Dynamic Load Management

Installation Guide

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

IMPORTANT: Under no circumstances will compliance with the information in a ChargePoint guide such as this one relieve the user of the responsibility to comply with all applicable codes and safety standards. This document describes approved procedures. If it is not possible to perform the procedures as indicated, contact ChargePoint. **ChargePoint is not responsible for any damages that may result from custom installations or procedures not described in this document or that fail to adhere to ChargePoint recommendations.**

Product Disposal

To comply with Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE), devices marked with this symbol may not be disposed of as part of unsorted domestic waste inside the European Union. Enquire with local authorities regarding proper disposal. Product materials are recyclable as marked.

Document Accuracy

The specifications and other information in this document were verified to be accurate and complete at the time of its publication. However, due to ongoing product improvement, this information is subject to change at any time without prior notice. For the latest information, see our documentation online at chargepoint.com/guides.

Copyright and Trademarks

Symbols

This guide and product use the following symbols:

DANGER: Risk of electric shock

WARNING: Risk of personal harm or death

CAUTION: Risk of equipment or property damage

IMPORTANT: Crucial step for installation success

 Read the manual for instructions

 Ground/protective earth

Illustrations Used in This Document

The illustrations used in this document are for demonstration purposes only and may not be an exact representation of the product. However, unless otherwise specified, the underlying instructions are accurate for the product.

Contents

Introduction 1

This document is provided to the installer of Dynamic Load Management (DLM) to ensure that DLM system and its hardware components (Energy Gateway, Smart Meter, and Router) are installed, commissioned, and activated correctly, and the data is transmitted to ChargePoint backend for further analysis.

Before You Begin

IMPORTANT: You must be a licensed electrician and complete online training to become a ChargePoint certified installer. If you do not complete training, you cannot access the ChargePoint network to complete installation.

Find online training at: chargepoint.com/installers

Accessing the Installation Guide

To ensure your safety, review the Installation Guide and familiarize yourself with the contents of each shipping box and the installation steps. ChargePoint certified installers can download the Installation Guide at: chargepoint.com/guides.

DLM Solution Components 2

Dynamic Load Management (DLM) is comprised of the following third-party hardware connected to ChargePoint Cloud Application. The components measure and provide connectivity via LTE/4G to ChargePoint.

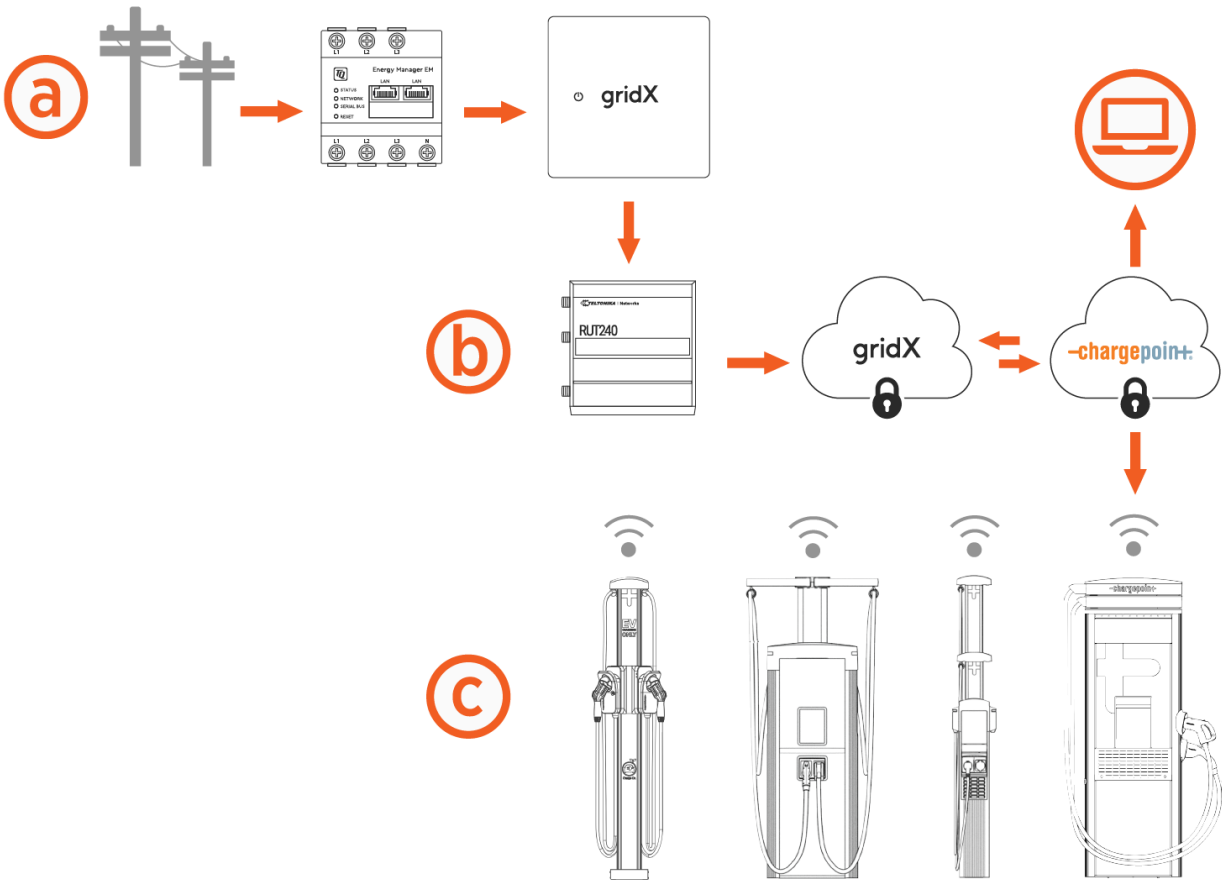
Component	Description
Energy Gateway	Energy Gateway enables the DLM system installed on site to connect to DERs (Distributed Energy Resources), and reports data to the back-end system.
Energy Meter	Electric Meter measures electrical values at the point of connection and makes them available via Energy Gateway.
Router	Industrial 4G LTE Wi-Fi router (for DLM) used for remote connection, and provide the energy data to the ChargePoint backend.

