ROMET®

BrightLync®

ADVANCED COMMUNICATIONS PLATFORM

Instruction Manual

Model Number: ACP-01
Reference: Certificate UL E104709

Document No.
55-MN-02 Rev.4.3

QMS#: F-136
Revision Level: 1
Revision Date: 08/13/2025

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1. SCOPE

This Instruction Manual provides information on safe installation, use and servicing of BrightLync according to UL Standards ***UL 60079-0, UL 60079-11, UL 61010-1, CSA C22.2 No. 60079-0:19, CSA C22.2 No. 60079-11:14, CSA C22.2 No. 61010-1***.

⚠ *"This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."*

⚠*"This device complies with the ISED Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation."*

⚠*"Radiofrequency radiation exposure information: this equipment complies with the radiation exposure limits prescribed for an uncontrolled environment for fixed and mobile use conditions. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and the body of the user or nearby persons. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter except as authorized in the certification of the product"*

⚠*"Any changes or modifications made to this device that are not expressly approved by Romet could void the user's authority to operate the equipment"*

⚠*The gain of the system antenna(s) used for the Product (i.e. the combined transmission line, connector, cable losses and radiating element gain) must not exceed the value specified in the FCC Grant for mobile and fixed or mobile operating configurations.*

⚠*Cet appareil est conforme aux normes RSS d'ISDE Canada en matière d'exemption de licence. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférences nuisibles et (2) il doit accepter toute interférence reçue, y compris celles qui peuvent entraîner un fonctionnement indésirable.*

⚠*Informations sur l'exposition aux rayonnements radiofréquences : cet équipement est conforme aux limites d'exposition aux rayonnements prescrites pour un environnement non contrôlé dans des conditions d'utilisation fixes et mobiles. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et le corps de l'utilisateur ou des personnes à proximité. Cet émetteur ne doit pas être placé à proximité ou fonctionner conjointement avec une autre antenne ou un autre émetteur, sauf autorisation dans la certification du produit*

⚠*IMPORTANT: Tout changement ou modification apporté à cet appareil qui n'est pas expressément approuvé par Romet pourrait annuler l'autorité de l'utilisateur à utiliser l'équipement.*

2. MARKING INFORMATION

Fig.1 BrightLync Label/Nameplate

Fig.2 BrightLync Battery Label

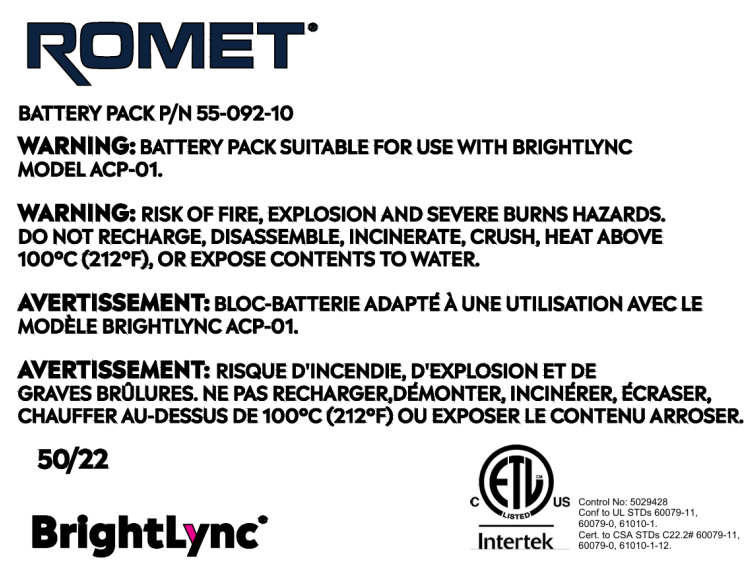


Fig.1a BrightLync Label/Nameplate

Fig.2a BrightLync Battery Label

NOTE: Labels may contain additional information not related to UL certification.

3. CONTROL DRAWING

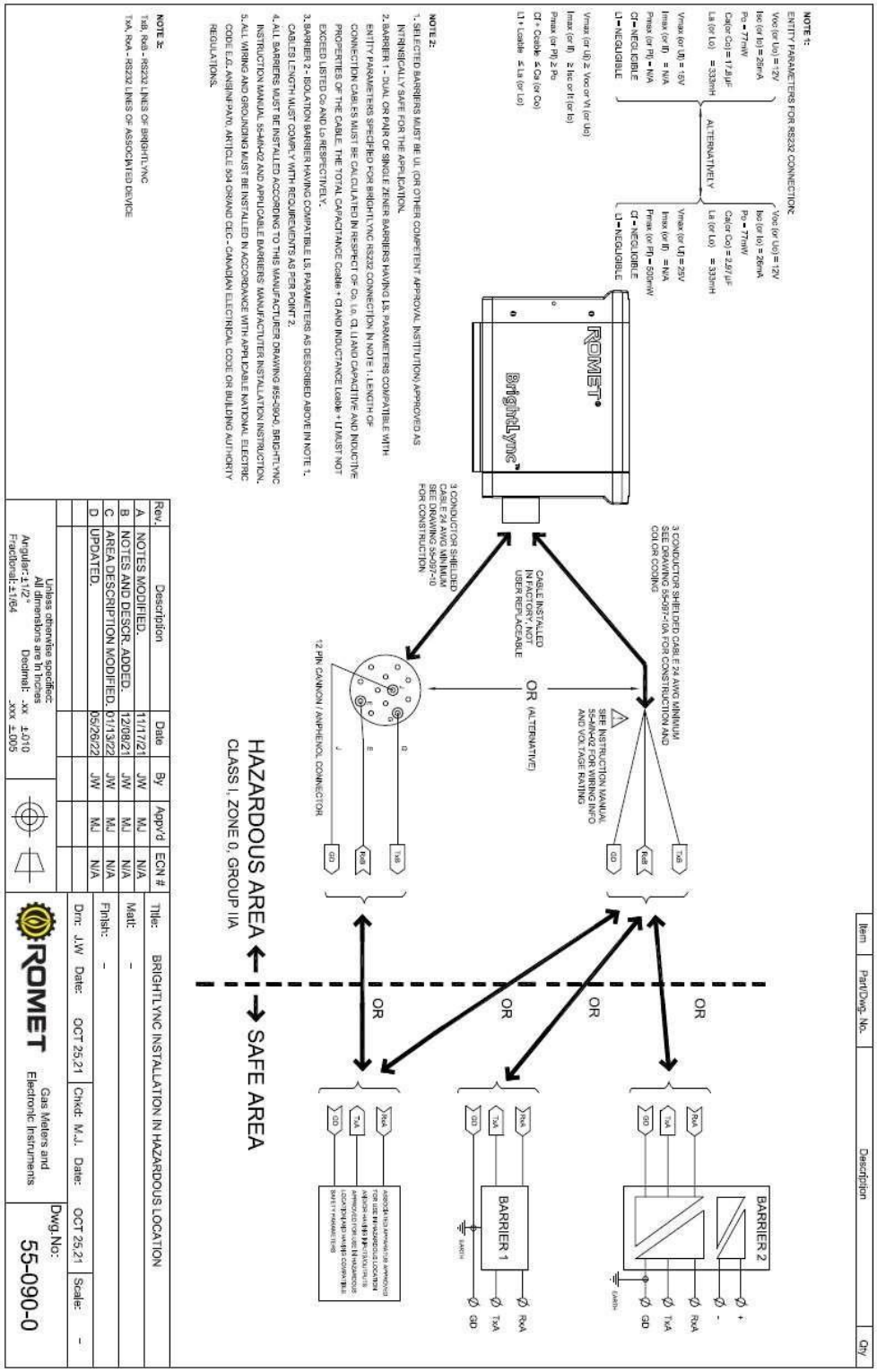
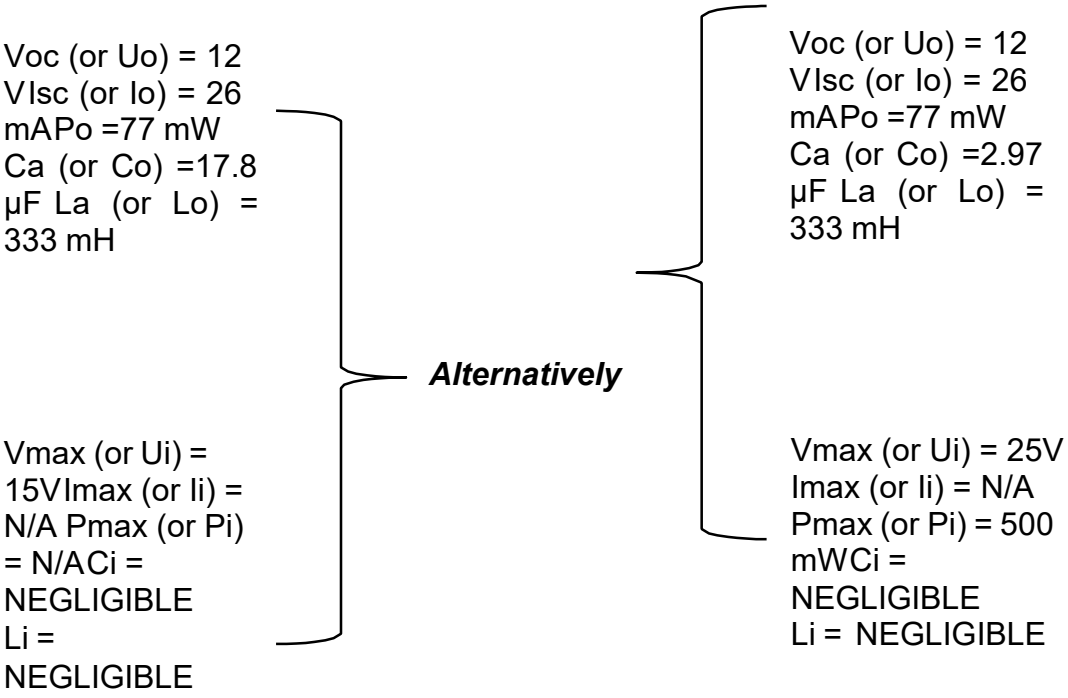


Fig.3 BrightLync I.S. Control Drawing 55-090-0

4. RS232 I/O I.S. ENTITY PARAMETERS



Vmax (or Ui) ≥ Voc or Vt (or Uo)Imax (or Ii) ≥ Isc or It (or Io) Pmax (or Pi) ≥ Po
Ci + Ccable ≤ Ca (or Co)Li + Lcable ≤ La (or Lo)

5. RS232 CONNECTION CABLE

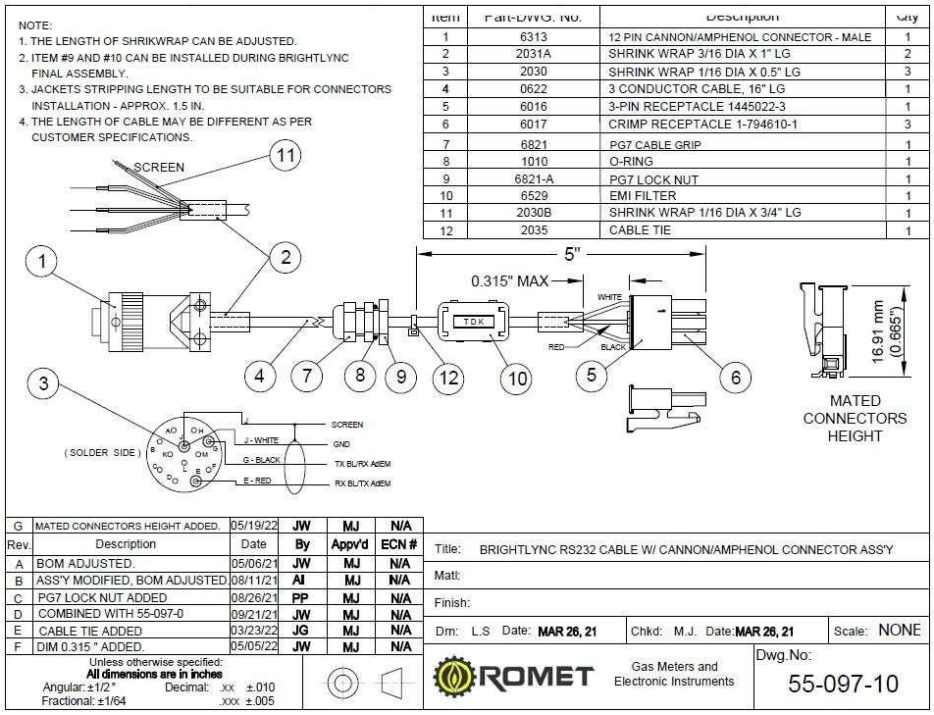


Fig.4 BrightLync RS232 Cable with Cannon/Amphenol Connector

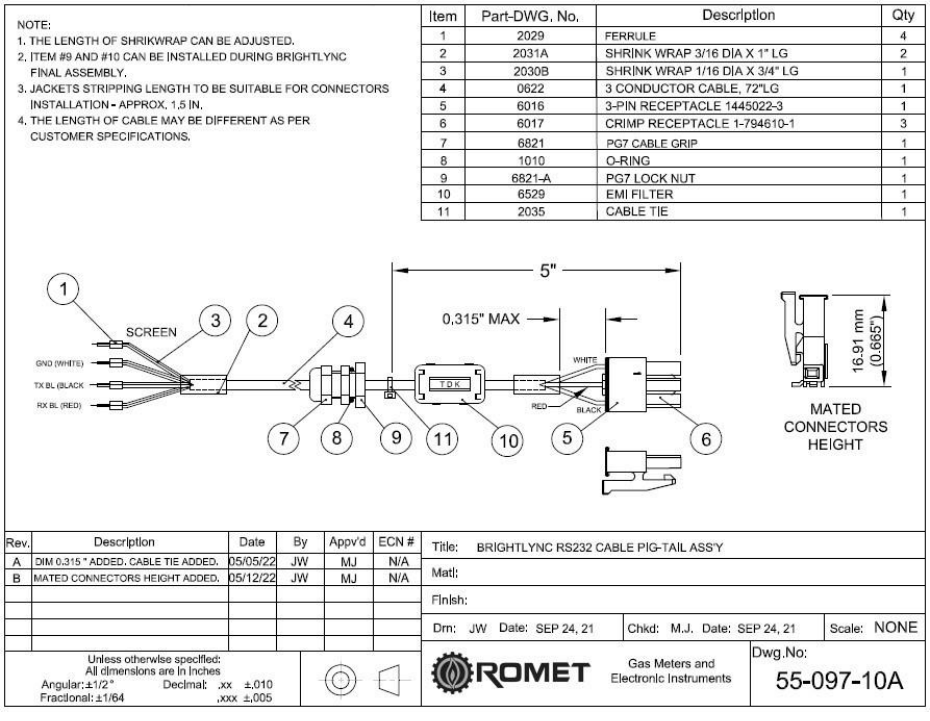


Fig.5 BrightLync RS232 Cable – Pigtail Alternative

For wiring, use copper conductors or "CU" only. 13 – 30 AWG, 300V MIN, 70°C MIN, minimum 0.5mm thicknessof insulation between wires. Colour coding as per Fig.4 and Fig.5 unless specified differently by the user.

6. ELECTRICAL AND ENVIRONMENTAL RATING

This equipment is suitable for use in Class I, Zone 0, AEx ia IIA Ga and Ex ia IIA Ga. Temperature code: T3

ELECTRICAL

RS232 I/O:
+ 15V STANDARD, ± 25V MAX

INPUT POWER:
3.6VDC D-CELL LITHIUM PACK

AS APPLICABLE WITH CONSIDERATION OF ENTITY PARAMETER LISTED IN CHAPTER 4

ENVIRONMENTAL

AMBIENT TEMPERATURE: -40°C TO +70°C (-40°F to +158°F)

MAXIMUM RELATIVE HUMIDITY: 95% NON-CONDENSING

ALTITUDE: UP TO 5000m

POLLUTION DEGREE: PD2

SELF DECLARED IP67/ NEMA TYPE 4X RATING NOT EVALUATED BY UL or ETL

7. INSTRUCTIONS FOR SAFETY

⚠ Warnings:

- The equipment shall be installed according to manufacturer's control drawing No. 55-090-0 (see sections 3, 4 and 5).
- Not to be installed on surfaces that are a source of heating.
- Battery pack replacement and servicing must be done when an explosive atmosphere is not present.
- Replace battery pack only with UL or ETL recognized component, Romet Battery Pack P/N 55-092-10.
- Substitution of components may impair intrinsic safety.
- When using BrightLync in a hazardous location, ignition hazards due to impact or friction of the aluminum mounting clamp must be considered.
- Mechanical installation and servicing, including but not limited to, cleaning, wiping, or rubbing of aluminum clamp must be done when an explosive atmosphere is not present.

⚠ Avertissements:

- L'équipement doit être installé conformément au dessin de commande du fabricant n° 55-090-0 (voir les sections 3, 4 et 5).
- Ne pas installer sur des surfaces source de chauffage.
- Le remplacement et l'entretien de la batterie doivent être effectués en l'absence d'atmosphère explosive.
- Remplacez la batterie uniquement par un composant reconnu UL ou ETL, la batterie Romet P /N 55-092-10.
- La substitution de composants peut nuire à la sécurité intrinsèque.
- Lors de l'utilisation de BrightLync dans un endroit dangereux, les risques d'inflammation dus à l'impact ou au frottement de la pince de montage en aluminium doivent être pris en compte.
- L'installation et l'entretien mécaniques, y compris, mais sans s'y limiter, le nettoyage, l'essuyage ou le frottement de la pince en aluminium doivent être effectués lorsqu'une atmosphère explosive n'est pas présente.

⚠ Battery Warnings:

- Battery pack suitable for use with BrightLync model ACP-01.
- Risk of fire, explosion, and severe burns hazards. Do not recharge, disassemble, incinerate, crush, heat above 100°C (212°F) or expose contents to water.

⚠ Avertissements de batterie:

- Batterie adaptée à une utilisation avec BrightLync modèle ACP-01.
- Risque d'incendie, d'explosion et de brûlures graves. Ne pas recharger, démonter, incinérer, écraser, chauffer au-dessus de 100 °C (212 °F) ou exposer le contenu à l'eau.

Important Notes:

- Safety of any system incorporating the equipment is the responsibility of the assembler of the system. Conformity to be checked by user inspection.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment might be impaired.

For more information on installation and operation, refer to the BrightLync User Manual (55-MN-01).

8. CONTACT INFORMATION FOR SERVICE AND TECHNICAL SUPPORT

For product related information, service, and technical support contact:

Romet Limited
5030 Timberlea Blvd.
Mississauga, Ontario
L4W 2S5, Canada

Tel: 800 387 3201

Email: romet@rometlimited.com

ROMET®

BrightLync®

ADVANCED COMMUNICATIONS PLATFORM

Appendix A

User Guide

Model Number: ACP-01

Document No.
55-MN-01 Rev.4.3

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Section 1- Appendix A - BrightLync® Overview

What is BrightLync

BrightLync Advanced Communications Platform is a secure, cloud-based system that provides a complete end-to-end 2-way secure data transmission solution. It seamlessly integrates with the Adem® Advanced Electronics Platform or any measurement device with serial communications or pulse output.

BrightLync is a cost-effective, premium solution that is designed to create a connected network for gas utilities, enabling new and mature infrastructure with near real-time data transmission, organization, and visualization.

How does the BrightLync Advanced Communication Platform work

BrightLync delivers information into the hands of decision makers by enabling data transmission between edge devices such as meters, pressure monitors, and electronic volume correctors (EVC) to utility operations via secure cloud services. Data is generated at utilities' endpoints which is collected and organized by Adem. BrightLync seamlessly integrates serially with Adem to enable remote data transmission for near real-time collection, alarm alerts, asset monitoring, over-the-air asset configuration/updates, and data visualization.

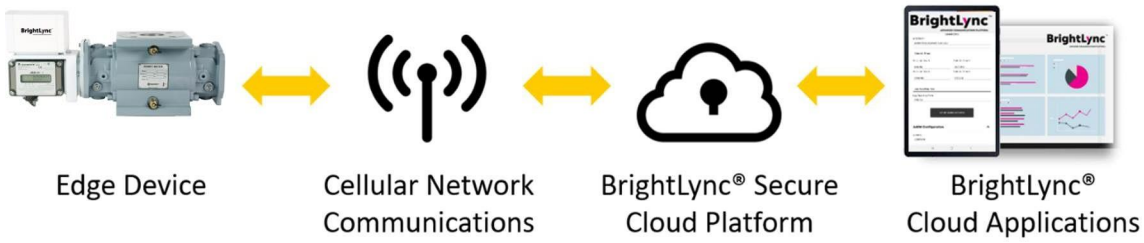


Image 1.1 – Romet's Technology Stack

BrightLync utilizes existing secure cellular network infrastructure to communicate with the BrightLync cloud platform. This minimizes the up-front investment due to not requiring large-scale network infrastructure. BrightLync is inherently secure and allows for resource auto scaling, eliminating the need for future hardware investment as the network grows. The BrightLync Advanced Communications Platform can be interfaced with through the Energy Array Device Manager and Mobile Application.

