrators. The owner account cannot be deleted and only transferred to a new owner. Please contact Support for any queries related to the Owner account.

17.5.1.1 Add new user

To add a new user:

- 1. click on the ADD NEW USER button + ADD NEW USER
- 2. Enter a Display Name, valid e-mail address and select the ROLE for this new user
- 3. Click on SEND AN INVITE

This will start a user invitation and validation process:



^{*}New password must meet password complexity rules enforced in line with OWASP2021 recommendations.

17.5.1.2 Modify User

To modify a user, click on the update User $\stackrel{\bigcirc}{\omega}$ icon.

(i) If e-mail address is changed, a new invite is generated to validate the new e-mail address. Once changes are done, click "CONFIRM".

17.5.1.3 Delete User

To delete a user, click the DELETE USER 📋 icon.

(i) The user being deleted will be informed by E-mail.

17.6 API Tokens



Application Programming Interfaces (API) provide a standardised method for sharing data between systems.

This data can be used by other systems such as Building Management Systems, meeting room booking systems, etc to either enable central control and central oversight of assets, but also augment the efficiency and performance of other systems.

To access SylSmart Connected Pro API data, an API subscription package must be purchased. The purchase of an API is undertaken by means of purchasing API Tokens for each site on a per reporting node basis.

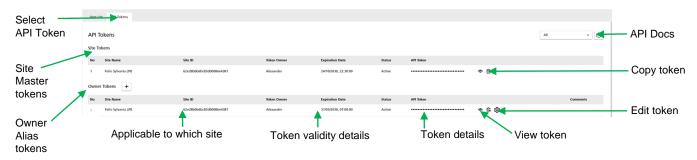
Once a token is purchased, the token is created by a Sylvania SylSmart Connected Pro administrator who will make the token available to the Site owner [SITE TOKEN].

SylSmart Connected Pro platform enables Site Owners to create Aliases of the purchased Token so that an OWNER TOKEN can be shared to multiple sub-systems. This enable site owners to control access to the API data by different system integrators, segregating access and not compromising the security of the SITE TOKEN.

To access API Tokens, select "API Tokens" in the User Access Menu.



17.6.1 Navigating API Tokens



17.6.2 Available Services

Today the following API data services are available to purchase once a PLUS (+) level package is purchased. It is not available on base services:

- Lighting Connected Pro+ API:
 - Lighting remote control (ON/OFF/DIM/SCENES/GLOBAL SCENES)
 - Lighting Based Occupancy Data Historical DATA*
 - Lighting Energy Data Historical DATA*
 - Lighting Performance Data Historical DATA*

Future API services will be added.

Feilo Sylvania does not guarantee a minimum latency or speed. Historical data is available in line with Data aggregation service subscription. Near real Time data will be available as a service in 2024 using MQTT connectivity options.



17.6.2 Owner SITE TOKEN (MASTER TOKENS)



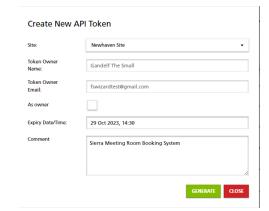
Once a token is purchased, the token is created by a Sylvania SylSmart Connected Pro administrator who will make the token available to the Site owner. Your service token is visible under SITE TOKENS.

17.6.3 Owner Tokens (ALIAS TOKENS)

Once a SITE TOKEN is available, owners can create alias Tokens to share to sub-system integrators and ensure security by segregating access via independent tokens.

To create an Alias Owner Token, a SITE TOKEN must be valid and is created by following these steps:

- 1. Click "+" next to Owner Tokens
- 2. Select the Site for which the API Token is to be generated The Token owner is automatically populated.
- 3. Select the Token validity:
 - a. As owner same validity period as the SITE TOKEN *Token will last as long as the subscription is active
 - b. Enter a Date and Time for expiry of the token
- 4. Enter a comment: Recommended to enter details of what this token will be used for, for traceability.
- Click GENERATE to create your Alias token ready to be shared with integrators.



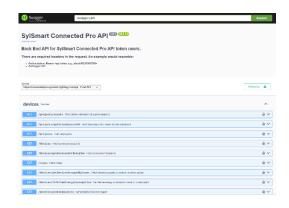


17.6.4 Open API - Swagger Document

Feilo Sylvania operates an OPEN API policy. To help you and integrators understand the requirements for authentication, the structure of the data and the format of the SylSmart Connected Pro API data, we make available an OPEN API document in SWAGGER format.

This document can be accessed via the platform via clicking the API Document button: or by visiting:

https://connectedpro.sylvania-lighting.com/api-docs/





17.7 Roles

User roles is an important part of managing the correct access of users to be able and unable to undertake certain tasks in your SylSmart Connected Pro system. Sylvania makes four user levels available in SylSmart Connected and SylSmart Connected Pro, each with different abilities to make changes in different parts of the system.