DLM Cloud Architecture and Load Management

The DLM enables multiple stations to operate simultaneously at the highest possible power available (above the actual electrical capacity) without overloading the electrical circuit.

- **Demand charge management or Peak Shaving**: Optimizes energy flows so that the average load does not exceed a certain threshold over a 15-minute time interval during peak times.
- **Breaker Overload Protection**: Ensures the electrical limitations of the site are not exceeded.

ChargePoint DLM solution is a cloud based load balancing architecture as represented in the work flow image below:



(a) Energy Meter monitors the power consumption on site and sends the data to the Energy Gateway.

(b) Energy Gateway sends the data via the router to the (secure) gridX cloud connection, and to ChargePoint.

(c) ChargePoint Cloud Application analyzes the data (associated with the power load) received via API and shares the power on a port level depending on the number of electric vehicles charging on site.

DLM Make Ready 3

The customer's technician prepares the site and makes it ready for the installation of the following DLM components:

- Energy Gateway including Power Supply Unit.
- Teltonika LTE-Router including Power Supply Unit and an antenna with a 3 m cable.
- Energy Meter EM420.

The technician has to confirm the correctness of the site preparation by completing the Construction Signoff Form.

Tools and Materials

Gather the following required tools prior to beginning the electrical or mechanical installation:

- Computer with Ethernet port and installed with standard browser (Chrome, Firefox) to set up the router and Energy Meter.
- Standard tools for installing components in the control cabinet.
- Cables, wires, wire sleeves for wiring the current and voltage measurements on the Energy Meter.
- Standard tools that an electrician is expected to bring for mounting components, potentially including housing for these components.

Ensure that the following required materials are provided by the customer's technician:

- x3 Current transformers (CTs) with matching rating and dimensions, inclusive of wiring (CT required xA/5 A, minimum Class 1).
  Note: If there are current transformers already available on site, check if they can also be used for the new Energy Meter in serial circuit. Energy Meter can be used without external CT's, up to 63 A. For more information, refer to the TQ Data Sheet.
  Note: Refer to **Wiring Setup** section for CT requirements.
- x1 Cat 7 S/FTP Ethernet cable for connecting Energy Meter to the Energy Gateway (**Note:** Ethernet maximum 330 ft (100 m)).
- x1 Cat 7 S/FTP Ethernet cable for connecting Energy Meter to the Router (**Note:** Ethernet maximum 330 ft (100 m)).

- x2 electric sockets ("Type F" required): one located next to the Energy Gateway and another next to the RUT240 router (at the place where the components are installed), preferably inside the distribution panel.