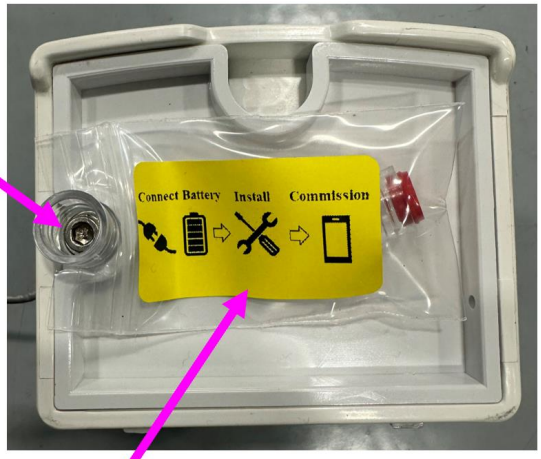
What's included in the box

Image 1.2 – Items included in the BrightLync box

- (A) Qty 1: BrightLync Module
- (B) Qty 1: Mounting Bracket (PN 55-444-1)
- (C) Qty 1: Bracket Clamp (PN 55-444-2A)
- (D) Qty 2: Installation hardware- Allen Head Cap Screw (PN 1196)- only 1 required for installation
- (E) Qty 2: Installation hardware - Lock Washer (PN 2071)- only 1 required for installation
- (F) Qty 1: Installation hardware – Flat washer PN (1185)
- (G) Qty 1: Installation hardware - Rock seal bushing (PN 2-341-3)
- (H) Qty 2: Installation hardware - Tamper plug (PN 2-341-2)
- (I) Qty 1: Installation hardware - Seal cup (PN 2-341-1)

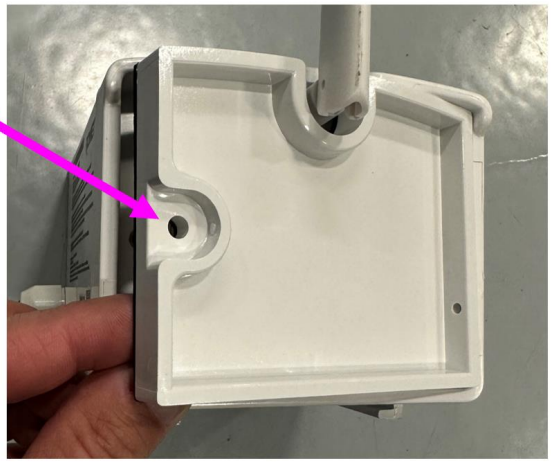
Section 2 – Connecting or Changing the Battery

- Step 1
  - Remove the screw on the battery lid
  - Set aside screws and security cup

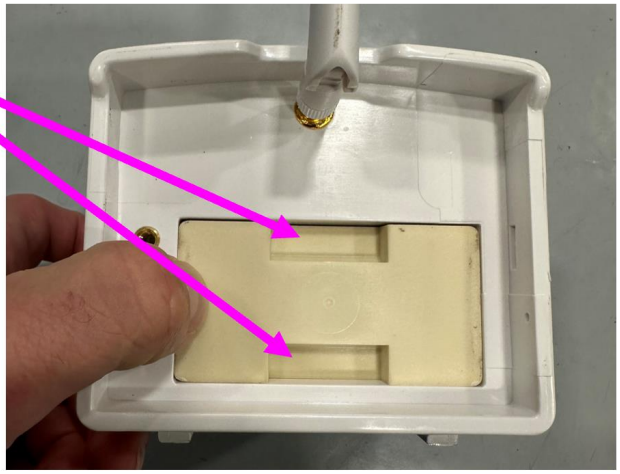


NOTE: Devices will come with a label and snap seal kit

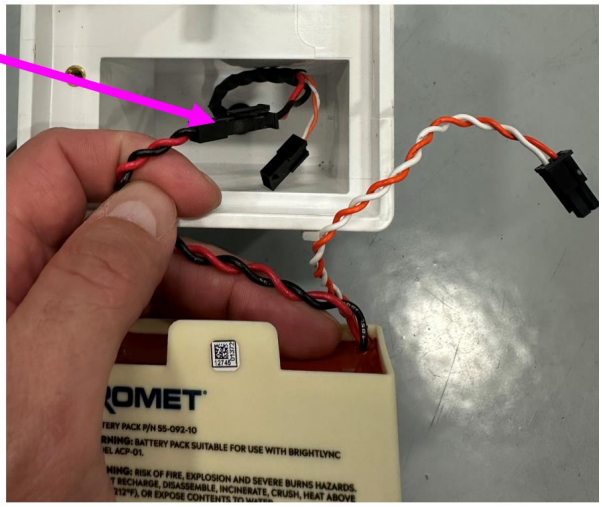
- Step 2
  - Remove battery lid from the left-hand side (screw hole location)
  - Open similar to a door (swinging outward / towards you)



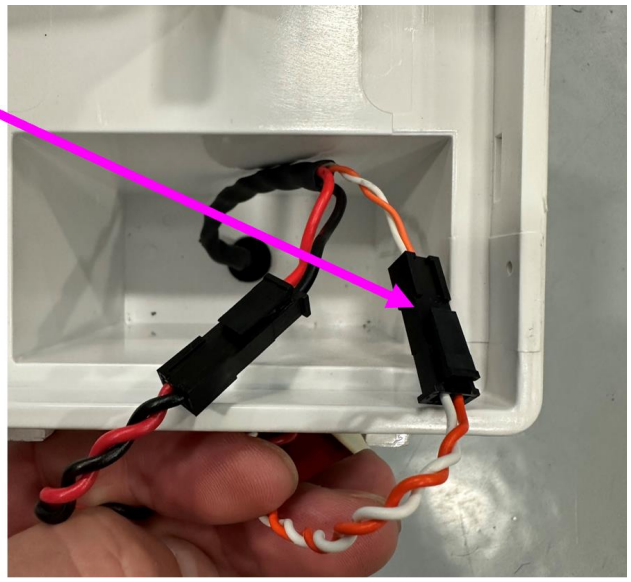
- Step 3
  - Remove battery pack by pulling from the two (2) indented tabs



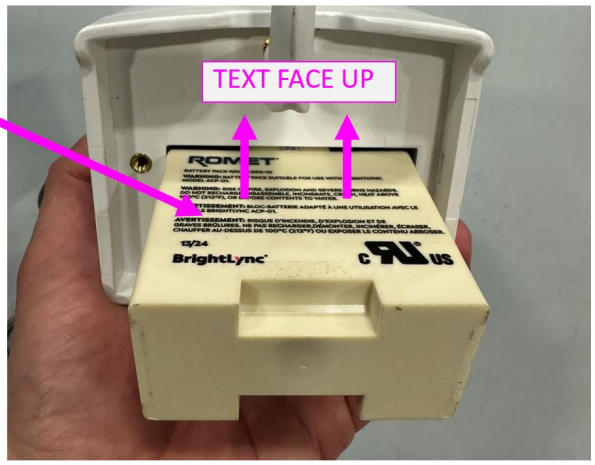
- Step 4
  - Connect the Red/Black wires first



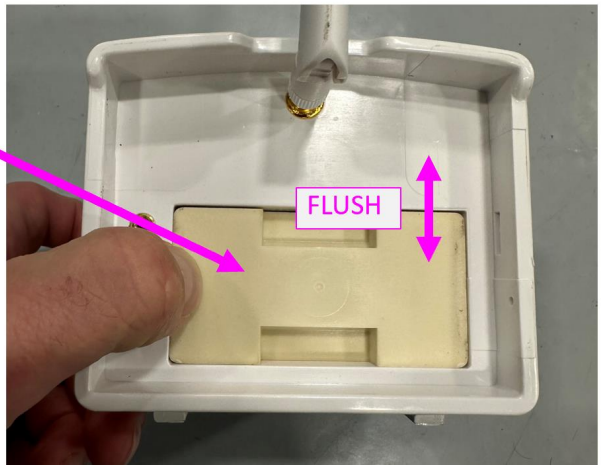
- Step 5
  - Connect the Orange/White wires second



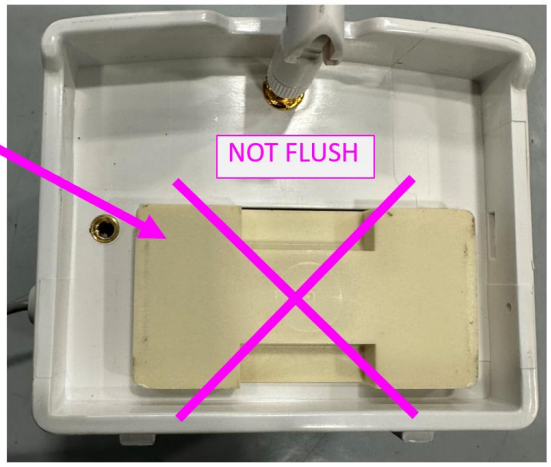
- Step 6
  - Re-insert the battery pack back into the BrightLync with the text on the battery pack ‘face up’



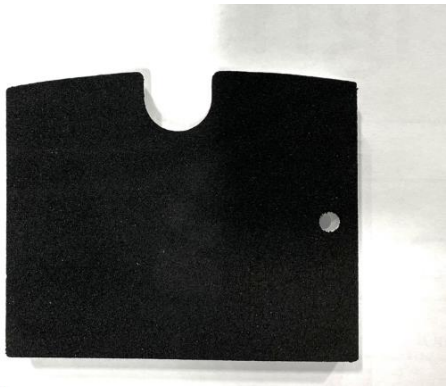
- Step 7
  - Push the battery pack carefully until battery pack is flush with BrightLync



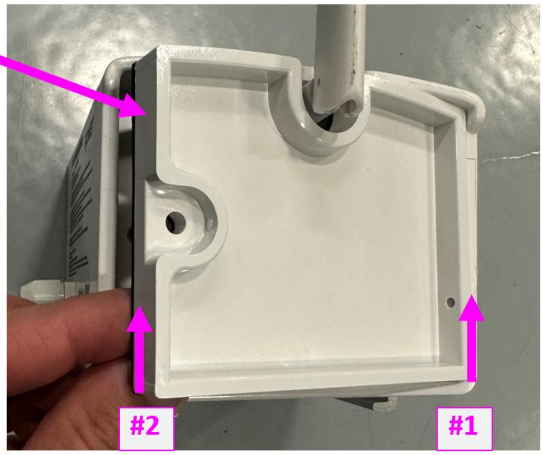
- Step 7 continued
  - If battery pack will not go flush, remove and re-adjust the wires and re-insert



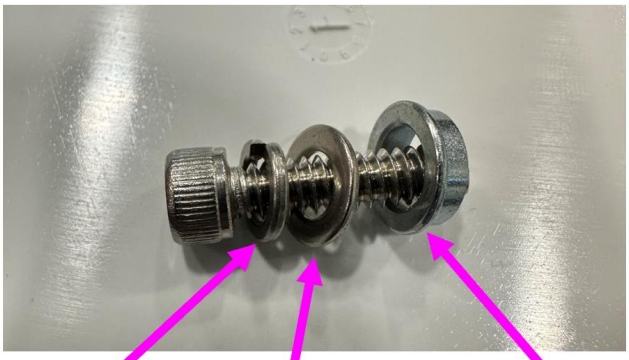
- Step 8
  - Install the battery lid with the right edge first followed by left side



NOTE: gasket will come attached to backside of the battery lid (adhesive backing)

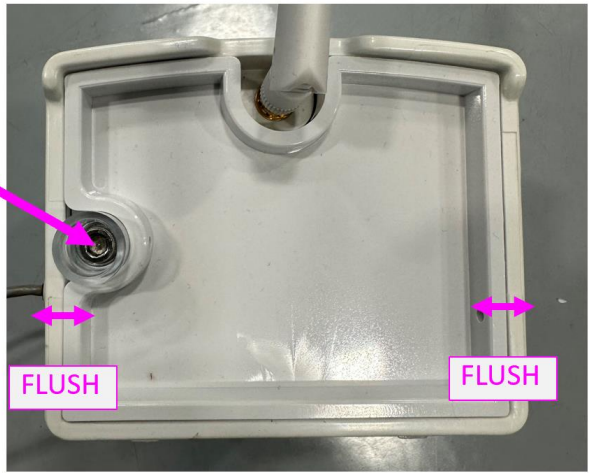


- Step 9
  - Re-install the screw kit back into the BrightLync as found (as removed)



- Step 10
  - Tighten the screw by ensuring that both sides of the battery lid are flush with the BrightLync

NOTE: After connecting the battery, Brightlync may take up to 4 minutes to initialize before it can be activated using a magnet.



Section 3 – Installation and Commissioning

Installing your BrightLync Module

BrightLync seamlessly integrates with Adem Electronics and can be installed directly onto Adem.

WARNING: Individuals servicing the BrightLync need to be grounded at all times for ESD protection, especially if installing a remote antenna.

1. Place the assembled module and bracket on top of the Adem, ensuring it sits flat and square with the Adem EVC (see image 2.1). Secure the assembly to the Adem module with the bracketclamp by seating the hook of the clamp onto the back ledge and “notch” of the mounting bracket. Let the clamp naturally wrap under the Adem (see image 2.2). Secure the assembly together with the supplied Allen cap screw and seal. Using a 5/32” hex driver or Allen key and hand tight only (ensure not to over torque the screw).

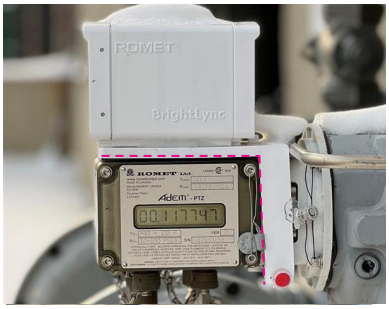


Image 2.1

Image 2.2

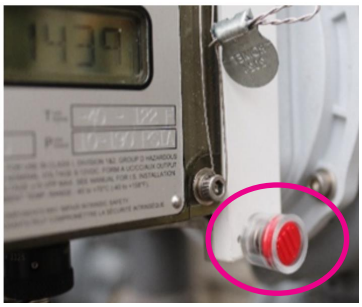


Image 2.3

2. Once BrightLync has been mechanically installed onto the Adem EVC, locate the 12-pin cannon RS232 serial communication connection on the bottom of the Adem and remove the cap. Locatethe BrightLync cable and associated 12-pin male connector to carefully align and insert into the female connection on the Adem. Ensure that the 12pins have aligned and are fully inserted by turning the connection clockwise until a hard stop is felt and the locking pin on the female connection is observed through the male connector (see image 2.5).

12pin Cannon RS232 Serial Communication Connection (Female)

Image 2.4

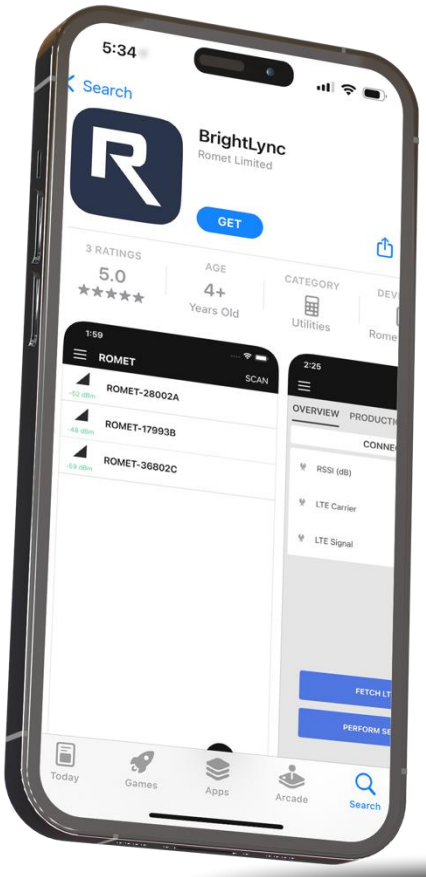
ROMET®

BrightLync®

ADVANCED COMMUNICATIONS PLATFORM

Appendix B

BrightLync Commissioning



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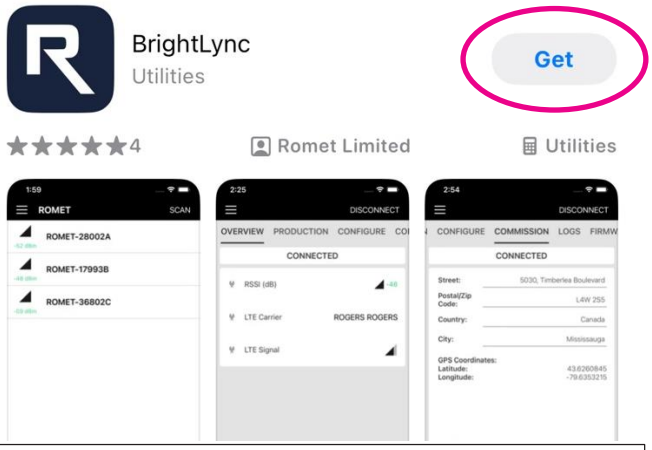
BRIGHTLYNC COMMISSIONING

INITIAL SETUP

Begin the initial setup and commissioning process of your BrightLync module.



BrightLync App

1. Download the Romet BrightLync App from the Apple App Store or the Android Play Store, if not already installed on your device.
2. Enter 'BrightLync' in the search function.

NOTE: Ensure that your device (e.g., iPhone, iPad, Android Mobile, or Tablet) is configured to stay awake for at least 5 minutes to ensure it does not 'go to sleep' or 'Autolock' mode during the commissioning process.

BrightLync Module

3. Ensure that the BrightLync module is physically installed and connected to an Adem before you proceed with the commissioning steps.

NOTE: Connecting the battery must be done before commissioning as new units are shipped with the battery 'unplugged'.

QR Code

4. Scan the QR code for installation instructions and user manual.

Serial Connection

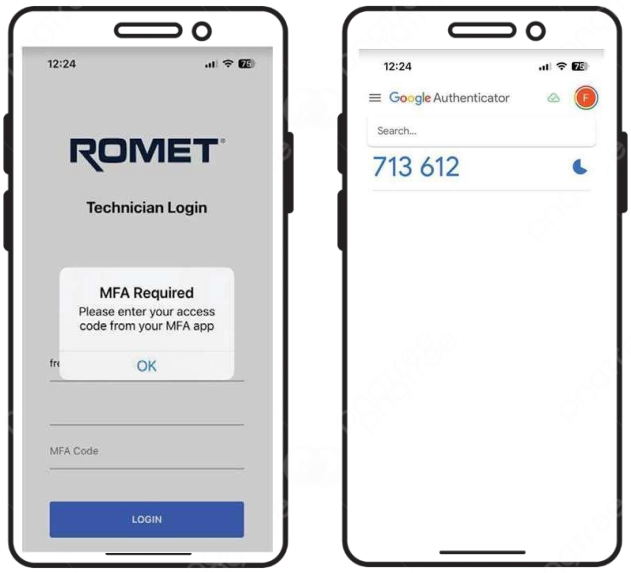
NOTE: If the BrightLync is not connected through the 12-pin serial connection before the BrightLync module is connected to the app, the commission process will not be successful.

LOGIN

Once the BrightLync app is downloaded and installed, open the app and begin the commissioning process.

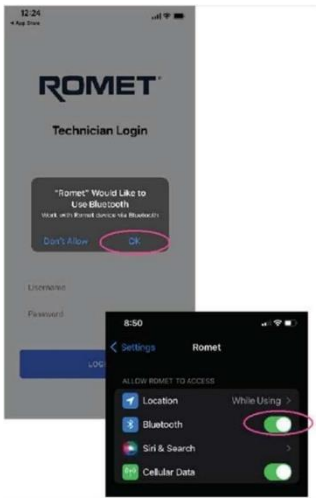
Login

1. Enter your Username and Password.
2. Select LOGIN.
3. Contact your utility system administrator for your BrightLync username and password if you do not have one.



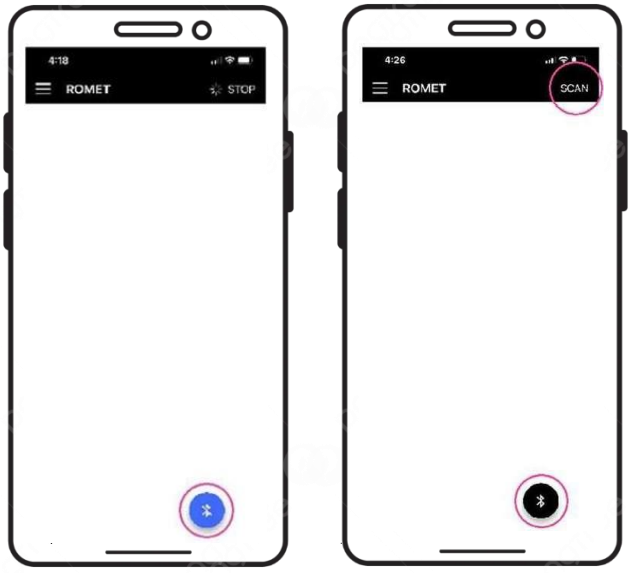
Multi-Factor Authentication

4. Multi-Factor Authentication (MFA) is required to gain access to the BrightLync App.
5. Press OK.
6. Enter the MFA number from the Google Authenticator



Enable Bluetooth

NOTE: If the Bluetooth on your device is not enabled before initially opening the app, a message prompt 'Romet Would Like to Use Bluetooth' will appear on your screen. Always select 'OK' to enable the Bluetooth service. If you select 'Don't Allow' the commissioning process will not be successful.



Multi-Factor Authentication

7. Upon a successful 'Login', the app will automatically begin searching for available BrightLync modules to establish a connection.

	A blue Bluetooth symbol on the bottom right-hand corner indicates that the app is searching.
	A black Bluetooth symbol on the bottom right-hand corner indicates that the app is not searching.

8. Select 'SCAN' on the upper right to begin scanning.

PAIRING

Initiate the Bluetooth pairing connection

BrightLync Module

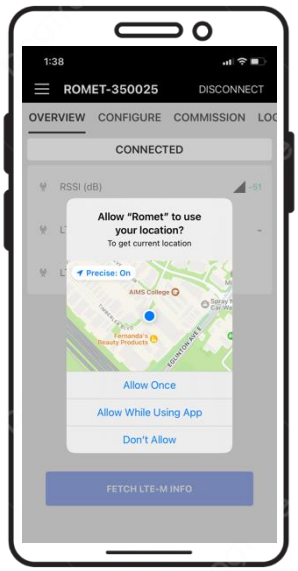
1. Momentarily place a Romet provided magnet tool on the raised 'target circle' located on the top side of the BrightLync module.

NOTE: After connecting the battery, Brightlync may take up to 4 minutes to initialize before it can be activated using a magnet. Using a third-party magnet is not recommendedas the magnet sensor is sensitive to polarity and it may not function as intended.