The four levels are:

- Owner
- Manager
- Installer
- User

Feature		Owner	Manager	Installer	User
	See Notifications	√	✓	✓	√
Notifications	Export notifications	✓	✓	×	×
	Modify Notification	√	√	√	×
	See Rules		√	√	✓
Rules	Modify Rules	√	√	×	×
Themes	Can change themes	✓	√	√	✓
	Entire Site	√	√	×	×
Control (*/**)	Zone	✓		√	✓
,	Device	√	√	√	✓
	See Scenes	✓	✓	√	✓
Scenes (*)	Trigger Scenes	√	√	√	✓
()	Modify Scenes	✓	√	√	×
	See Analytics Charts	√	√	√	✓
Analytics (*)	See Analytics Floorplan	✓	√	✓	✓
	Sites Dashboard view	√	✓	×	×
Sites (*)	Export Assets list	✓	✓	×	×
Site (*)	Dashboard	√	√	√	✓
```	See asset list	✓	✓	<b>√</b>	✓
Assets (*)	Export Assets list	<b>√</b>	<b>√</b>	<b>√</b>	✓
	View schedules	✓	✓	<b>√</b>	✓
Schedules	Modify schedules	<b>√</b>	<b>√</b>	<b>√</b>	×
	Change analytics baselines	✓	<b>√</b>	<b>√</b>	×
	Apply meta tags	<b>√</b>	<b>√</b>	<b>√</b>	×
	Draw zones and manage floor plan	✓	✓	<b>√</b>	×
	Modify node placement	<b>√</b>	<b>√</b>	<b>√</b>	×
	Modify Gateway placement	✓	<b>√</b>	✓	×
Settings	Change API credentials > SylSmart Connected	×	×	×	×
	Modify API > Third Party	✓	×	×	×
	Subscribed services (View)**	<b>√</b>	<b>✓</b>	×	×
	Language selection	✓	<b>√</b>	<b>√</b>	✓
	Re-Synchronise Project	<b>√</b>	<b>✓</b>	×	×
	Invite user of lesser permission level	<b>√</b>	✓	*	×
	Invite user of same permission level	· /	×	*	*
Account	Modify other user of lesser permission level	<i>✓</i>	-	*	*
Management			<b>✓</b>	· ·	<b>✓</b>
	Change own username	✓ ✓	<b>✓</b>	<i>'</i>	*
	Change own email address	· /	<b>✓</b>	· /	×
Support	Can see support pages	<i>✓</i>	· ✓	<i>'</i>	<b>√</b>
	ce Level dependent - May not be able to access/view	these featur	es if service	not subscrib	ed
OC! VIC	** Additional Access / Feature contr				
	Additional Access / Feature Conti	old dollining z	-VE-T		



#### 17.8 My Account

If you wish to change your account password, change your registered Username or e-mail address, please access the My Account page and choose either:

- Change password - This will start a password reset process.



- Edit - Update your profile Username or e-mail address

#### 17.9 Gateway Placement

To manage gateways as assets, they must first be created. In these settings you can create and manage SylSmart Connected gateways. This is accessed by selecting Settings > Gateway.



#### 17.9.1 Create a new gateway

To create a new gateway and make it visible in this list, on the assets list and be visible for placement on floorplan management pages, click on **CREATE A NEW GATEWAY** and a new window appears:

- Enter the Gateway ID (Typically the serial number)
- Select Gateway type
- 3. Select Gateway model
- 4. Select the physical location of the device (this will make the device visible only on that floor's assets page)
- 5. Mark the areas which the gateway serves wirelessly
- 6. Record the IP address of the device on the Local Area Network
- 7. Record the installation date
- 8. Save the details by clicking "SAVE GATEWAY"

# Gateway ID: C143255621-00255 Gateway Type: Oualified Blaetooth Meth • Model Micro GW • Physical location: Avis Way - Upstairs • Areas served: Avis Way - Upstairs Areas Served: 192.168.1.2 Installation Date: 16 Oct 2023

#### 17.9.2 Modify a gateway

To modify a the details of a gateway, simply click the Edit gateway button. Once changes are made, click **SAVE GATEWAY**.

#### 17.9.3 Delete a gateway

To DELETE a gateway, simply click the DELETE gateway button and confirm your action. This will delete the device from all assets lists and from floorplans.

#### 17.9.4 Position a gateway on a floorplan

To place a gateway on a floorplan, refer to the instructions provided in section 17.4 However instead of selecting "Lighting" or "Assets", select the "Gateways" tab and proceed to map devices as instructed.

Mapped gateway devices will show on the floorplan as a [©] icon.





#### 18. About 9

Should you need to review anything about the platform or report an issue to Support, the About Section will enable you to review:

- Platform Version number
- Terms and Conditions of User
- Privacy Policy

# 19. First Setup. Key Steps. Checklist.

The recommended process for setting up SylSmart Connected Pro is detailed below in chronological order and also serves as a checklist to help you ensure your SylSmart Connected Pro platform delivers the maximum for you.

Setup Item	Action	Done (Y/N)
	Project Fully Commissioned	
	Mesh Quality test 100% (min.90%)	
	Firmware updates completed	
SYLSMART	Device services enabled	
CONNECTED	Devices Energy values known per device	
	Gateway Installed and Communicating freely	
	Mapping of location of each device	
	Full details of Tenant (name, email owner, site location)	
	Services Ordered and recorded start and end date	
SYLSMART	Websockets setup	
CONNECTED PRO	Tenant created	
CONNECTED PRO	Services created and enabled	
Pre-Setup	E-mail server created and tested	
(SYLVANIA ONLY)	Site API Tokens created	
(0.20/	Site(s) created for tenant	
	Check Analytics Plume size	
	Synchronise SylSmart Connected project	
	Create Gateway settings	