  Note: When placing two power supplies next to each other, consider their size and orientation to avoid blocking.
- x3 Miniature Circuit Breaker (MCB) 10/16 A.
- x6 Terminal blocks (if needed) on a DIN rail to connect the CT wiring.

Site Preparations

Prepare the following with the grid connection in the electrical panel according to the Wiring Setup specification below:

- Install the x3 Miniature Circuit Breaker (MCB) 10/16 A for voltage measurement (L1, L2, L3, and N) for the Energy Meter (labeled) near the planned installation place.
- Install the x3 current transformers (L1, L2, L3) available according to the above specification near the planned installation site of the Energy Meter. Wire and connect the CTs to the terminal blocks and label them.

DANGER: DANGER OF DEATH BY ELECTRIC SHOCK AT THE CURRENT TRANSFORMER TERMINALS

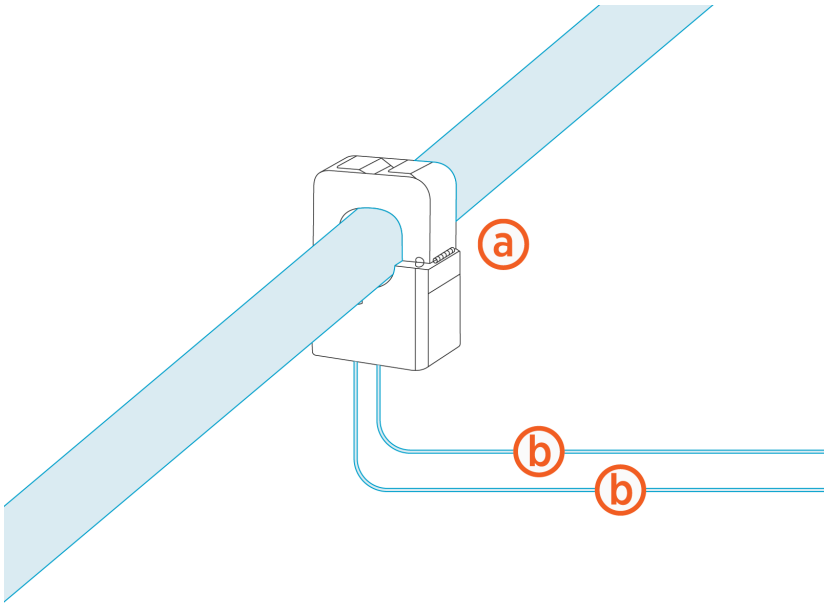
Due to the type of connection, there is a mains voltage of 230 V present at conductors k/s1 and l/s2.

To prevent accidents, put up a notice with this information at this location on site.

The image below illustrates connecting CTs to the Energy Meter using CT clamps. The CT clamps can be positioned around the main wire or cable to ensure the wire is fully enclosed.

- An available location (2,75 in ; 70 mm) for the Energy Meter (4TE) in the distribution panel (recommended) or near by in another panel.
- An available location for the Energy Gateway (4,33x4,33x1,18 in ; 110x110x30 mm) in the distribution panel (recommended).
- An available location for the router (4,13x4,13x1 in ; 105x85x25 mm) with LTE coverage.

  Note: A minimum of 4G reception of -85 dbm is required at the installation location of the router. If the coverage is insufficient, find a location within an Ethernet cable distance of 330 ft (100 m) to the Energy Meter and plan to use an optional external antenna (maximum 9,8 ft (3 m) cable).