Pairing a Device

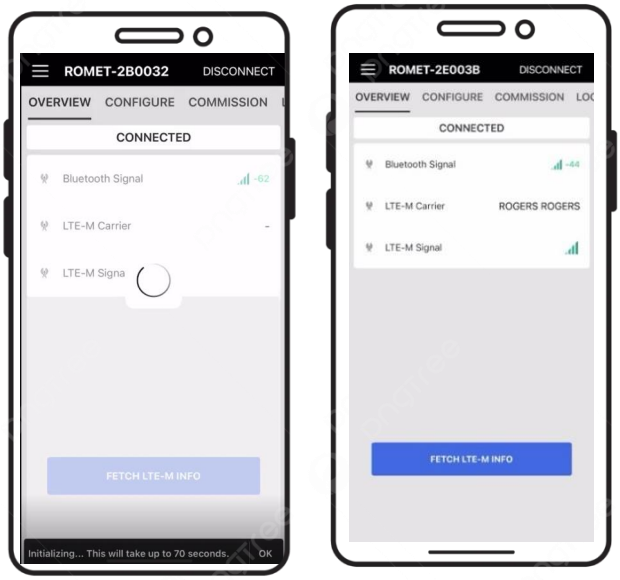
2. The BrightLync module(s) will become visible on the app. Select the appropriate BrightLync module to pair with your device.

NOTE: The BrightLync module will appear with the following nomenclature: 'ROMET-XXXXXX' with the last six (6) characters representing the last six (6) alphanumeric digits from the associated BrightLync module IoT number found on the back of the module.



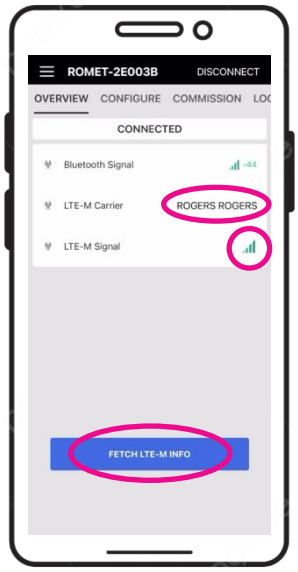
Location Service

NOTE: If the Location Service on your device is not enabled before initially opening the app, a message prompt (see image above) 'Allow Romet to use your location?' will appear on your screen. Always select 'Allow While Using App' to enable the Location Service. If you select another option, the commissioning processwill not be successful.



Overview Tab

NOTE: When the connection is made to the module (the BrightLync module is paired with the device), the app will automatically navigate to the overview tab. This Initializing activity takes approximately up to 70 seconds, during which time a small circling symbol will be in the center of the screen with "Initializing…This will take up to 70 seconds" message at the bottom of the screen, and the background will be grayed out.



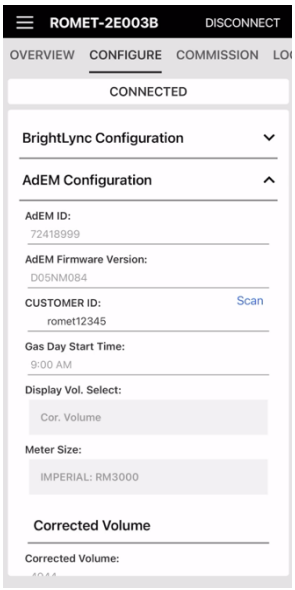
Fetch LTE-M Info

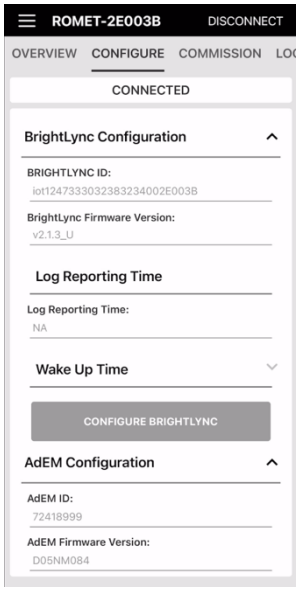
Once the connection is complete and the screen is no longer grayed out, press "Fetch LTE-M Info". After approximately 20 seconds the "LTE-M Carrier" and "LTE-M Signal" fields will populate indicating the cellular carrier and signal strength. The number of green colored bars indicates signal strength.

LTE-M Signal	Action
	Proceed with commissioning.
	Proceed with commissioning.
	Proceed with commissioning.
	Proceed with commissioning.
	**"Weak signal. Commissioning may be not successful due to the unstable network"-** Wait 30 seconds and try to Fetch LTE-M again. If you receive the same message again, this could possibly be resolved by utilizing an external antenna and/or antenna extender.
	**"Could not read LTE-M information"**- Indicates that the device attempt to retrieve connectivity from the tower is not successful. Refer to the troubleshooting guide for steps.
	**"No signal- commissioning will not be successful"**- Wait 30 seconds and try to Fetch LTE-M again. If you receive the same message, signal on the tower near the device may be too low or not support LTE-M. Refer to the troubleshooting guide for steps.

CONFIGURE TAB

Navigate to the CONFIGURE tab to enable BrightLync and Adem configurations.





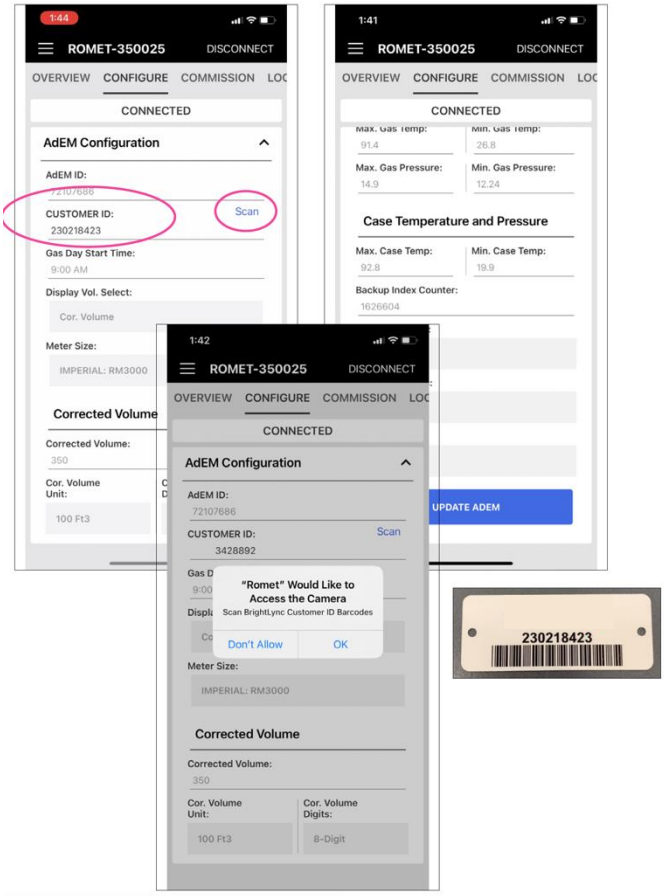
1. The Log Reporting Time hour will automatically match the Gas Day Start Time. The Log Reporting Timerefers to the time at which the BrightLync module sends the audit trail logs of the Adem to the cloud daily.

NOTE: The Log Reporting Time hour will automatically match the Gas Day Start Time configured in the Romet Adem. (e.g., if the Gas Day Start Time is set for 9:00 am, the Log Reporting Time will be randomly selected and set from 7 – 53 minutes.

After commissioning, the BrightLync Wake-Up Time(s) (up to 4) hours can be configured. The minutes will be the same as the Log Reporting Time.
This setting manages the additional regularly scheduled time(s) of when BrightLync performs any activity requestsent through the cloud, such as, firmware updates or active data pulls.

> ***NOTICE***
>
> **It is strongly recommended to disable any additional 'Wake Up Times' to preserve battery life (Wake Up Time drop-down is gray). Additional wake up times will reduce battery life.**

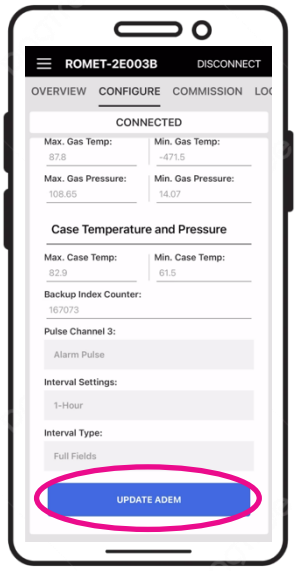
2. Review the settings and select the 'CONFIGURE BRIGHTLYNC' button before proceeding to the next step, whether or not changes were made.



The CONFIGURE tab will also provide options to modify the configuration of the Adem (The configuration of Adem will automatically be retrieved through BrightLync via the initial serial connection during installation).

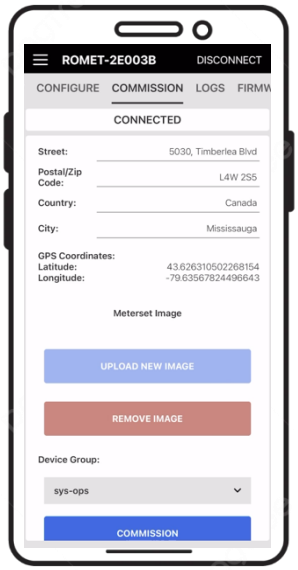
3. Enter the desired utility company Customer ID. This number will be associated with the BrightLync module and the associated meter. This number can be up to 16 alphanumeric characters. No Spaces.

Alternatively, Customer ID can be scanned by clicking on the Scan option available next to the Customer ID. A prompt to access the device camera will appear on your screen. Always select 'OK' to enable the camera to capture the Customer ID bar code. If access to the camera is denied, the Customer ID has to be manually entered.



Customer ID

4. Changes made to the Customer ID need to be configured by selecting the blue 'UPDATE ADEM' button before proceeding to the next step. If you do not select this request, you will receive a message, 'You have unsaved BrightLync data'.



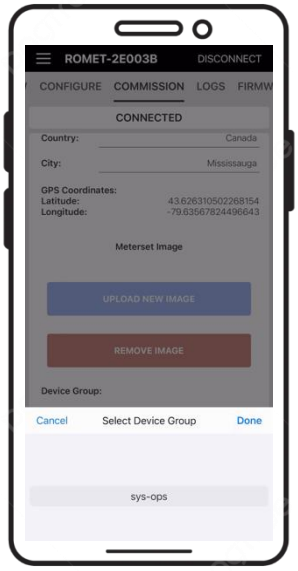
Commission Tab

Navigate to the COMMISSION tab to finalize the BrightLync commissioning process. The BrightLync module will need to be commissioned only once upon site installation.

The installation address fields will automatically be filled using the GPS coordinates.

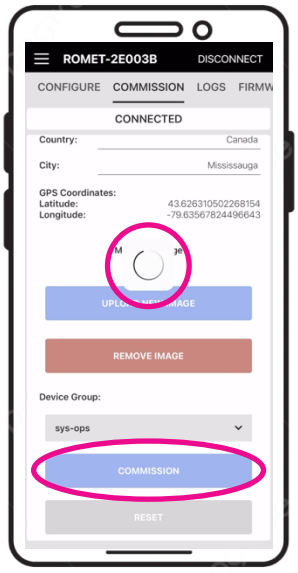
NOTE 1: If the automatically filled address field is incorrect, it can be manually edited to the correct address.

NOTE 2: 'Reset Start Date' is used when the battery is changed to reset battery life calculations. BrightLync does not have to be recommissioned to reset battery life calculations.



Device Group

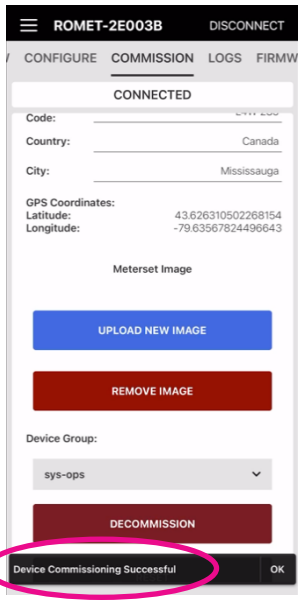
5. Select the appropriate Device Group from the dropdown menu. Available device groups are pre-set per utility organization.



Commission BrightLync Module

6. Once the Device Group is selected, select the Blue 'COMMISSION' button to commission the BrightLync module.

NOTE: This activity takes approximately 20 seconds and during this time a small circling symbol will be in the center of the screen and the background grayed out.



Device Commission Successful

Once the BrightLync module has been successfully commissioned, the blue 'COMMISSION' button will change to a red 'DECOMISSION' button. A prompt of 'Device Commissioning Successful' will appear at the bottom of the screen to indicate the commissioning results.

7. Select 'OK'
8. Then select 'DISCONNECT' on the top right corner of the screen.

The commissioning process is now complete.

NOTICE

DO NOT touch or select the red 'DECOMISSION' button. If a module is mistakenly decommissioned, simply reselect the blue 'COMMISSION' button.

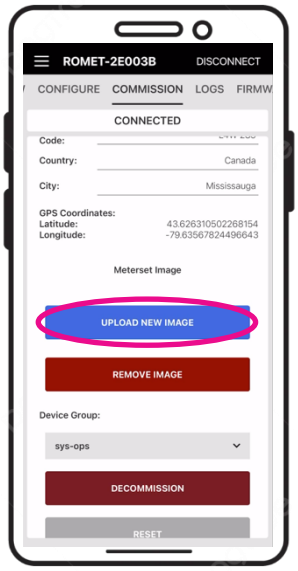
NOTE 1: The orange 'RESET' button will force a decommission function if an error occurs during any part of the commissioning process.

NOTE 2: If there are any issues commissioning the module and an error message is received (e.g., 'Unable to add device to group' or 'Unable to commission'), select the orange 'RESET' button and then select the 'COMMISSION' button. If the problem persists, refer to the troubleshooting guide.

UPLOAD A PHOTO

After the commission process is complete, you can upload a photo. The photo can be anything your company needs. For example, a photo can be of the BrightLync device, the BrightLync lot number, the meter number, the entire meter set, etc.

To upload a photo:

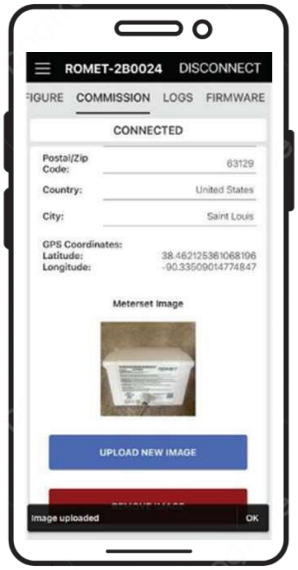


Upload New Image

1. Press 'UPLOAD NEW IMAGE'

Take Photo

2. Take a photo.



Use Photo

3. Then select, 'Use Photo'. The photo will appear on the commissioning screen.

DISCONNECT

After selecting 'DISCONNECT' you will be directed to the DISCONNECTED screen. Select the blue 'BACK TO SCAN' button at the bottom of thescreen. Ensure that the device that was commissioned goes to sleep and disappears from the screen. Once the device disappears you are now ready to commission another BrightLync module.

NOTE: To discover accessible BrightLync modules for establishing a connection, click on 'SCAN' in the upper right corner to initiate the scanning process. Consult the 'LOGIN' section for the available options.

ROMET®

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ADVANCED COMMUNICATIONS PLATFORM

Appendix C

Energy Array Device Manager

Version 1.4

TABLE OF CONTENTS

1. ENERGY ARRAY - HIERARCHY OF THE STRUCTURE

The system hierarchy is structured as follows:

- Company
- Utility
- Device Group

The users can be classified as

Company:

- Company Admin
- Company Viewer

Utility:

- Utility Admin
- Utility Power User

Device Group:

- Device Group Admin
- Device Viewer

2. ROLES AND PERMISSIONS

2.1 ROLES

- Company Admin – view everything on the company account, has full user permission except for creating, modifying, or deleting a company admin. The only role that can edit Company settings.
- Company Viewer – view all underlying utilities, device groups, and devices for a particular Company.
- Utility Admin – full access to the Company's Utility resources. The only role that can commission/ decommission devices.
- Utility Power User – access to specific management actions (e.g. to initiate active data pull, reboot, etc.)
- Device Group Admin – has access to a group(s) of devices within the Utility.
- Device Viewer – can view a single device.

2.2 PERMISSIONS

User permissions are determined by the role that the user has been set up with.

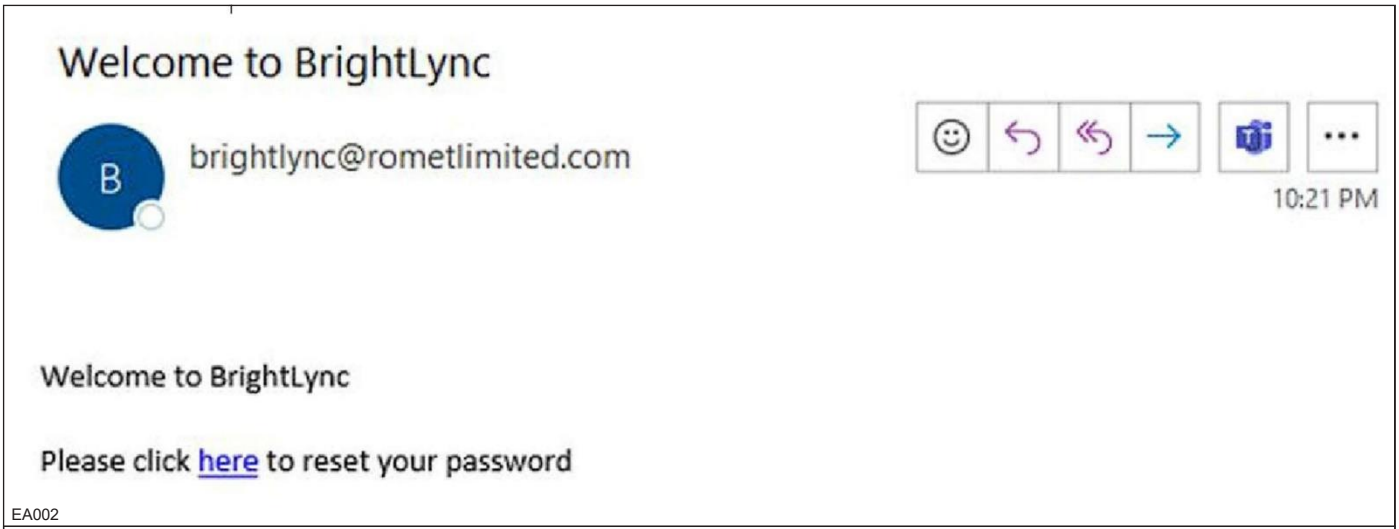
- Management Actions are only available for users at an Admin level, either Company, Utility or Device Group Admin. Permissions for these roles include the ability to install firmware, pull Asset data from the device, and export Asset data from the porta.
- Measurement (Company) Settings are available to be changed by the Company Admin. Only metric and Imperial Settings are on the portal.

3. LOGIN AND MULTI-FACTOR AUTHENTICATION (MFA)

3.1 FIRST TIME LOGIN

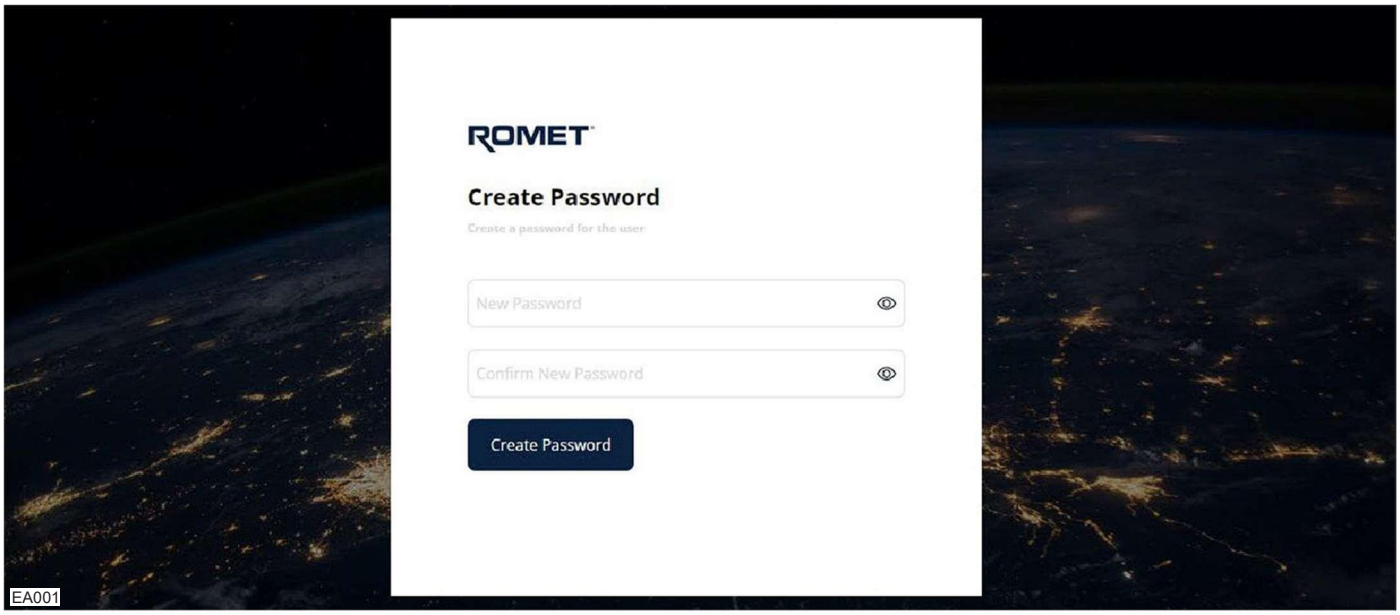
When a user logs in for the first time, they are required to enable MFA to complete their log in.

When an account is created the user will receive an email to set the password.



Email Hyperlink

When the user clicks on the hyperlink in the email, the user is directed to Energy Array Device Manager, where they can create a password.



Set Password

Once the password is created, the user is directed to enable multi-factor authentication. To do this, the user must download Google Authenticator on their mobile device.