	Place Nodes on floorplan	
	Scale Floorplan	
	Define Active Area of floorplan	
SYLSMART	Draw Zones	
CONNECTED PRO	Check ALL Assets ONLINE	
	Create META Tags and assign to devices	
(Client)	Create custom scenes and test	
	Test Lighting Remote control	
	Create Schedules	
	Set Analytics Baselines	
	Check Site / Owner API Tokens	
	Create user API Tokens	
	Handover User Manual and Basic Training	
HANDOVER	API Document Handover	
	SYSTEMS INTEGRATION SUPPORT	

Sylvania's local passionate support teams will help you throughout your project implementation and can be contacted using the details in our support site or see more details in section 20.



# 20. Contact Information and Support Requests

If you have any questions are need any support, it is possible to contact Feilo Sylvania's local and passionate support teams and supporting documentations using:

Support Site: www.support.sylvania-lighting.com

This portal enables you to access a wide range of support documents:

- Frequently Ased Questions
- User Manuals
- Application Guides
- Local Office Contact numbers
- Access Support Ticketing

On the navigation bar, select HELP and click Help.

#### In Platform Support:

From within SylSmart Connected Pro you can complete a form with key information which will automatically compile an e-mail to our support teams

On the navigation bar, select HELP and click Contact

E-mail Support: support.sylsmart@Sylvania-lighting.com







#### 20.1 Helpdesk Availability

Feilo Sylvania helpdesk is available during Business Hours, from 09:00am to 17:00pm CET. (GMT+1) offering support over e-mail for the purposes of:

- a) assisting users with the proper use of the Software;
- b) determining the causes of errors in the Software; and/or
- c) fixing errors in the Software.

#### 20.2 Methods of Support

All support services may, at Feilo Sylvania's discretion, be wholly or partly performed as remote support. Feilo Sylvania reserves the right to choose the method of communication for support. In most cases support will be offered by e-mail.

#### 20.3 Request for Support - Requirements

- Request for support shall be by e-mail to support.sylsmart@sylvania-lighting.com
- b) It shall include:
  - Name and e-mail of the project owner if you are not the owner please secure owner permission before making a request for support
  - Your phone contact details
  - Description of what the issue is including screenshot or video captures
  - Description of how the error occurs and what was being done when the error occurs
  - Device firmware / software version used
  - Device Unique ID
  - Mesh quality test details
  - Network details including confirmation of network connection of your router
  - Gateway(s) IP addresses and confirmation of connection (lease time active)
  - Details of firewall in use and confirmation of whitelisting
  - Network size and how devices and overview of device types
  - Details of any visual error indicators on any devices
  - Internet Browser details including developer, version, incognito and cookie setting details
  - Your perception of severity based on the severity matrix.

Please only report one issue per request and include as much details as possible.

FSIG reserves the right to decide the final severity assigned to an issue.

All personal details shared are treated in accordance with Feilo Sylvania's privacy policy available at: https://www.sylvania-lighting.com/en-int/legal/privacy-policy/

If a request support fails to provide this information, your request may be delayed in processing or cancelled.

#### 20.4 Response and resolution times



Feilo Sylvania shall:

- a) use all reasonable endeavours to respond to requests for Services made through the e-mail; and
- b) use all reasonable endeavours to resolve issues raised by the Customer,

in accordance with the following severity matrix having the fields specified as follows:

- (a) Severity class: Defines the Severity class, according to which a response time and a resolution time are specified for issues belonging to the Severity class.
- (b) Description: Describes a Severity class in order to determine to which Severity class an issue belongs to.
- (c) Acknowledgement time: FSIG will provide an acknowledgement by a qualified member of its staff to begin to determine the cause of and to fix an issue as soon as possible, but in any event a response will be provided within a response time specified in the following matrix for each Severity class.
- (d) Resolution time: FSIG will provide best efforts to resolve an issue within a resolution time specified in the following matrix for each Severity class. The resolution will be delivered to the Customer as instructions of proper use of the Software, as a work-around, or as an emergency software fix.

If the issue cannot be resolved within the specified *Resolution time*, a schedule for resolving the error will be agreed with the Customer.

		Service Level Agreement - Targets		
Severity	Description	Acknowledgement	Resolution	