(a) Main supply wire

(b) Secondary terminals

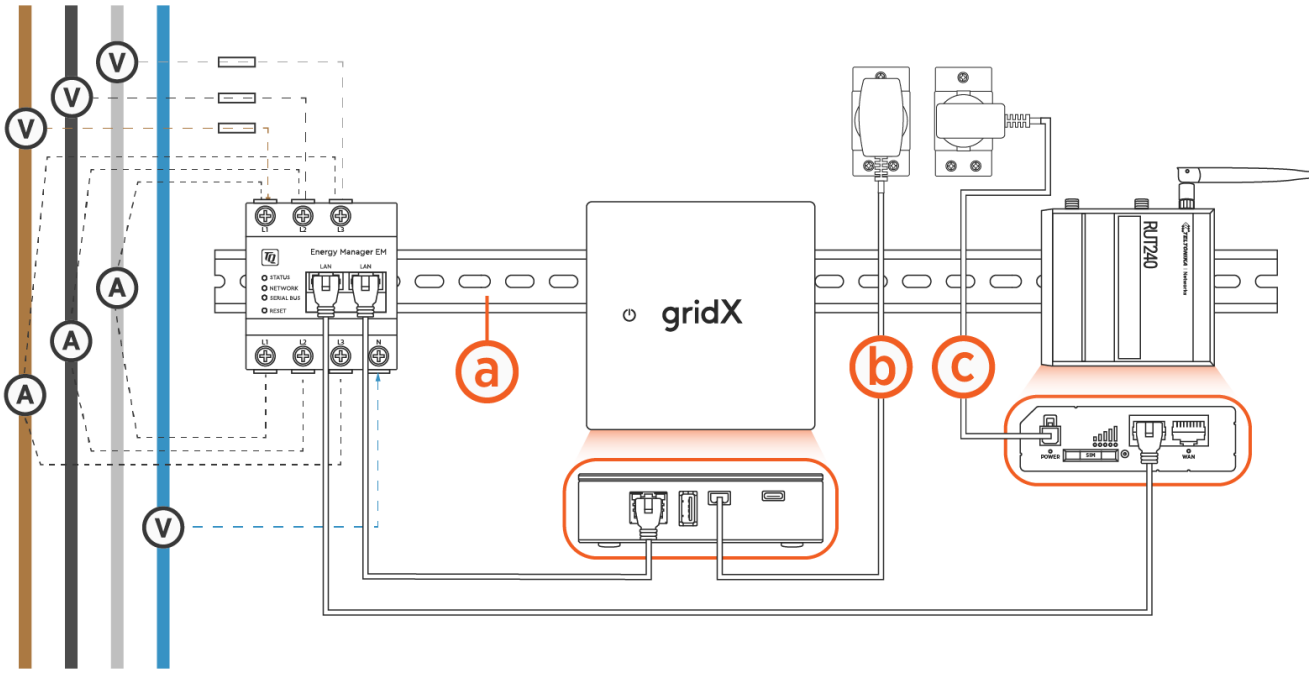
Wiring Setup

Review the following local setup and space requirements. For full product specifications, refer to DLM hardware components datasheets: Energy Meter and Energy Gateway. Using that data, ensure that the installation location is equipped with service wiring that supports the DLM's power requirements.

IMPORTANT:

Current measured directly via meter (EM420) up to 63 A or via three external CTs, and all wiring (except power cords) and two outlets must to be provided by customer and meet the following requirements:

- Secondary current 5 A.
- Accuracy class 1 or better (depending on the transformer ratio).
- No Rogowski coil devices and no groundings in CT circuits.
- An external antenna for the mobile router can additionally be ordered with 9,8 ft (3 m) cable.
- All Ethernet cables can be up to 330 ft (100 m).
- Local internet connection can be used instead of a mobile router.