NOTE: iOS users can download it from the App Store and Android users can download it from the Play Store.

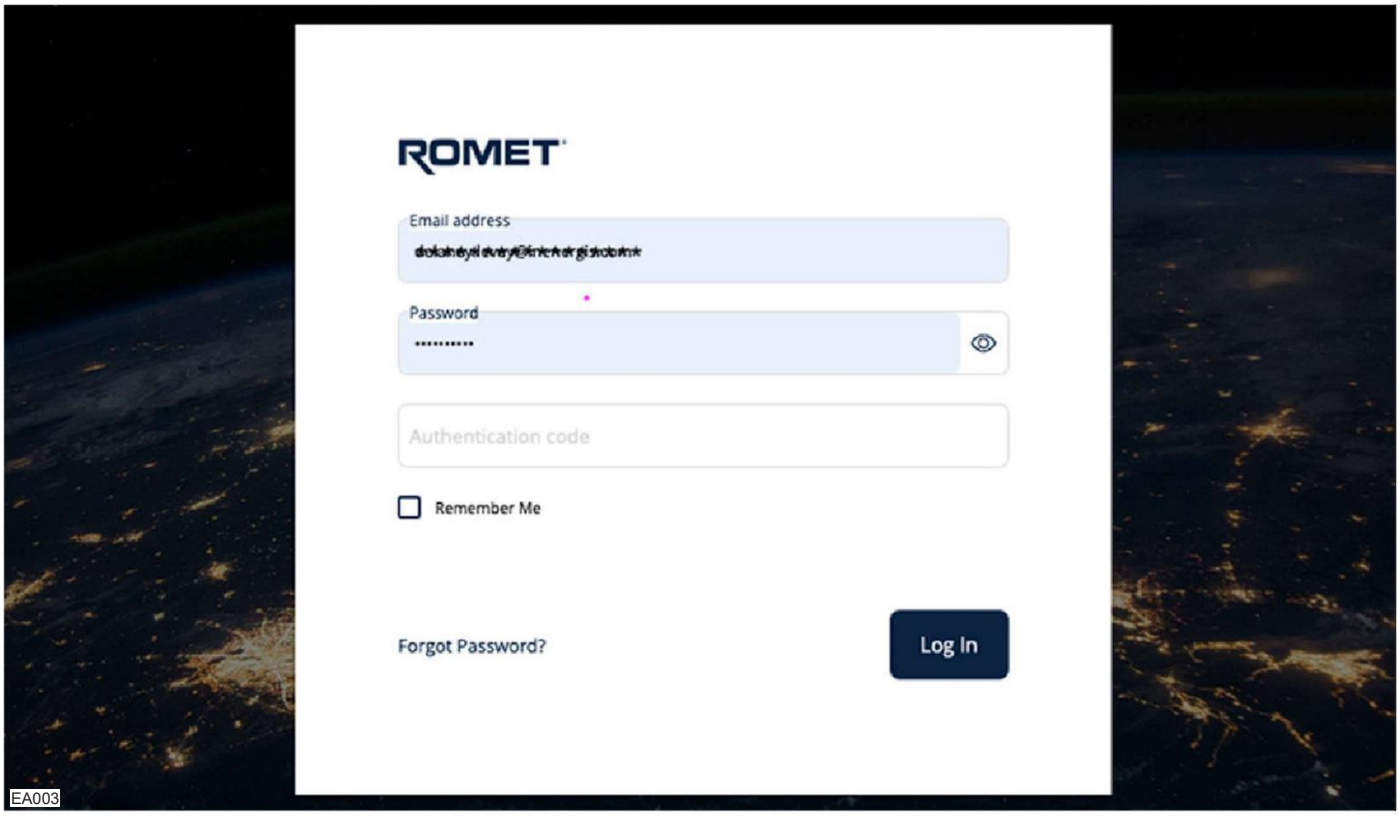
If you need to use any other application for Authentication, contact your System Administrator.

To complete the setup, the user needs to

- Enter the password that was created on Energy Array Device Manager,
- Click on Generate the QR Code
- Scan the QR code through the Google authenticator lens and the code generated should be entered in the ‘authentication code’ field below the password field.
- Click on the ‘Enable MFA’ button.

MFA is now enabled. Please proceed to the login page.

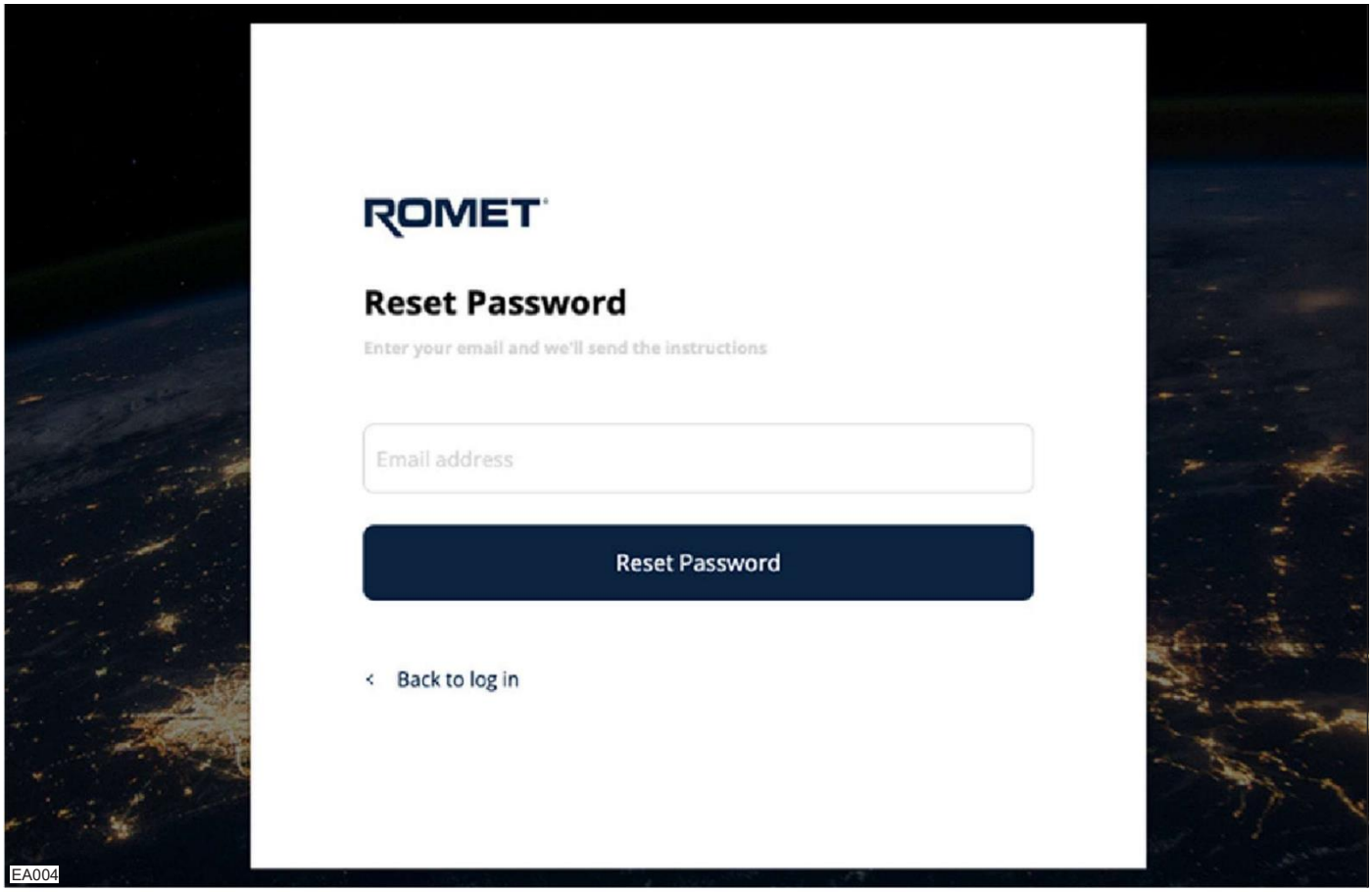
3.2 LOGIN OF A REGISTERED USER



Enter Authentication Code

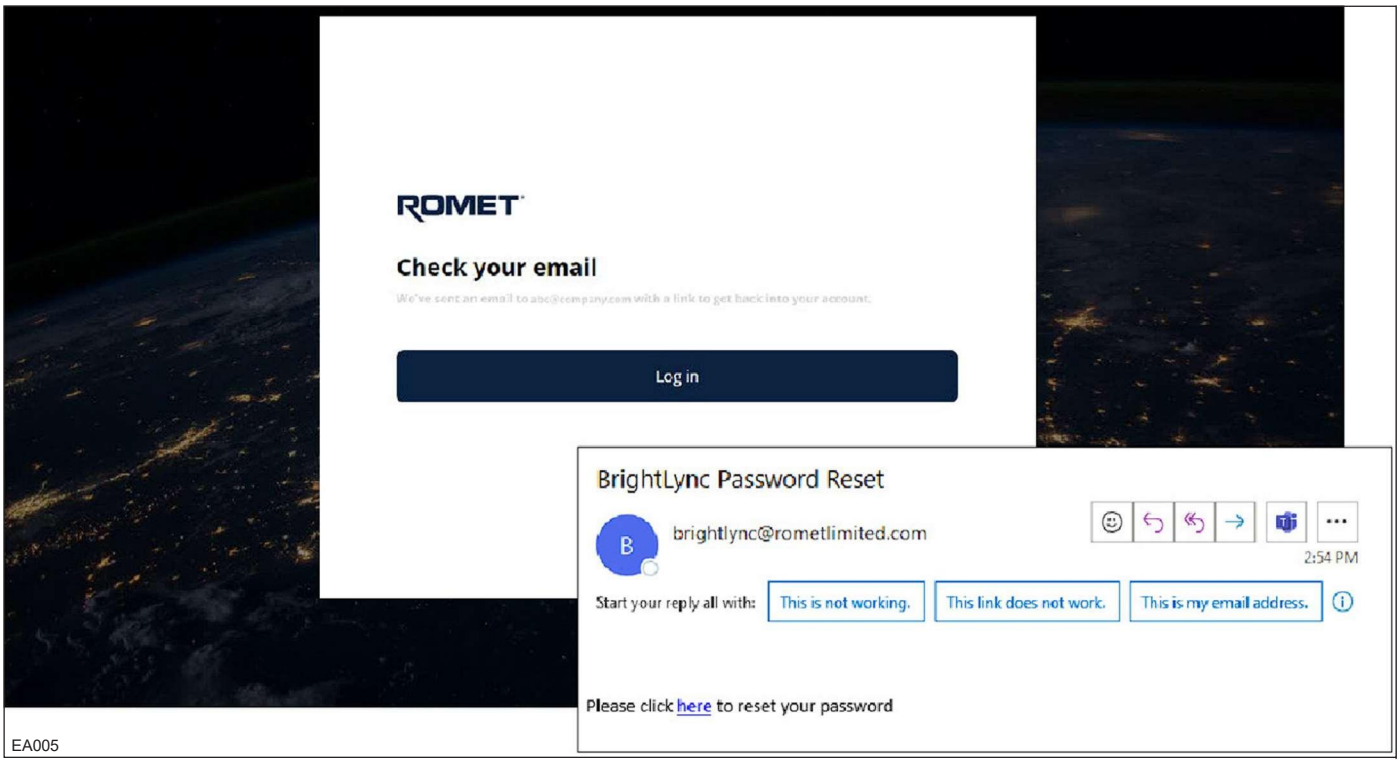
The user should be able to log in with the registered email address and password and by entering the authentication code generated by the Google Authenticator.

3.3 FORGOT PASSWORD



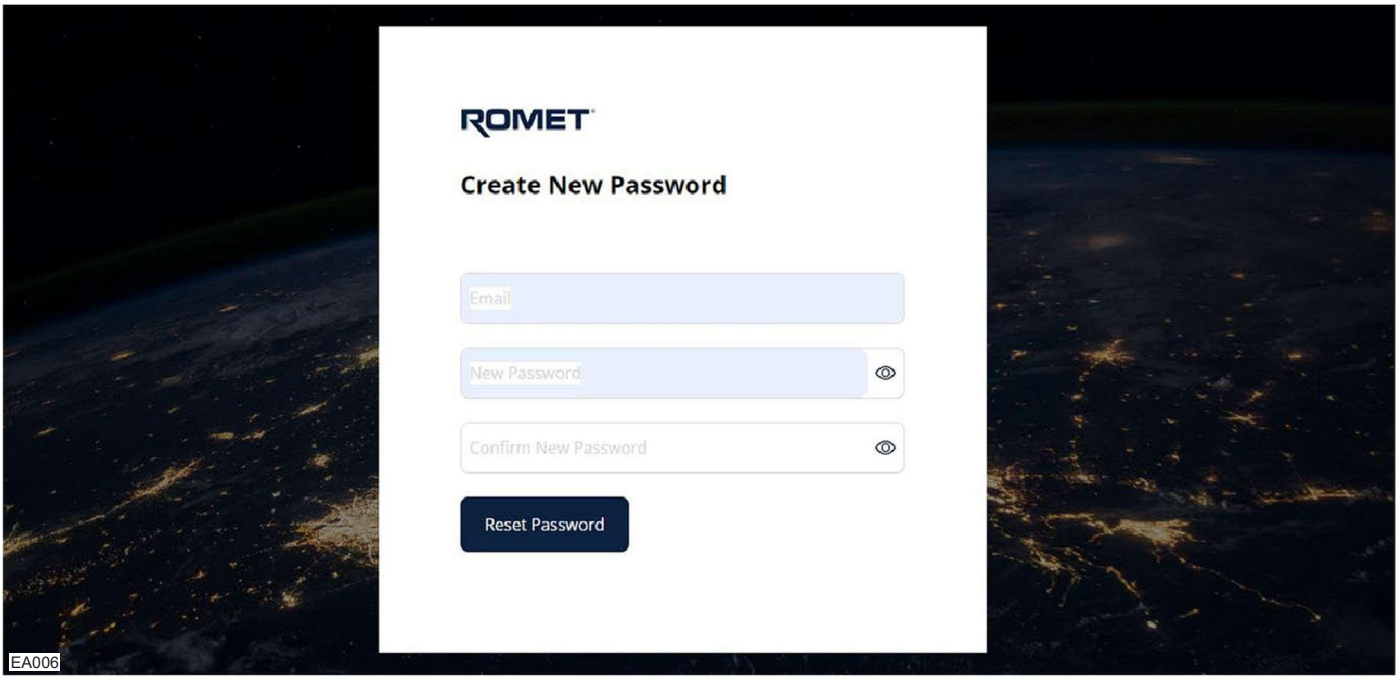
Forgot Password

To reset the password, the user needs to click on the 'Forgot Password' hyper-link on the page and the ‘Reset Password’ page will open. The user needs to enter the email address registered for their account, and a message will be sent to the email address.



Password Reset

The user will receive an email to reset the password.



Create New Password

The user will be directed to create a new password via the hyperlink in the email.

4. COMPANY SETTINGS

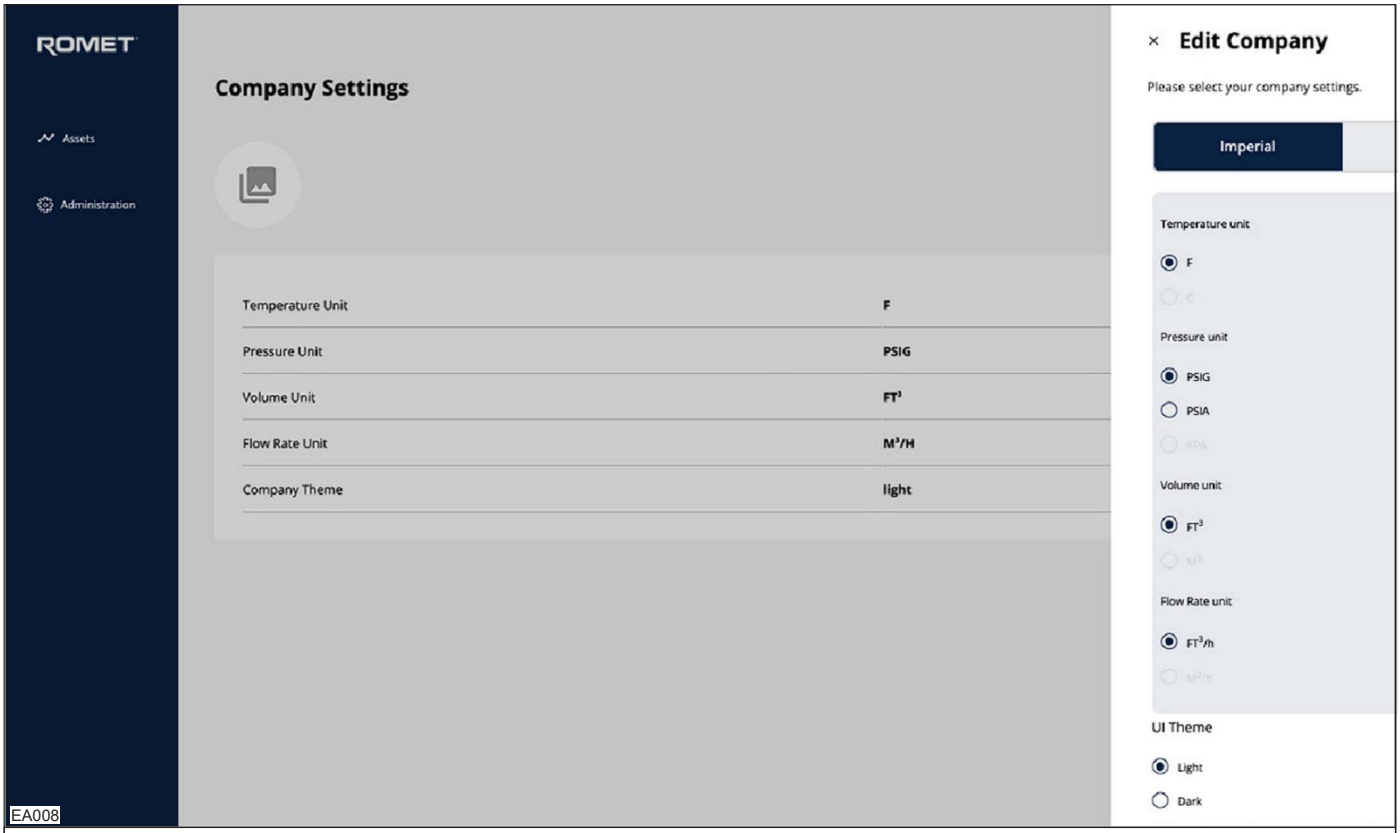
As part of Company Set Up, the Company Admin role has the permission to configure the Company Settings.

Settings Icon

To access this configuration menu, the user must click on the Settings icon in the top right corner of the page.

By clicking on the settings icon, a modal will be displayed on the right-hand side of the screen, where the user can set the measurement units to either Imperial or Metric.

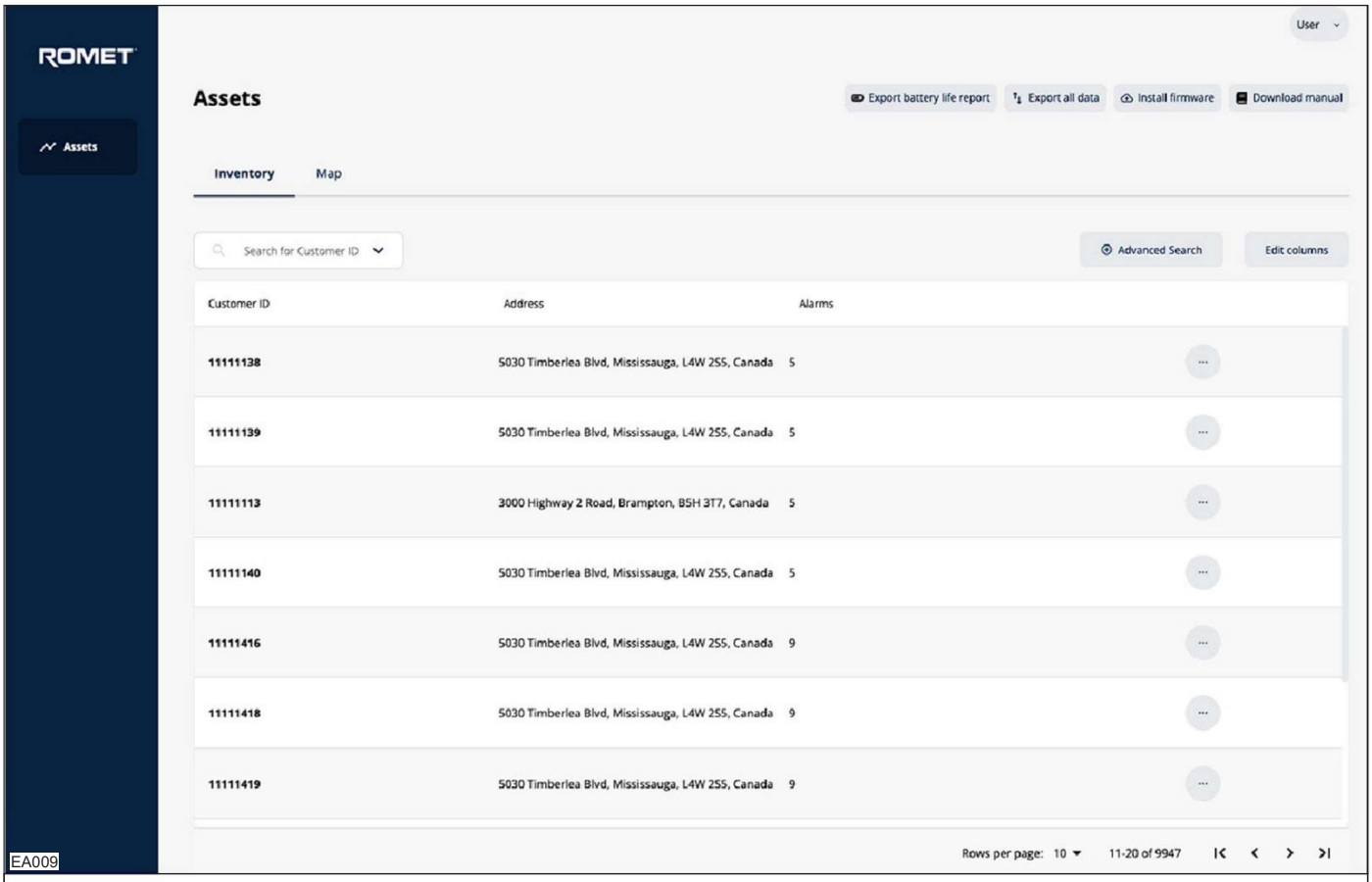
It is also possible to select the 'UI Theme' for the platform of either Light or Dark, by clicking on the preferred radial button setting.