Critical	Unsafe, unsecure, not meeting the regulations	2 hours*	8 hours*	
Vital	Not working, loss of function	4 hours*	24 hours*	
Major	Degradation of performance, reduces usability of product, severe visual defect	8 hours*	72 hours*	
Minor	Small inconvenience, bug. Normal operation not affected	24 hours*	1 week*	

#### 20.5 Exclusions and conditions of support

Support and Service Levels are subject to the terms defined in SylSmart Connected Pro SLA, details of which are available on request.

# 21. Supporting Information



#### 21.1 API Connections

The SylSmart Connected Pro API is a REST API which operates only on request and response basis. It is not designed for low latency near real time data. This feature is planned for 2024. Connection to BMS systems is only possible via Cloud API.

#### 21.2 Architecture and Security overview

A comprehensive architecture and security overview document is available on special request. Please contact <a href="mailto:support.sylsmart@sylvania-lighting.com">support.sylsmart@sylvania-lighting.com</a> for more details.

Please note that SylSmart Connected Pro operates a session time out policy for your security. If the user closes the browser, the session shall be terminated and will require the user to log in once again.

If the browser is inactive for 15 minutes, the session shall be terminated and will require the user to log in once again. Before automatically terminating a session, a message shall be displayed to the user warning of inactivity. Once a session is automatically terminated due to inactivity, the warning message shall remain on screen and force a re-login by any user wishing to resume activities.

#### 21.3 Data volume and Cellular connections

The estimated data throughput per device per day is 3 megabytes. It is not recommended to employ cellular data communication when operating SylSmart Connected Pro. If you choose to operate SylSmart Connected Pro on cellular connection, Sylvania shall not be held responsible for any data costs incurred.

#### 21.4 Gateway requirements

SylSmart Connected places functional and operational requirements as described in SylSmart Connected Application Note SGW-102 available by logging into SylSmart Connected (connected.sylvania-lighting.com) or by contacting support.



# 22. Warranty and Disclaimer

The information provided on this website and/or in any associated Sylvania SylSmart Connected or SylSmart Connected Pro documentation are intended for guidance only and should not be considered financial or legal advice. Feilo Sylvania International Group shall not be held liable for any direct or indirect losses in connection with the aforementioned.

Although every effort has been made to ensure the accuracy in the compilation of the technical detail within this publication, specifications and performance data are constantly changing. Currrent details should therefore be checked with Feilo Sylvania International Group Kft.

Unless specifically set forth by Feilio Sylvania in writing, any and all software and its documentation provided by Feilo Sylvania, or third party software, is supplied "as is", without any warranty, including, without limitation, the implied warranties of performance, merchantability, accuracy, completeness, fitness for a particular purpose, and non-infringement with respect to the software and accompanying written materials.

Notwithstanding, the foregoing exclusion shall not exonerate Supplier from its warranty obligations regarding any Luminaire product exhibiting total failure or any component exhibiting significant malfunction because of the defect of the embedded software.

Where the Services include support services, these will be provided remotely by the Supplier from the Supplier's premises and during the Supplier's normal working hours. Although every effort has been made to ensure the accuracy in the processing, compilation and visualisation of the technical detail within the SylSmart Connected Pro platform, and the in the compilation of the technical details in this publication, specifications and performance data are constantly changing and subject to statistical and rounding errors as well as issues of data availability and issues beyond Sylvania's control. Feilo Sylvania International Group shall not be held liable for any direct or indirect losses in connection with the aforementioned. E.&.O.E.

Where a cellular connection is used, it is the sole responsibility of the customer for any costs of operating SylSmart Connected and SylSmart Connected Pro and ensuring a continued connection.

Terms and Conditions of sale shall apply for SylSmart Connected and Connected Pro, details of which can be found at: <a href="https://www.sylvania-lighting.com/en-int/legal/ts-and-cs-of-sale/">https://www.sylvania-lighting.com/en-int/legal/ts-and-cs-of-sale/</a>



### **Document Revisions**

Rev	Date	Editor	Changes
1.0	16.10.2023	EJAL	Initial version

For more information please visit:

Company address

http://www.sylvania-lighting.com/

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