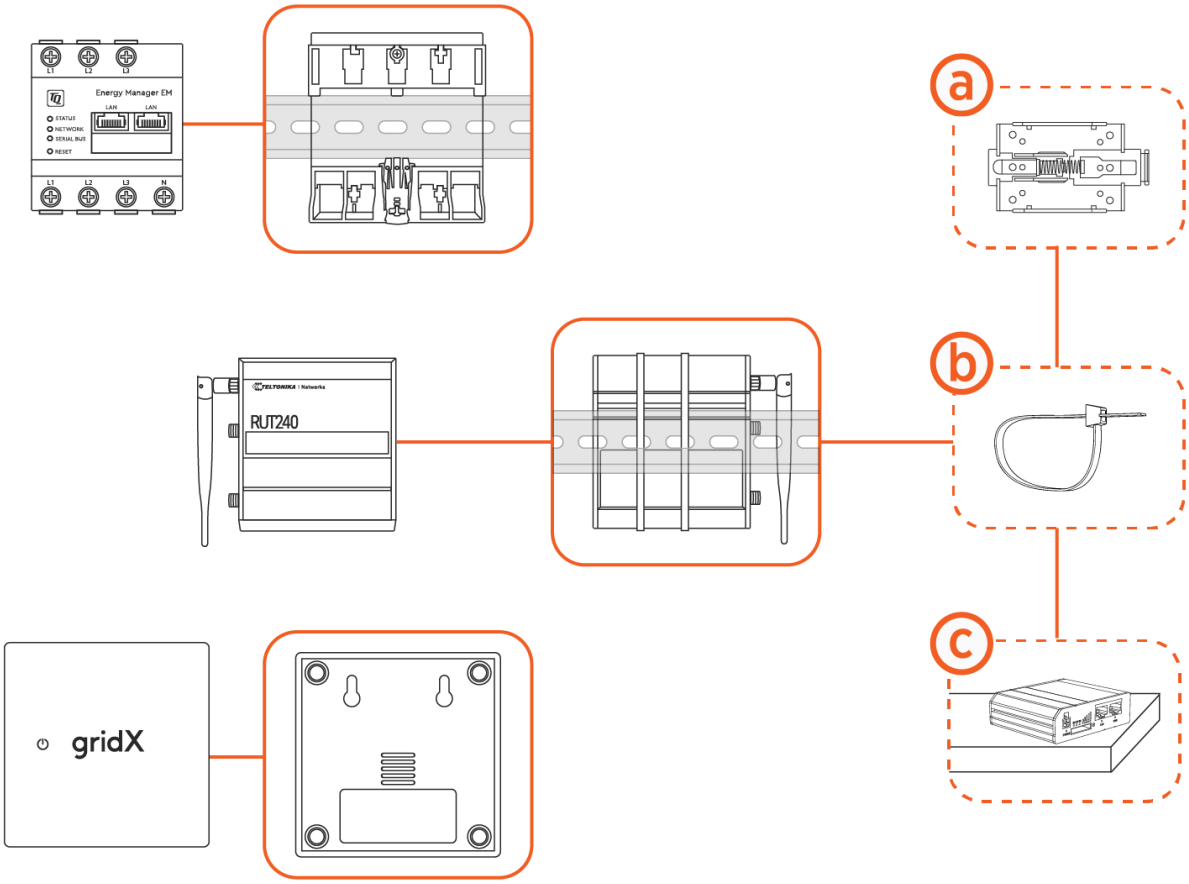
(a) Energy Gateway measurement (4,33x4,33x1,37 in ; 110x110x35 mm) mountable on DIN Rail and router measurement (3,34+0,78x3,34x1 in ; 85+20x85x25 mm) mountable on DIN Rail

(b) Power supply = 3,28 ft (1 m)

(c) Power supply = 6,56 ft (2 m)

Review Mounting Information

Review the mounting information and the scematics prior to DLM installation to ensure that Energy Gateway, router, and the Energy Meter are installed and connected correctly.



(a) Mounting device on a DIN Rail

(b) Mounting device using a zip tie

(c) Mounting device (screw holes on back panel) on a wall using wall-mount brackets or on a shelf using shelf brackets

Note: Equipment for mounting of the two devices (Energy Gateway and router) is not supplied by ChargePoint.

DLM Installation 4

ChargePoint sends an onsite technician to enable a Plug and Play installation of DLM and commissioning of its hardware components (Energy Gateway, router, and the Energy Meter). The technician has to confirm the correctness of the fulfillment by completing the Site Commissioning Form.

To get started with installation, the following steps are performed:

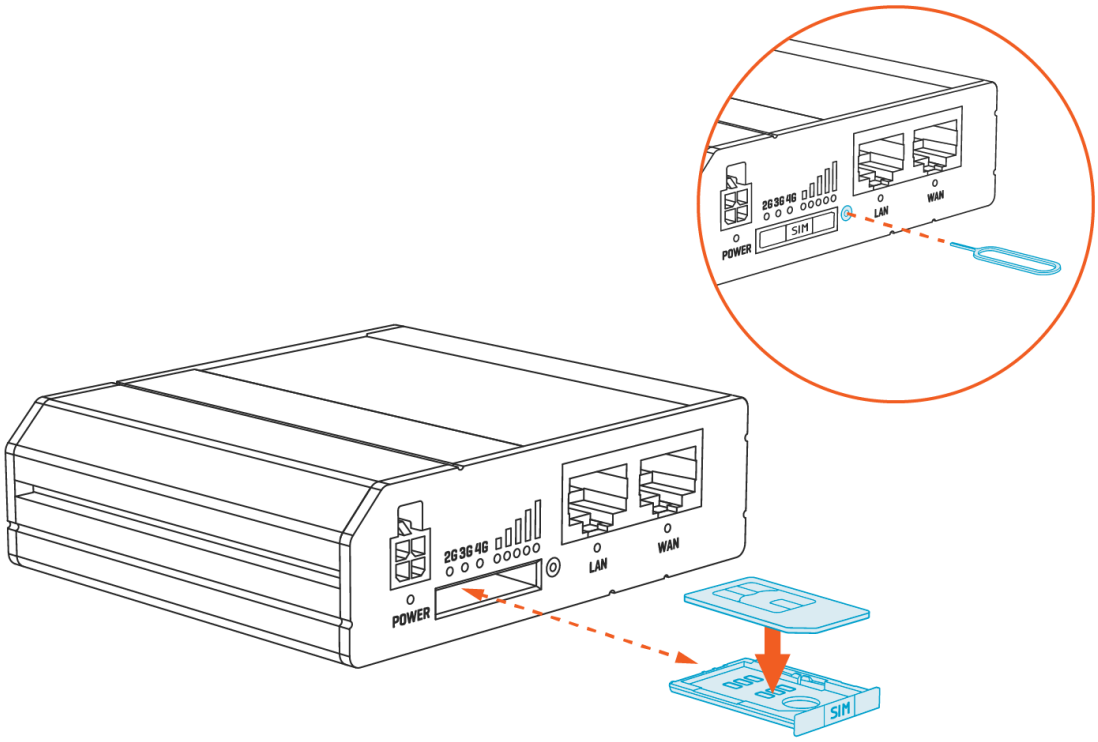
Insert the SIM Card in Router

Note: It is recommended to have a fully configured router from Teltonika (easy and safe solution), where the SIM is already inserted in order to support a plug-and-play installation. Otherwise, perform the steps below to insert the SIM in the router:

1. Push the SIM holder button with the SIM needle.
2. Pull out the SIM holder.
3. Insert the SIM card into the SIM holder.
4. Slide the SIM holder back into the router.
5. Attach the appropriate Mobile and Wi-Fi antennas and ensure they are properly labeled.

   Note: Depending on the type of installation site, the installer can use either the standard antennas or an additional external antenna that has been provided.
6. Connect the 4-pin connector (or the power adapter) to the power socket on the front of the device. Then plug the other end of the adapter into an electrical outlet.
7. Connect to the device wirelessly using SSID and password provided on the device information label or use an Ethernet cable connected to LAN port.

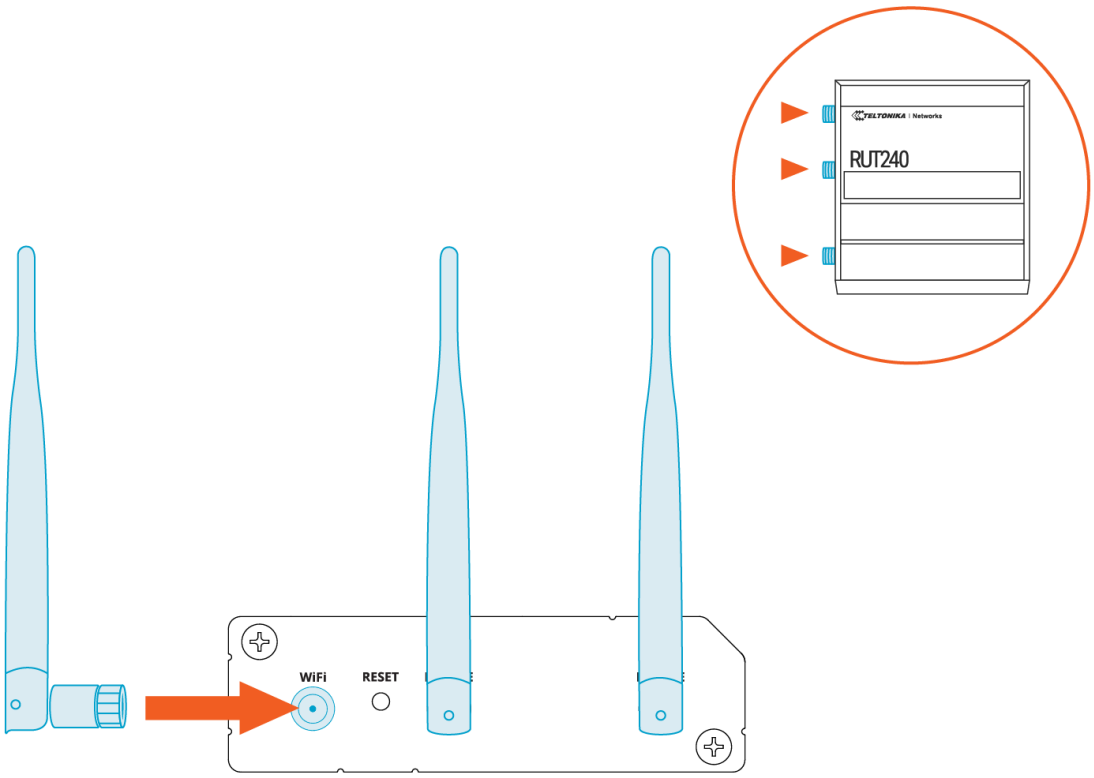
8. Close the SIM card slot securely.