Save Changes

Click 'Save' and all settings will be implemented.

5. ASSETS



Assets Page

The Assets page has two tabs:

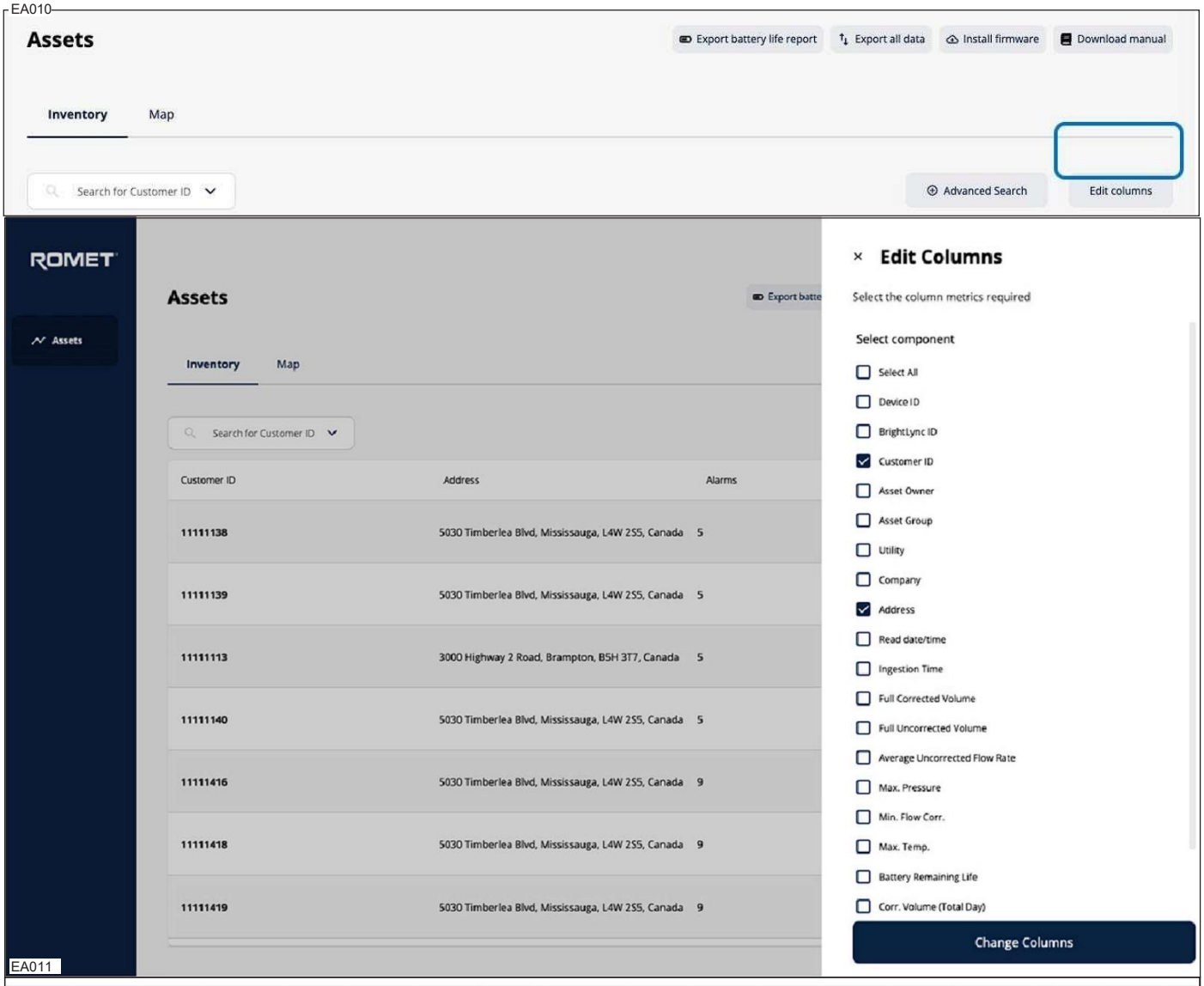
Inventory	This tab details all the required information of the assets such as Customer ID, Address and Alarms.
Map	The user can view the location of the assets on the Map. Further details on the Map functionality can be found in section 6.6.

5.1 INVENTORY

The inventory tab provides the user with access to the following functions:

5.2 EDIT COLUMNS

EA010



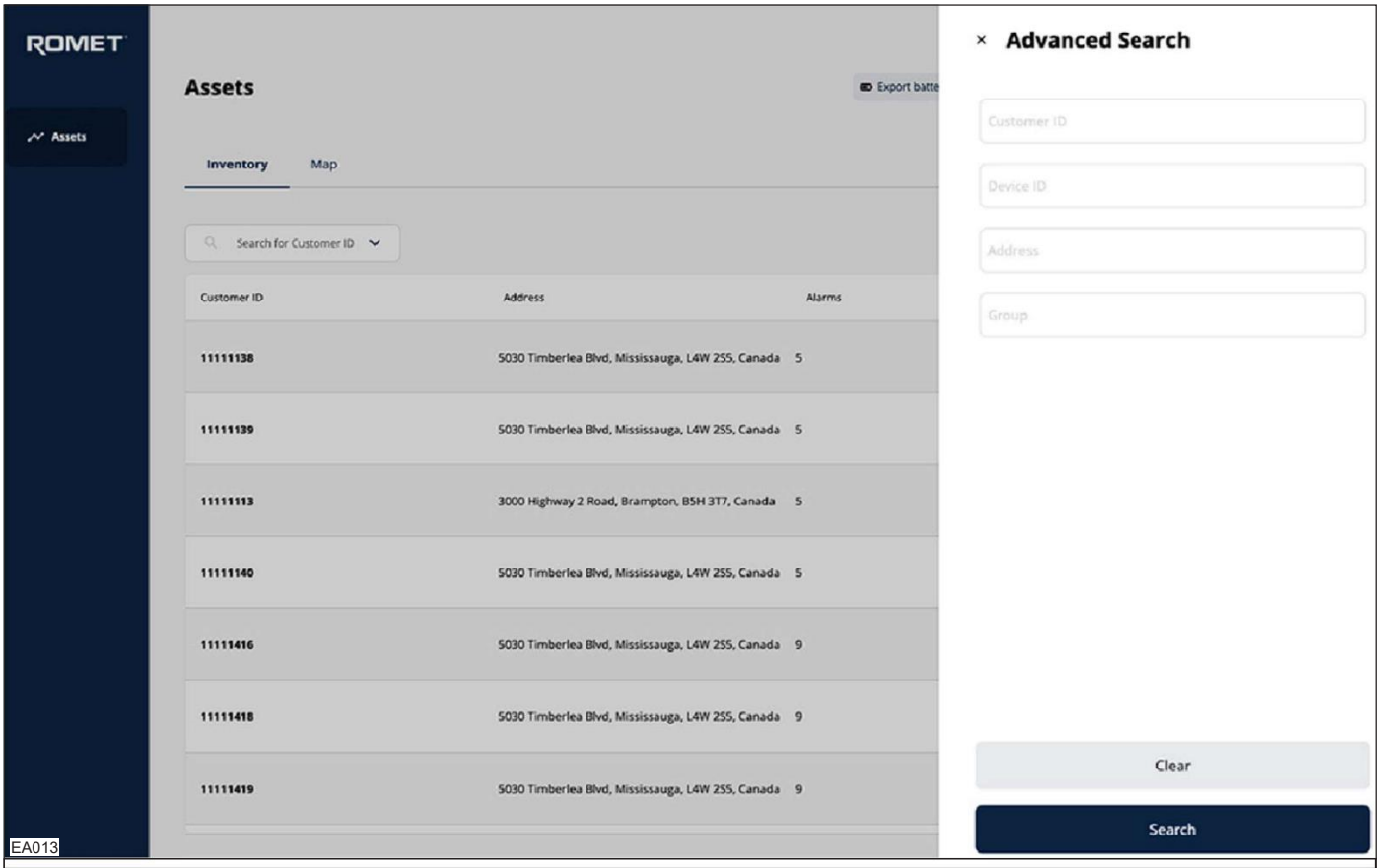
EA011

Edit Columns

When the user clicks on ‘Edit columns’ button, a model will be displayed on the right of the screen, where the user can select the columns that they wish to be displayed on the table view of the Assets page.

5.3 ADVANCED SEARCH

EA012



EA013

Advanced Search

When the user clicks on the ‘Advanced Search’ button, a model will be displayed on the right of the screen where the user can enter the parameters for an advanced search. Once the parameters are entered, click ‘Search’; the user will then only see in the table the devices that match the parameters entered.

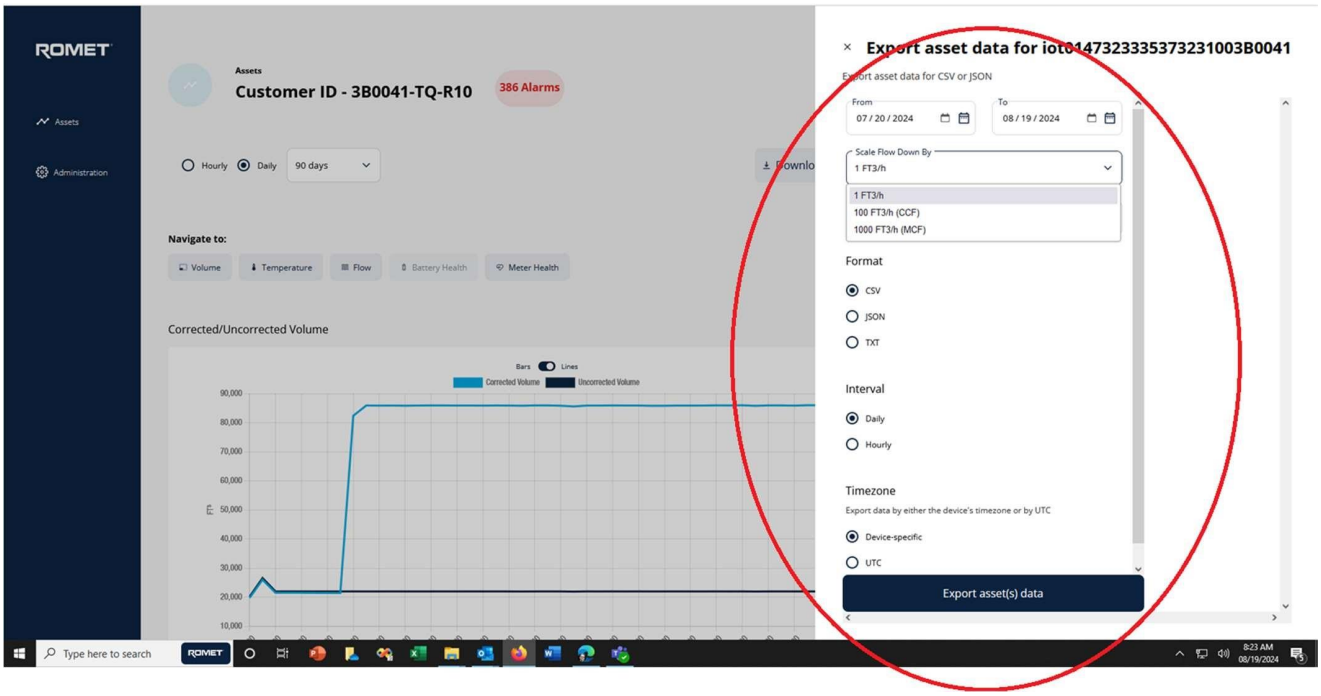
5.4 EXPORT ALL DATA

When the user clicks on the ‘Export all data’ button, a model will be displayed on the right of the screen where the user can enter the factors for their data export.

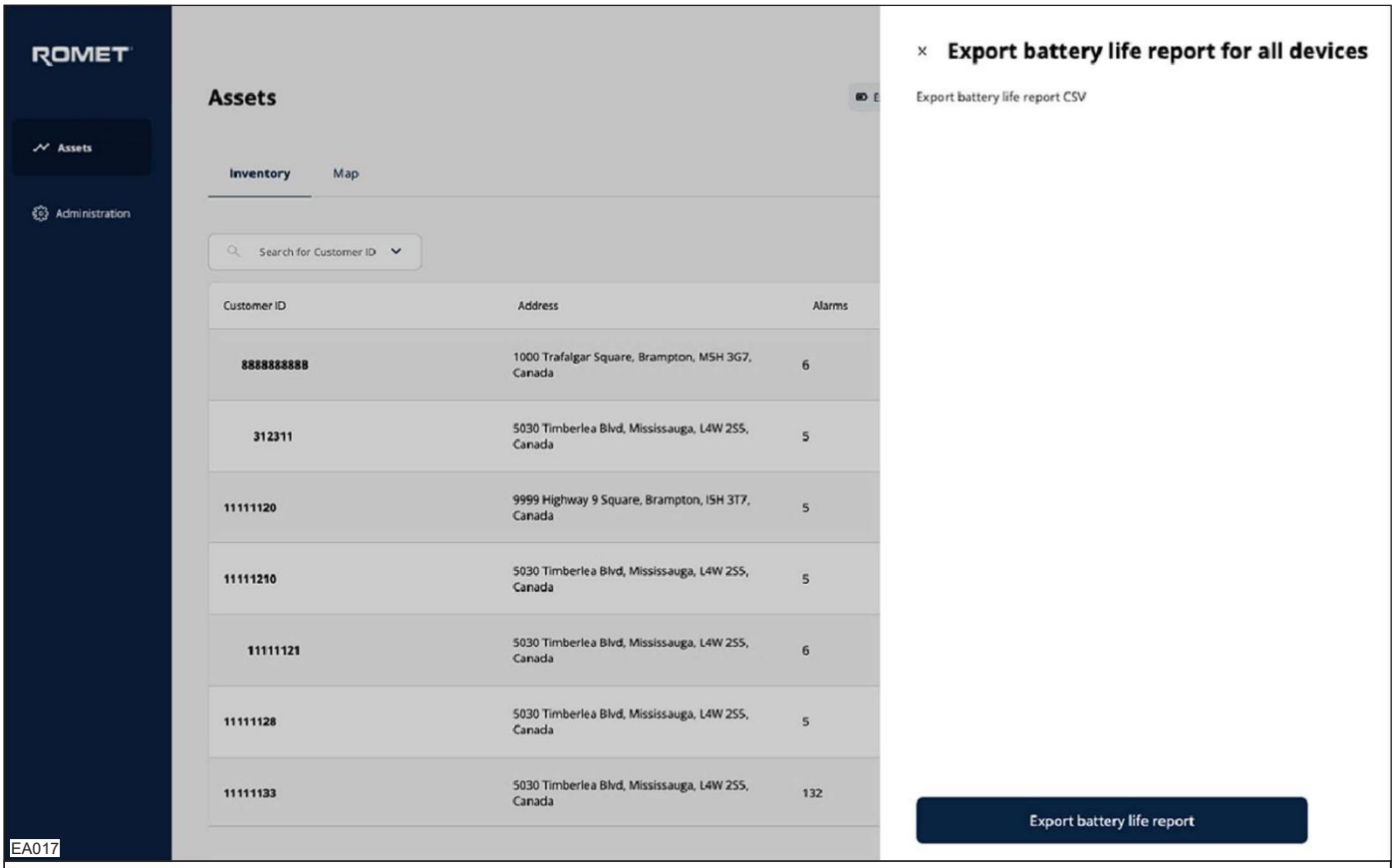
This includes a date selector detailing the dates ‘From’ and ‘To’ and the format and interval timescale for the data to be exported.

NOTE 1: Users have the option to export asset data in either .csv or JSON format, with the report being delivered to the email address associated with their user account.

NOTE 2: The 'From' and 'To' dates must not exceed a 31-day span. A warning message will appear for incorrectly entered dates. Able to Export data as CCF and MCF, as csv, json, txt, and export device time zone or UTC.



5.5 BATTERY LIFE EXPORT



Battery Life Export

When the user selects to ‘Export battery life report’ button, a model will be displayed on the right of the screen where the user can select to export the battery life report.

The report will be sent to the registered email address on the user account.

6. ASSETS PAGE

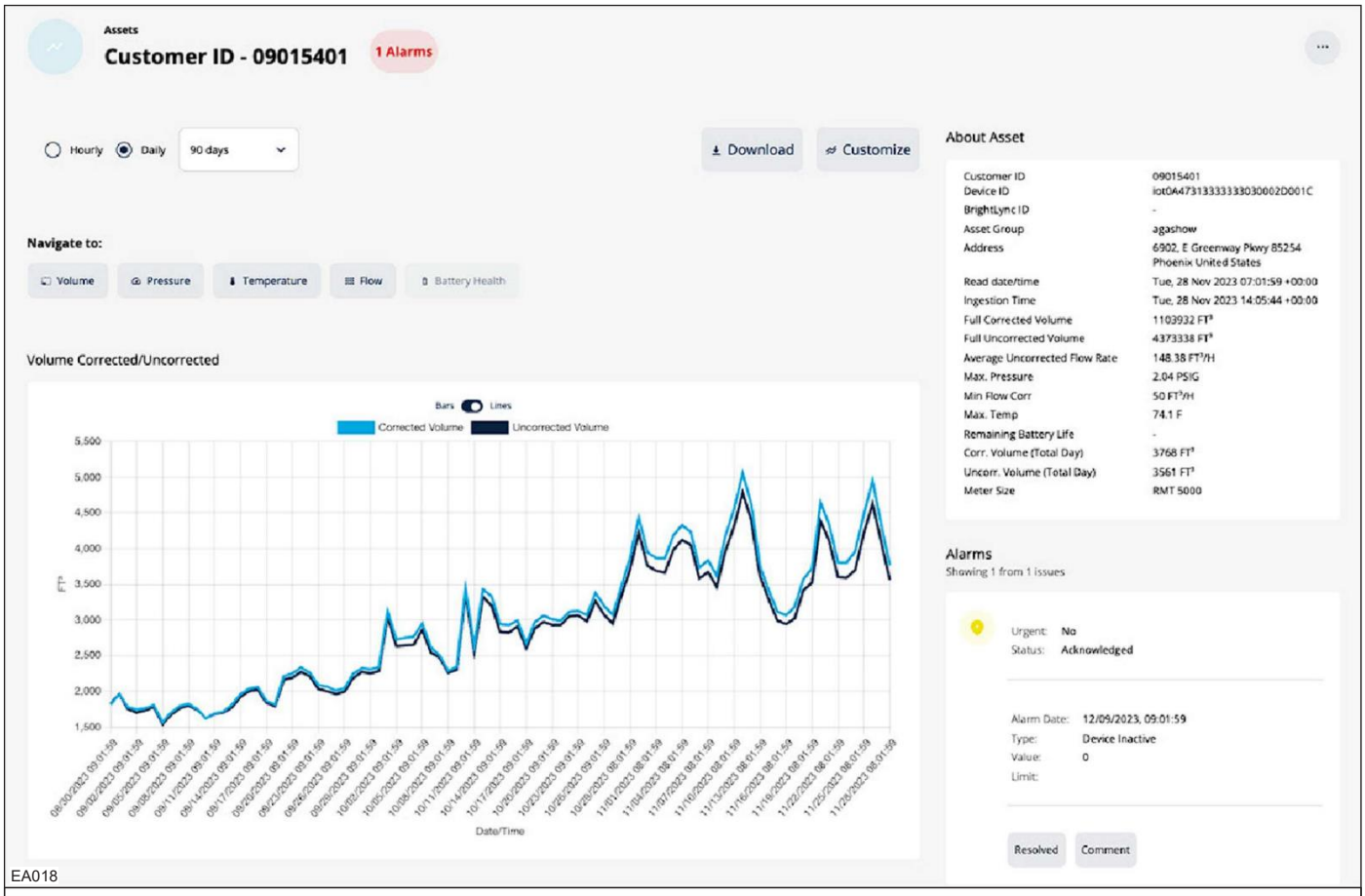
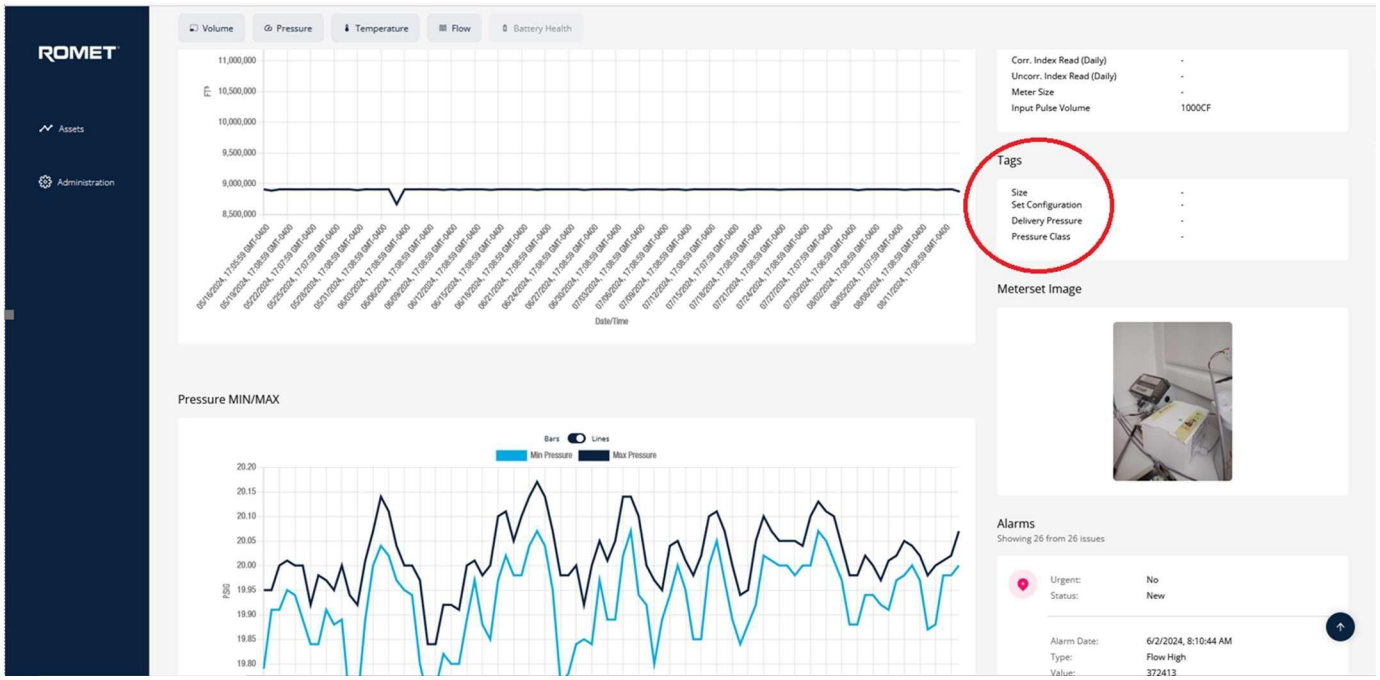


Table View

When the user clicks on any asset within the table view, the asset page with all the relevant information for the selected asset will be displayed.

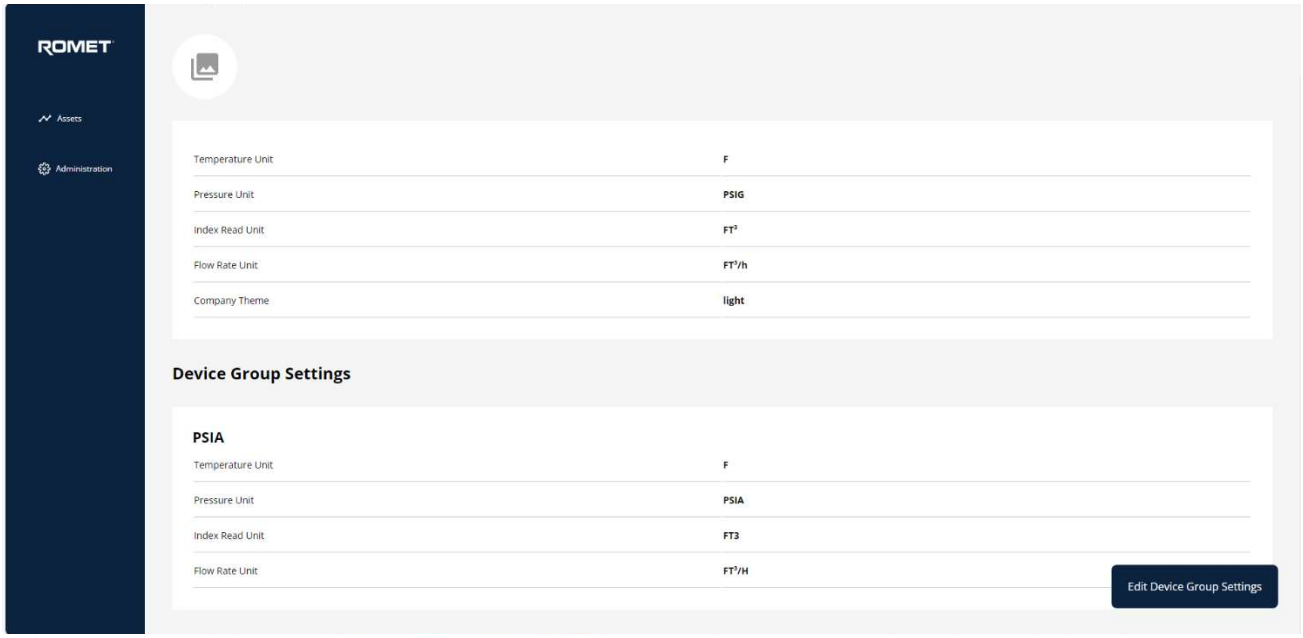
The information displayed provides an overview of the measurement data for the device including volume, pressure, temperature, and flow; along with the remaining battery life of the device, where the device is located, and the date/time stamp of the data.

Device Tags

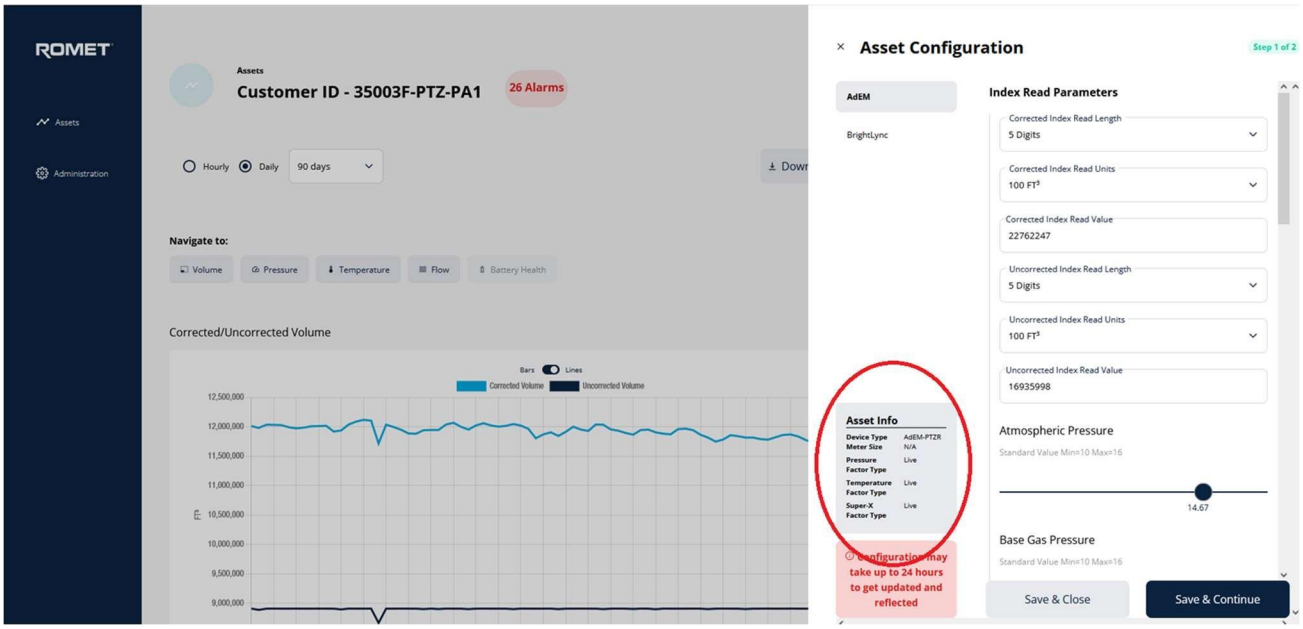


Users can use tag devices on the Asset Configuration page using either Predefined Tags or Utility-specific Tags. Utility-specific Tags can only be created or deleted by a Utility Admin user. Predefined Tags are Meter Size, Rate, Set Config, Delivery Pressure, Network Location, and Pressure Class.

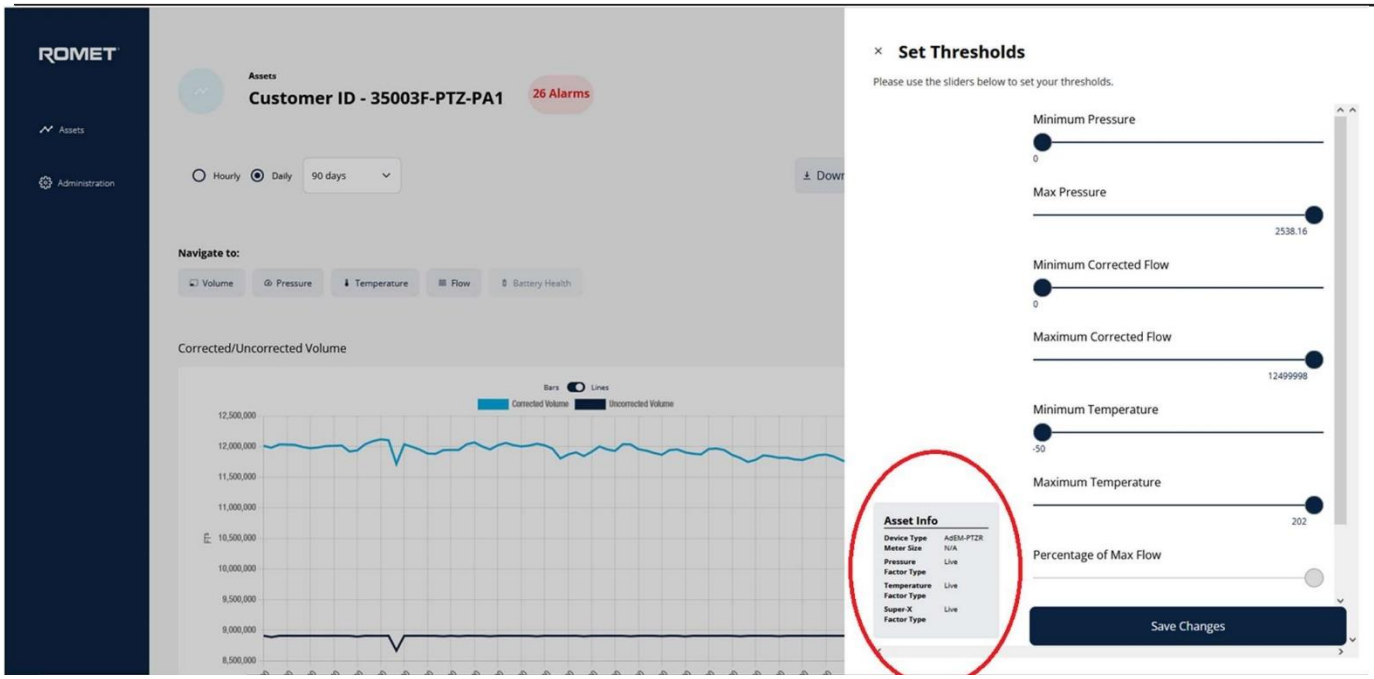
Users can edit device group settings.



Once the device group is edited, it shows on the Device Group Settings.



Asset Configuration Screen. The asset information is displayed. (Asset Info) with Device Type and Meter Size and Factor Types.



Set Threshold screen. Device Type and Meter Size and Factor Types.

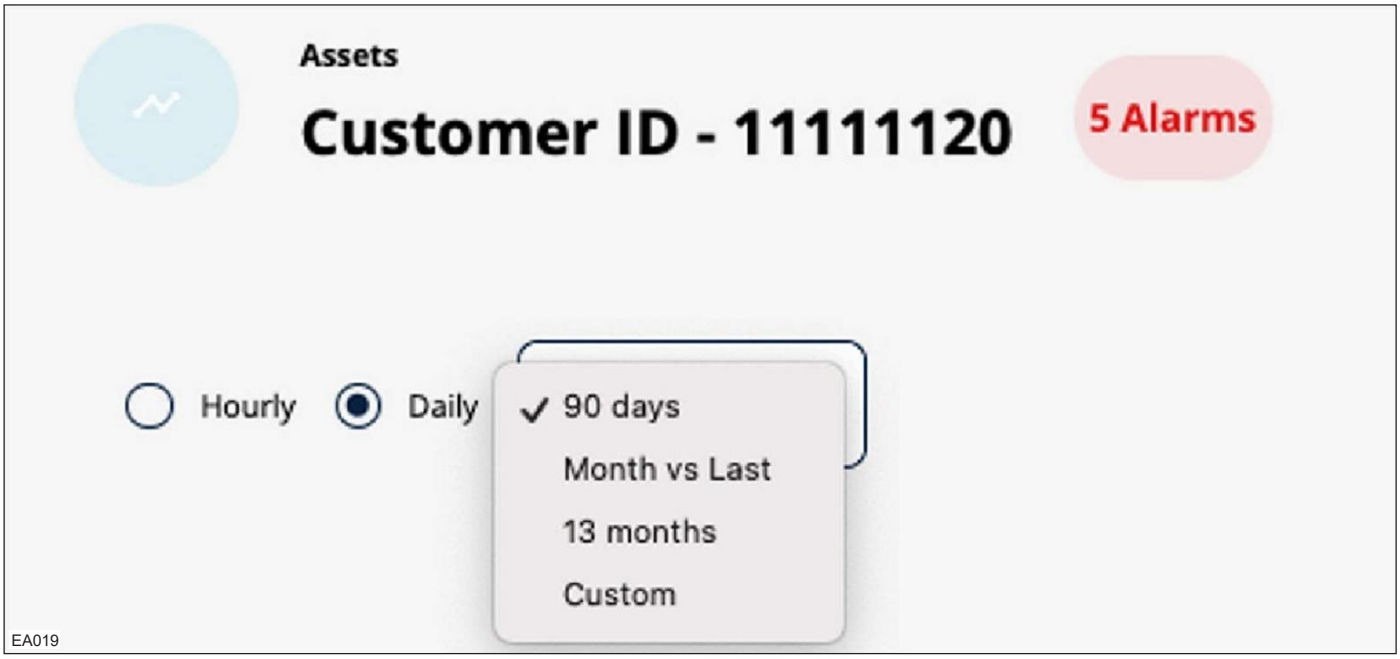
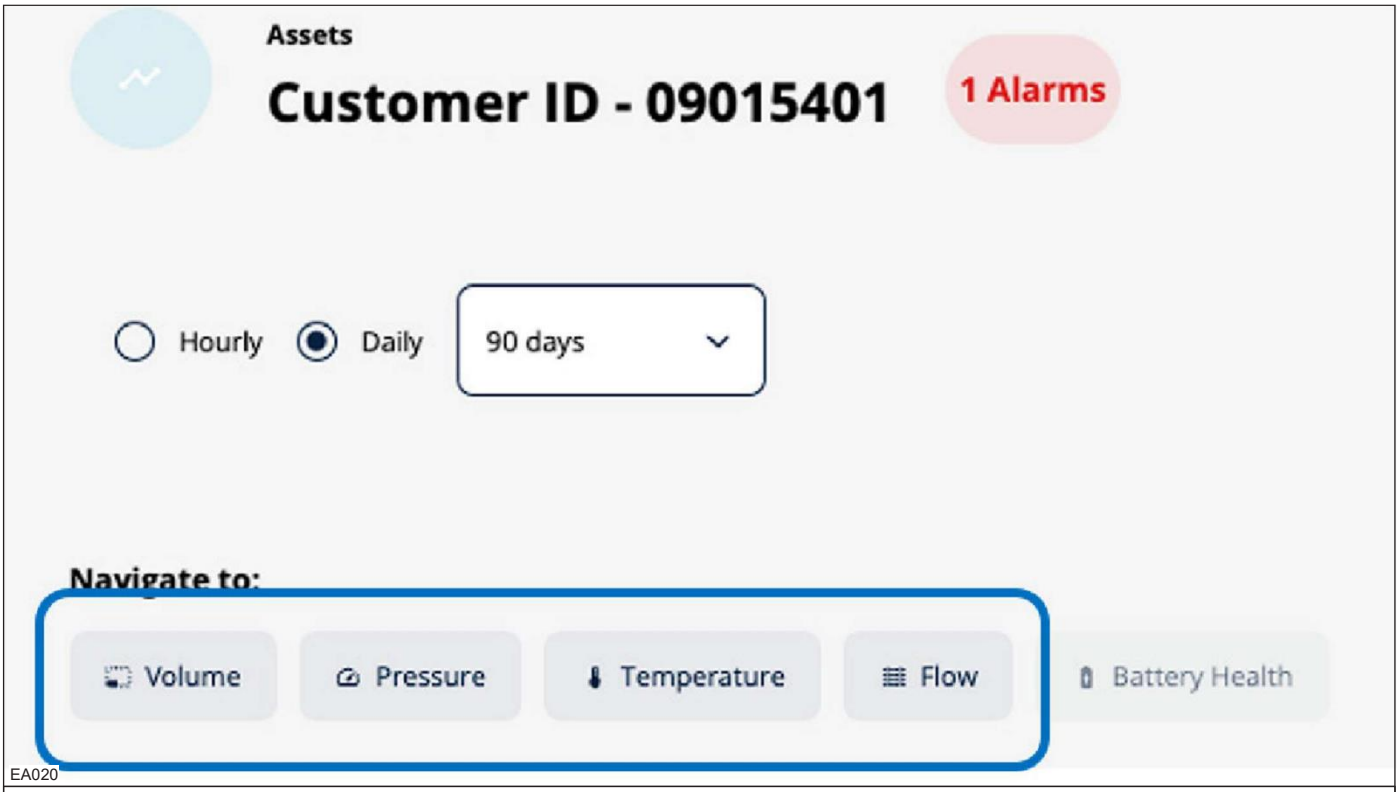


Table View

The page also contains several useful graphs, with the ability to be view over varying time intervals (Daily or Hourly), or over multiple time periods (90 days, Month vs. Last, a 13-month period or Custom). The ability to view over a 13-month period, enables the user to view a comparison of the current month data with the previous year's same month data.

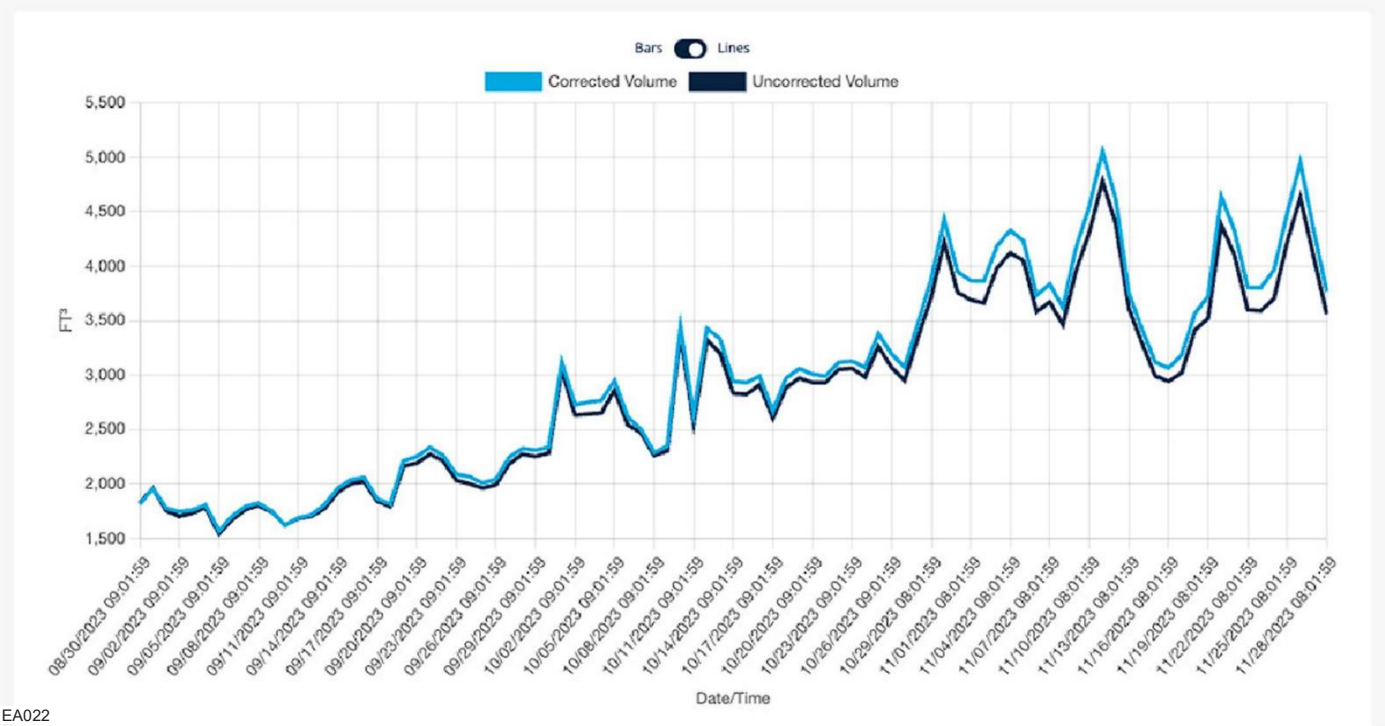


Navigation Buttons

The user can navigate to the required graphs via two methods, either scrolling down the page, or via the hyperlink navigation buttons located at the top of the page

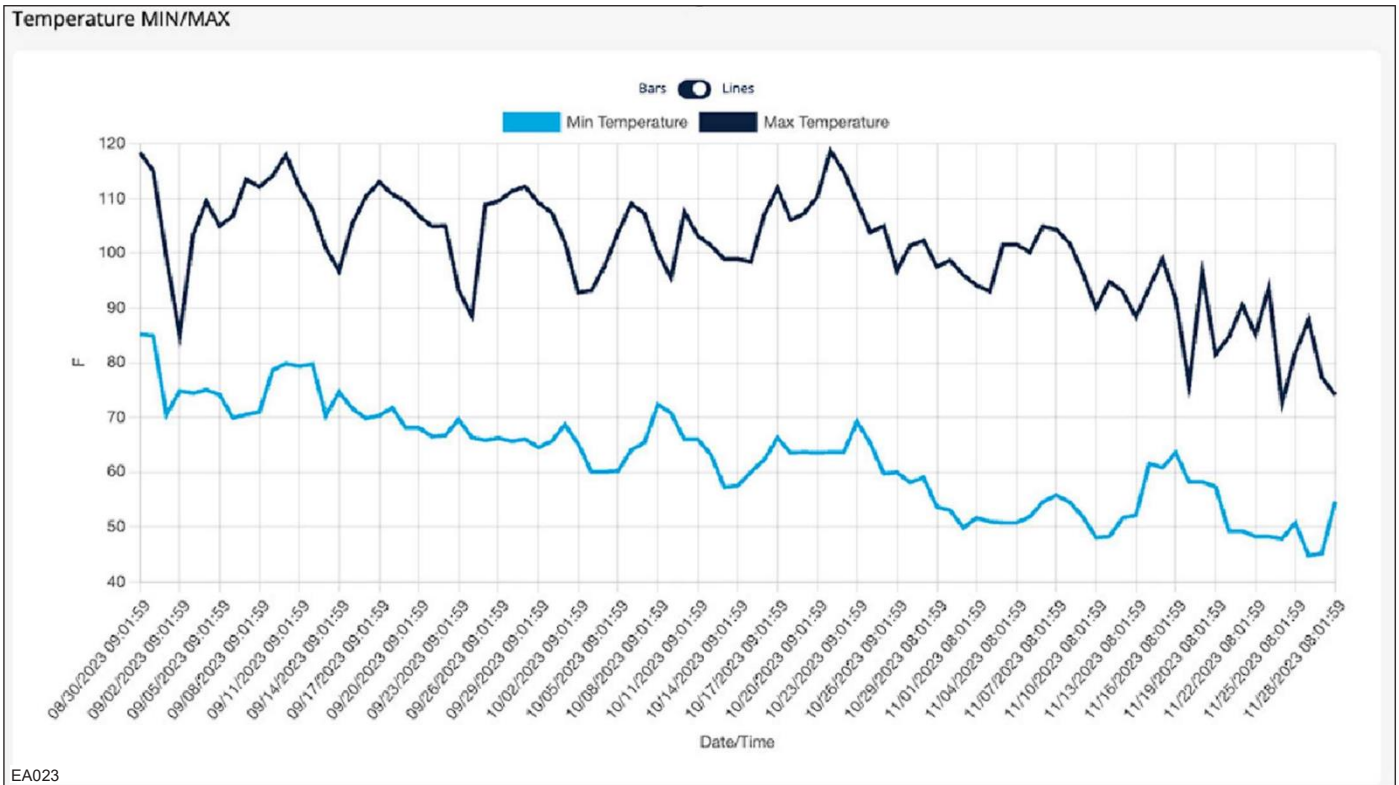
When selected, each button allows the user to be directed to the respective available graph.

Bars  Lines	Graphs can be viewed as either a bar chart, or line graph by switching the button at the top of each graph.



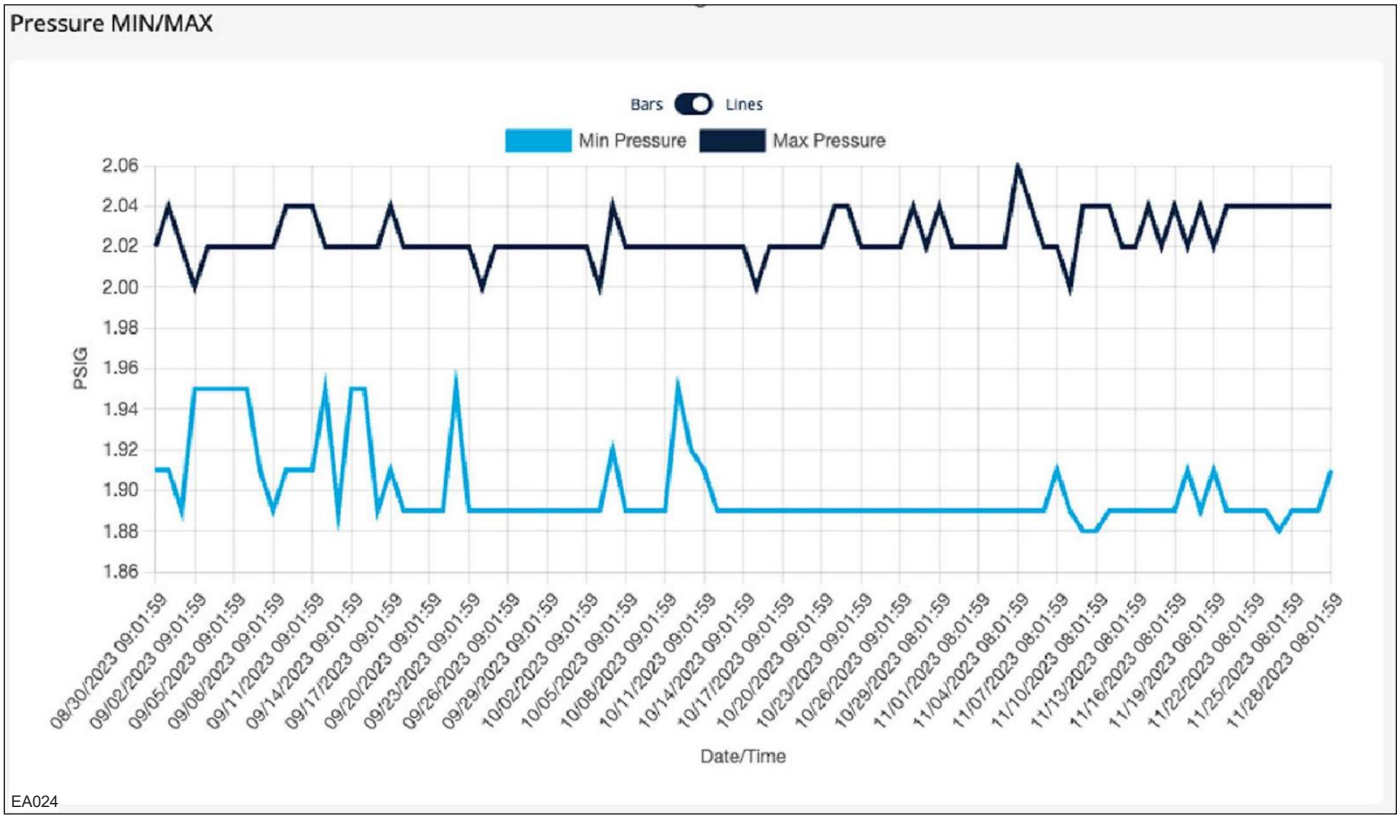
EA022

Volume



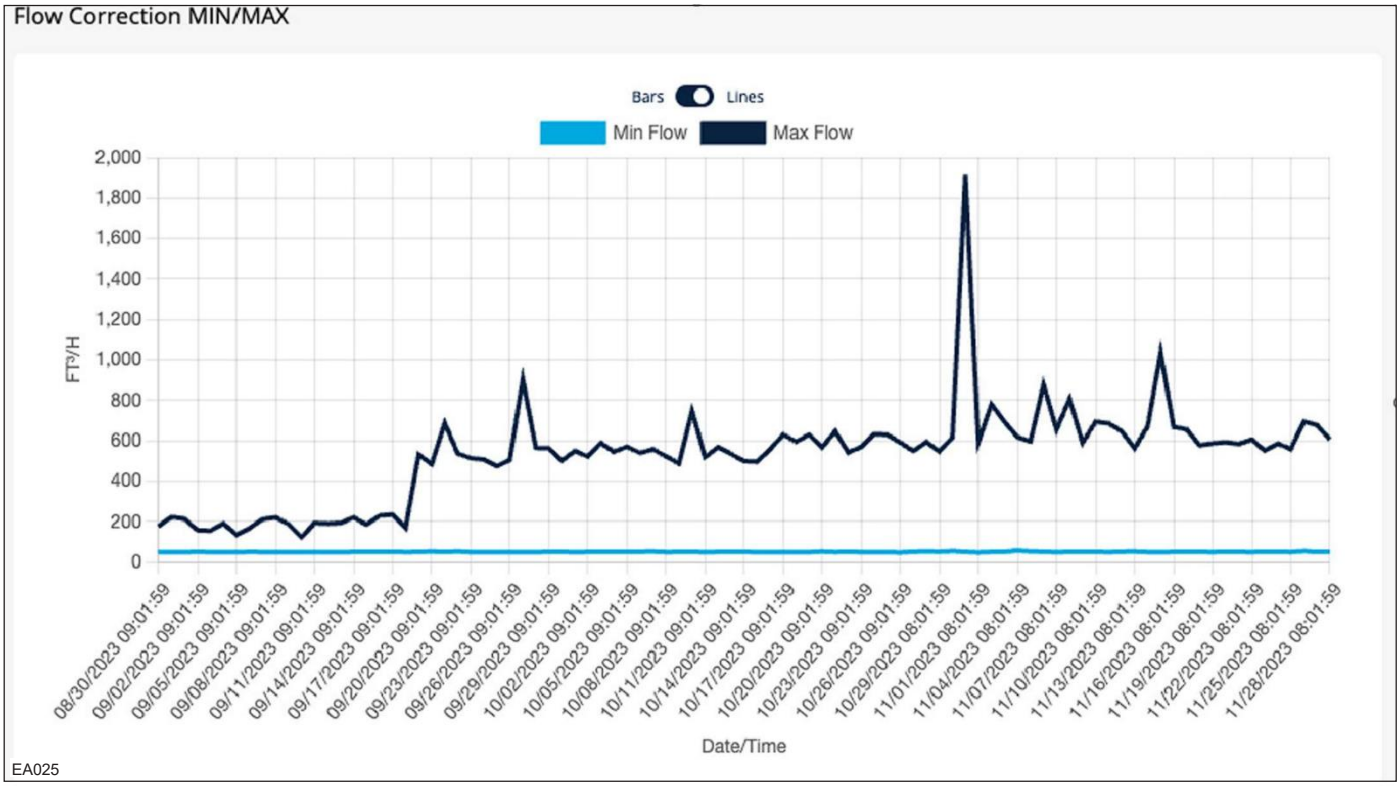
EA023

Temperature



EA024

Pressure

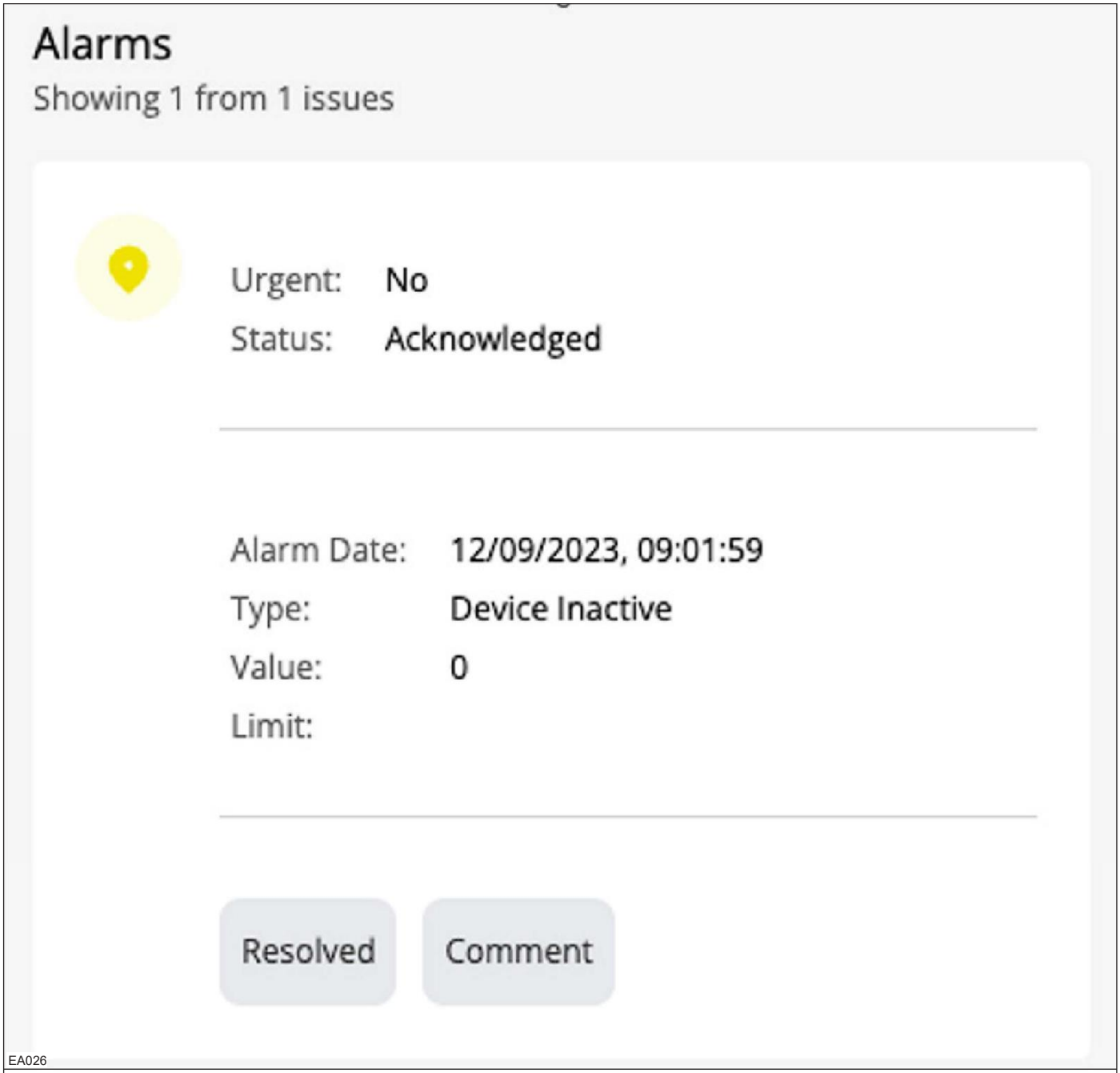


EA025

Flow

6.1 ALARMS

From the Asset page, it is possible for the user to manage any alarms that may have occurred on the device.



Asset Page

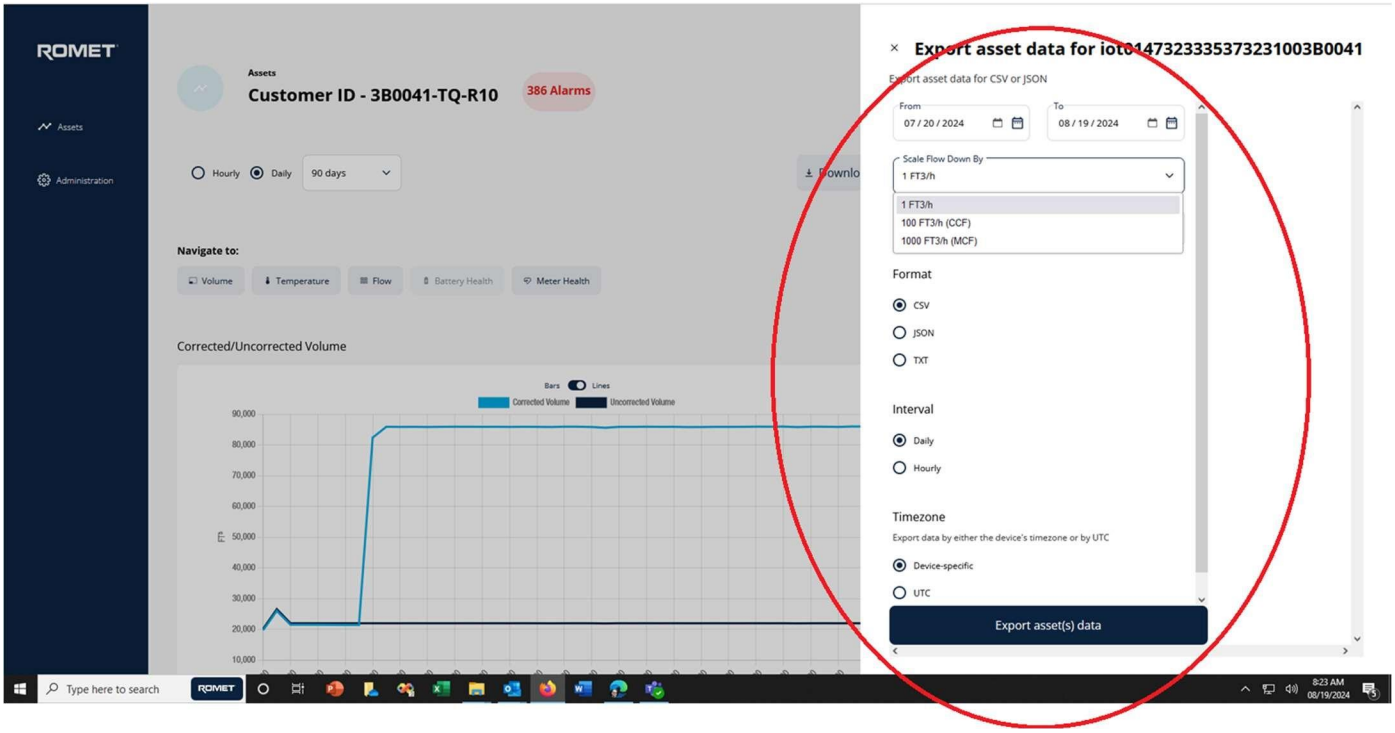
The user can either acknowledge, or resolve the alarm, including adding comments with explanatory notes if required.

6.2 ALARM STATUS

The status of the alarms are as follows:

- Active alarms are indicated in the color 'Red',
- Acknowledged alarms are indicated in the color 'Yellow'.
- Resolved alarms are indicated in the color 'Green'.

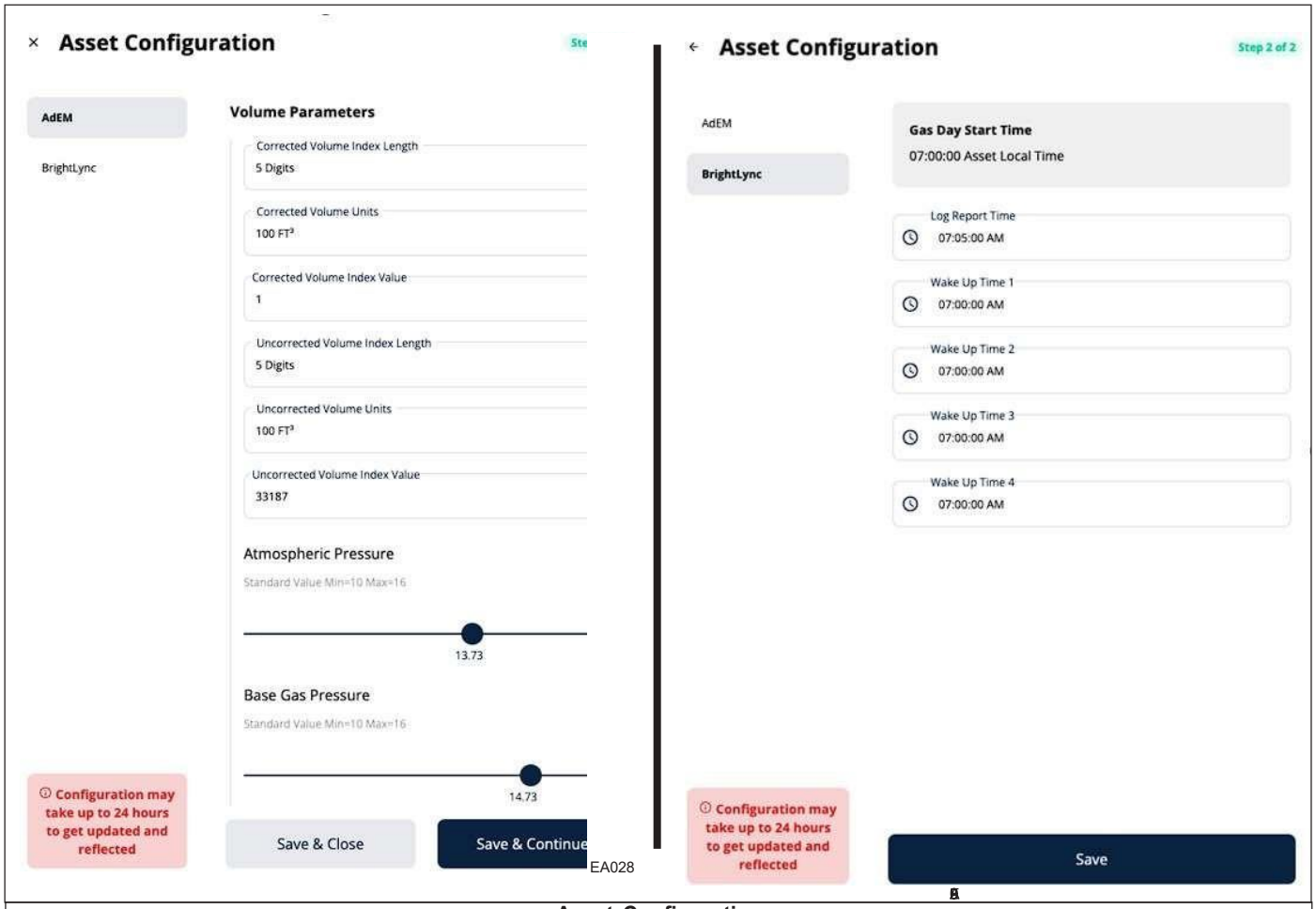
6.3 EXPORT ASSET DATA



The user can export asset data and set the interval. Export data as CCF and MCF, as CSV, JSON, txt, and export devicetime zone or UTC.

NOTE: refer to the information notes in section 6.4. Data will ONLY be exported for the selected asset.

6.4 ASSET CONFIGURATION



Asset Configuration

The following user roles have the permission to configure both Adem and BrightLync devices:

- Company Admin,
- Utility Admin,
- Device Group Admin

The following user roles have the permission to configure both Adem and BrightLync devices:

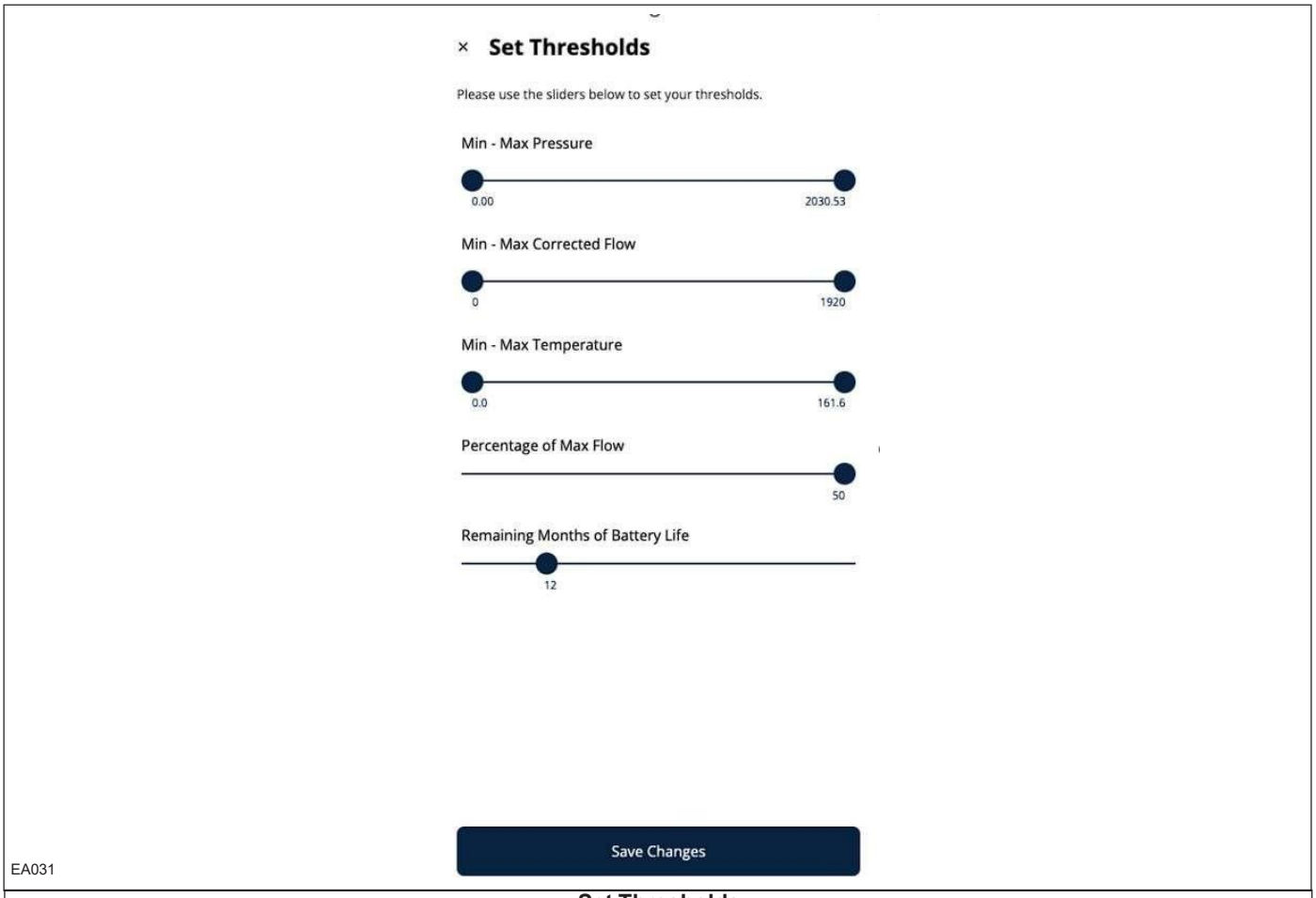
- Device type,
- Meter Size,
- Factor Types

Within the Asset Configuration, the user can configure:

- Volume Parameters
- Alarm Parameters
- Other Parameters including Gas Mole %, Gas Specific Gravity

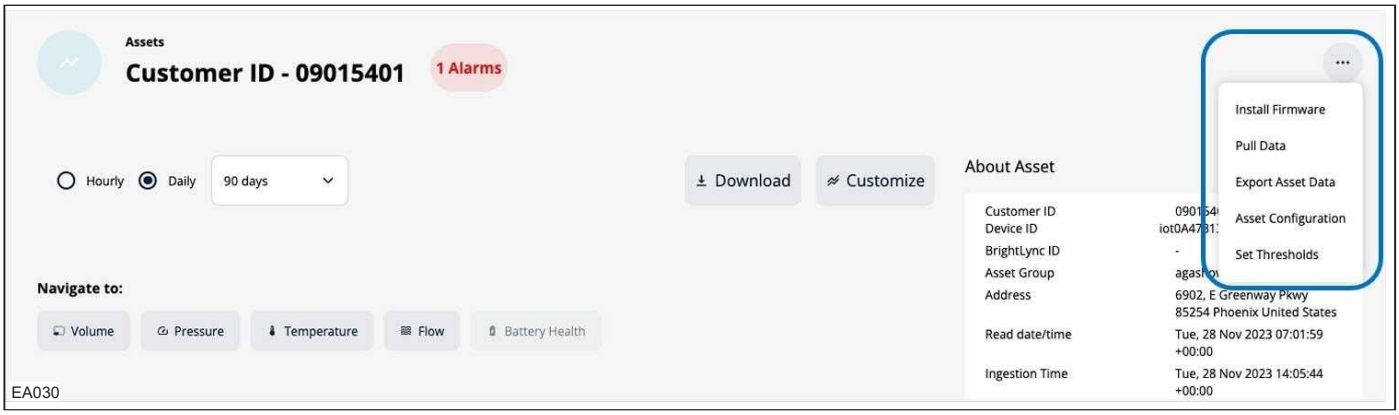
NOTE: Asset Configuration settings may take up to 24 hours to be updated on the device, and reflected in Energy Array Device Manager

6.5 SET THRESHOLDS



Set Thresholds

The Utility Admin user only has the permission to set thresholds for each asset individually.



Options Button

The option will be displayed via navigating to the options button in the top right-hand corner and can be selected from the dropdown menu.

6.5.1 IMPACT OF THRESHOLDS

The configuration/setting of thresholds is the basis for triggering the Alarms, as described in sections 7.1 and 7.2.

It is possible to set the threshold for:

- Maximum / Minimum Pressure
- Maximum / Minimum Corrected Flow
- Maximum / Minimum Temperature
- The percentage (%) of maximum flow
- Remaining months of battery life.

By setting thresholds for these parameters, it allows the user to be notified when one of the thresholds has been breached, triggering an alarm for the specific device it has happened on.

Setting the threshold to notify the user of the remaining battery life enables the Utility to be able to provide service & maintenance management of the device, as the battery can be replaced when required.

6.6 MAP

Map

The user can view the map on the 'Map' tab in addition to the columns of the asset.

There are three buttons on the bottom of the map:

Hide Map – to hide the map

Full Map – to show the map on the full screen

Turn On/Off Dynamic Map – When the dynamic map is 'On', the table will actively update to display the points on the map. When the dynamic map is off, the table will show a complete static asset list.

6.7 METER SET

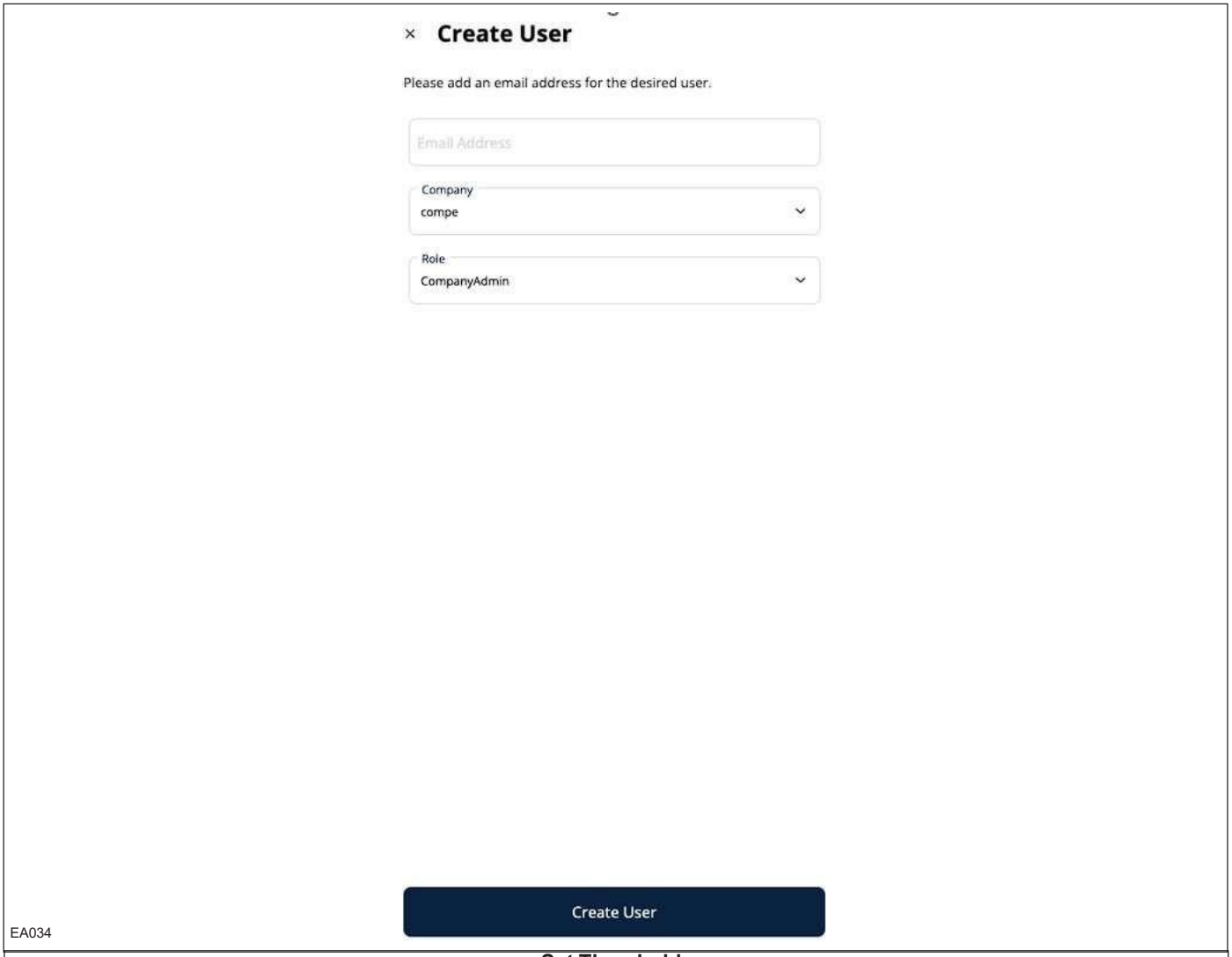
Once a device has been commissioned in the field, it is possible to store an image of the Meter Set within Device Manager.

The image is uploaded within the BrightLync App during the commissioning process, and will be displayed on the Asset page for that specific device

7. ADMINISTRATION

Administration enables two main functions, Manage Users, and My Settings.

7.1 MANAGE USERS



Set Thresholds

- Import Users – The administrator can import the name, email address and group, and other information for the users via a .csv file upload.
- Create User – When the administrator clicks on the Create User button, a modal panel on the right-hand side of the screen will be displayed.

The Company Admin can input the email address, Company and the new users role, before clicking Create User; following which the new user will receive the welcome email as detailed in section 4.1.

7.2 MY SETTINGS

All users can enable or disable the multi-factor authentication on the 'My Settings' page.

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Appendix D
API Instructions

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Introduction

BrightLync API allows access to collected meter and data metrics in an automated (M2M) and predictableway. The API connection process uses TLS version 1.3.

Our API follows the REST paradigm and has the following workflow: **AUTH → API call** (multiple).

The authentication API provides you with an authentication token. This token is to be saved and used in subsequent calls until token expiration (1 hour). You can authenticate using the login user/password usedfor the BrightLync app and Energy Array™. Note that multi-factor authentication should be disabled on the entity being used to call the API.

Please note that *only* the following **ROLES** can make this call, programmatically:

- Company Administrator
- Utility Administrator
- Device Group Administrator

1.0 API Base URL Endpoint

https://7v7crqbu64.execute-api.us-east-1.amazonaws.com

1.1 Authentication

This is the first call and it is necessary to authenticate the access entity. After successful authentication, atoken will be returned which needs to be used for subsequent calls.

Syntax:

POST /dev/auth

```
{
   "email": "email
   address","password":
   "password"
}
```

Example Body Output:

```
{
   "access-token":
"eyJraWQiOiJRWnpaeUNjaGJSUmFcL1Zna0EyV3hBVFhzS2kzcFNOTGhWRXZVRHQ0dG81ND0iLCJhbGciOiJSUzI1NiJ9.
eyJzdWIiOiI4M2FjNWJjZC00OWJhLTRkZjAtOWUxYS03MDkwODcyNTk2ZjgiLCJjb2duaXRvOmdyb3VwcyI6WyJtaV9kZ
XZfZW5lclwvQ29tcGFueUFkbWluIl0sImV2ZW50X2lkIjoiZWYwOGNlZGYtNjUzMS00NDYwLWEyMzEtYzkyOGNmNWY3YTE2I iwidG9rZW5fdXNlIj***",
```

"expiration": 1632845005,

"id-token":
"eyJraWQiOiJmTWRtRmJiVFwvNkRjZmViRVVTMDNJM0FIVDI5SW95QzVZS3c0USswWlJGTT0iLCJhbGciOiJSUzI1NiJ9
.eyJzdWIiOiI4M2FjNWJjZC00OWJhLTRkZjAtOWUxYS03MDkwODcyNTk2ZjgiLCJhdWQiOiIxYzVycXVkdGExYmQwZm
hmNW5hOTlmZXB1OSIsImNvZ25pdG86Z3JvdXBzIjpbIm1pX2RldI9lbmVyXC9Db21wYW55QWRtaW4iXSwiZW1ha
Wxfd mVya WZpZWQiOnRydWUsImV2ZW50XF***",

"refresh-token":
"eyJjdHkiOiJKV1QiLCJlbmMiOiJBMjU2R0NNIiwiYWxnIjoiUlNBLU9BRVAifQ.sSeW5M_QMOEjJn3nYQIhqtrimd7TCtU
ac zAO6nuihQpA1PBevEdGYe5eP-wj5ywXa_Ssw9NRKy882-A6e2BnsUEQ7zFO-jwiE4ANw0q-
Ws5XsVJ5gqhwyOMV6JMgEHtFetE8g2wDghO3xGv9w1CESCq_YNQIefhxITrrp3nuhCeaQferCWum2gyEIUivQipRw
7v0w6
0ZQp9LElEzBgmSzyDbHtuGO353dD0N_Soi**

*","mfa-enabled": false,

"theme": "light",

"logo": "https://public-ui-uploads.s3.us-east-1.amazonaws.com/********/logo-1********130.png"

}

Note: ***You will need to use the "access-token" for the remaining calls outlined in section 2.0 and 2.1.***

2.0 List Devices

This command will return the list of all devices within the group along with their relevant

informationSyntax:

GET /dev/devices?size=100&page=1&full=y

Query Parameters:

- size (optional)
    - Page size of each pagination result.
- page (optional)
    - Current page index in pagination
    - Minimum value: 1
- full (optional)
    - allows you to query tags attached to the device as well as data fields such as:
        - meterSize
        - AdEMFirmware
        - brightlyncFirmware
        - AdEMModel
    - possible values: y | n

⚠ Both size and page must be passed on to enable pagination.

⚠ If a request to this API times out, it may be an indication that pagination must be applied. Ifpagination is already applied, the size may be too large.

Example Body Output:

{

"count": 140,

"rows": [

{

"id": "iot01473234353634310021 0021",

"device_group_id":

"mi_test_engr_qa_metric","meterId": "

210021-KPA-RC17",

"latitude": 43.5929073366955,

"longitude": -79.7565547427539,

"address": "6815, Segovia Rd L5N 1P1 Mississauga

Canada","street": **null**,

"city": **null**,

"postalCode":

null,"country":

null,

"has_alarm":

true,

"thresholds": [],

tags": {

"predefinedTags": [

{

"id": "53761b83-213f-4eb4-9335-7145743bcd7c",

"name": "LP",

"category_id": "3c41bb55-208b-4ddb-8334-e1206a1e7265"

},

```
"utilityTags": [
    {
      "id": "4f2f78a9-6c20-4d97-83aa-27b62f434762",
      "name": "xxxx",
      "category_id": "4c4cc0a7-4d2d-4a9d-a5e9-a4b20f8abd44"
    },
"data": {
   "meterSize": "RM 300 ",
   "AdEMFirmware":
   "D06NM004",
   "brightlyncFirmware": "CCB_2.2.0-
   rc19_C","AdEMModel": "AdEM-PTZ"
}
},.....
```


2.2 Export Device Data:

The following commands are to be used to access the data for a singular device from the list of devices inthe group OR to access data from all devices. The data can optionally be returned in UTC time format

Syntax (singular device):

GET /dev/device/<Iot ID>/export?frequency=daily&format=json&fromDate= 09-29-2024&toDate= 10-02-2024&forceUtc=true

Syntax (all devices):

GET /dev/devices/export?frequency=daily&format=json&fromDate=09-29-2024&toDate=10-02-2024&page=1&size=50&forceUtc=true

Query Parameters:

- Iot ID
  - Device Identifier ie. iot01473234353634310029002A
- frequency (optional) = daily | hourly
  - Daily or hourly logs
  - Default: daily.
- format (optional) = json | csv
  - The format of the exported data.
  - Default: json.

- fromDate (optional)
  - Start date of data to be included in the payload foreach device.
  - Format: YYYY-mm-dd.
  - Default: 31 days before the current date.
- toDate (optional)
  - End date of data to be included in the payload foreach device.
  - Format: YYYY-mm-dd.
  - Default: current date.
- size (optional)
  - Page size of each pagination result.
- page (optional)
  - Current page index in pagination
  - Minimum value: 1
- forceUtc (optional)
  - returns all the data in UTC time format(GMT+0000) if forceUtc= true
  - Default: local time format

⚠ difference between fromDate and toDate can be a maximum of 31 days.

Example Body Output:

[
{
"MID": " 29002A-RC12",
"deviceId":
"iot01473234353634310029002A",
"serialNo": "AA30233257",
"AID": "62000000",
"time": "09/30/2024, 19:30:59 GMT+0000",
"ingestionTime": "09/30/2024, 19:30:49
GMT+0000","pressureUnit": "PSIG ",
"flowUnit": "FT3/h",
"temperatureUnit":

"F","bV": 3.62,
"voltageUnit": "V",
"ccbbV": 3.59,
"dayCV": "58329",
"volumeUnit": "FT3",
"dayUV": "59954",
"GDST": "15 00 00"
},

Contact Us

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Troubleshooting Guide

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TROUBLESHOOTING GUIDE

Message	Resolution Steps
Commissioning	
Commissioning in progress	Wait for commissioning to finish (up to 3-5 minutes). Do not move away from the screen or disconnect the device.
Commissioning Not successful, please click RESET and try again.	Please select RESET. After RESET is successful, please try to commission BrightLync again. If commissioning is still unsuccessful after reset attempt, select 'DISCONNECT' on the top right corner of the screen. Select the blue 'BACK TO SCAN' button at the bottom of the screen. Ensure that the device goes to sleep and disappears from the screen. Once the device disappears you are now ready to initiate the Bluetooth pairing connection with magnet tool and try commissioning the device again.
Commission incomplete. Press RESET and try again.	
Commissioning incomplete, please select the right device group and try again.	
Resetting/Decommissioning not successful see logs for details	Retrieve logs and contact your company administrator to determine the cause
Fetch-LTE-M	
Could not read LTE-M information	Check that the Brightlync firmware version is 2.2.4 or higher. If the device is running an older version, update it to the latest firmware. After the update, ensure the device goes to sleep and disappears from the screen. Once the device is no longer visible, use the magnet tool to wake it and initiate Bluetooth pairing. Then, attempt to recommission the device. If the issue persists, contact your company administrator for further assistance.
Weak signal. Commissioning may be not successful due to the unstable network.	Wait 30 seconds and try to Fetch LTE-M again. If you receive the same message again, signal assessment is required, and this could possibly be resolved by utilizing an external antenna and/or antenna extender.
No signal. Commissioning will not be successful.	Wait 30 seconds and try to Fetch LTE-M again. If you receive the same message again, signal assessment is required, and this could possibly be resolved by utilizing an external antenna and/or antenna extender. If still not successful, further investigation of signal is required.
Permissions and Communications	
Network busy during Initialization	Let the device go to sleep, wait for 60 seconds and try again. If the issue persists, disconnect the device battery and try to reconnect after 10 minutes
Initialization Unsuccessful	Disconnect the device battery and try to reconnect after 10 minutes.
Device was busy and did not respond to the app request	Select 'DISCONNECT' on the top right corner of the screen. Select the blue 'BACK TO SCAN' button at the bottom of the screen. Ensure that the device goes to sleep and disappears from the screen. Once the device disappears you are now ready to initiate the Bluetooth pairing connection with magnet tool and try again.
Looking for Adem	Adem is busy processing. Please wait until the message disappears and try again. If the message appears again, check the connection from BrightLync to Adem
No Adem found	

File transfer not successful please try again	Select 'DISCONNECT' on the top right corner of the screen. Select the blue 'BACK TO SCAN' button at the bottom of the screen. Ensure that the device goes to sleep and disappears from the screen. Once the device disappears you are now ready to initiate the Bluetooth pairing connection with magnet tool and try again.
Bluetooth failed to write	Select 'DISCONNECT' on the top right corner of the screen. Select the blue 'BACK TO SCAN' button at the bottom of the screen. Ensure that the device goes to sleep and disappears from the screen. Once the device disappears you are now ready to initiate the Bluetooth pairing connection with magnet tool and try again.
Configuration is still in progress	General Timeout. Please exit the app, wait 5 minutes and configure again.
Invalid permission to access device	The user does not belong to the 'Device Group' that the device is commissioned to. Please contact your company administrator.
Could not read from BrightLync	The user does not belong to the 'Device Group' that the device is commissioned to. Please contact your company administrator.