Connect Antenna

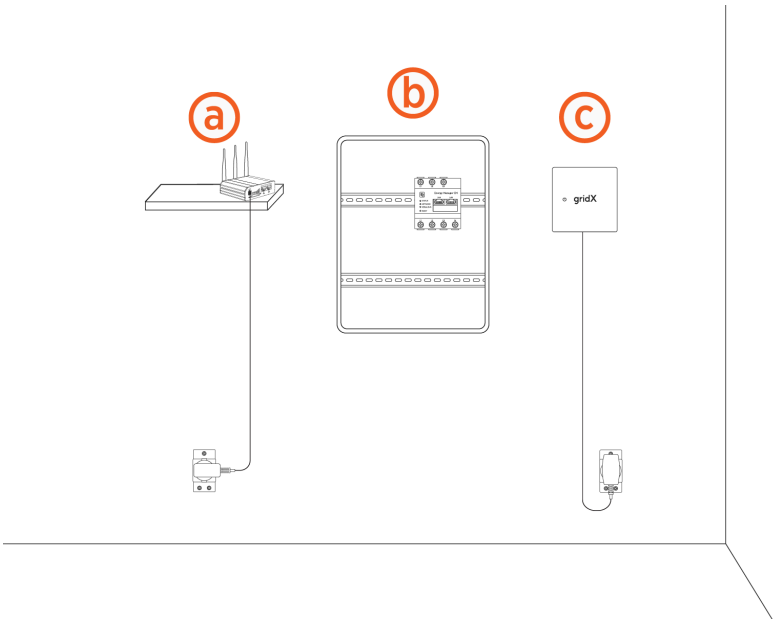
1. Identify the antenna port on the router and securely connect the antenna to the router's antenna port securely.
2. Attach both MAIN and AUX mobile antennas to connectors labeled **Mobile** on the router.

3. Attach Wi-Fi antenna to the connector labeled **WiFi** on the router.



Mount the Components

1. Choose an appropriate location within the electrical panel or a cabinet where the components will be mounted. Mounting process may vary depending on the model and design of the hardware component.
2. Securely mount the Energy Meter, Energy Gateway and the router inside the cabinet (using DIN rail or other).
    - To install the Energy Meter on a DIN rail, hook the Energy Meter onto the top edge of the DIN rail and press down until it latches into place.
    - To install the Energy Gateway and router, locate wall-mount brackets or DIN rail accessory (if provided with the devices), attach the device to the accessory (using screw holes or clips on the back panel).
    - Align or slide the device on DIN rail until it securely snaps in place. Check mounting space requirements for DIN rail mounting (based on device's dimensions when cables or antennas are attached).



(a) Mounting router using a shelf

(b) Mounting Energy Meter using a DIN rail

(c) Mounting Energy Gateway using a wall bracket

Connect the Current Transformer to Energy Meter

1. Locate the six terminals (within the terminal blocks where the CTs are attached). The terminals allow the Energy Meter to indirectly receive data for measuring current and reporting.
2. Connect each phase (L1, L2, L3) to the respective terminals on the Energy Meter.

   Note: In this connection for indirect measurement with current transformers, the CT terminals, labeled l/s2 and k/s1, are connected between the Energy Meter and the MCB for voltage measurement. Specifically, the CT terminal labeled l/s2 is connected to the top (output) terminal of the Energy Meter, while the terminal labeled k/s1 is connected to the bottom (input) terminal of the Energy Meter.
3. Take a note of the password, which is either printed on the side of the Energy Meter casing or provided as a sticker in the box.

Install Voltage Measurement to Energy Meter

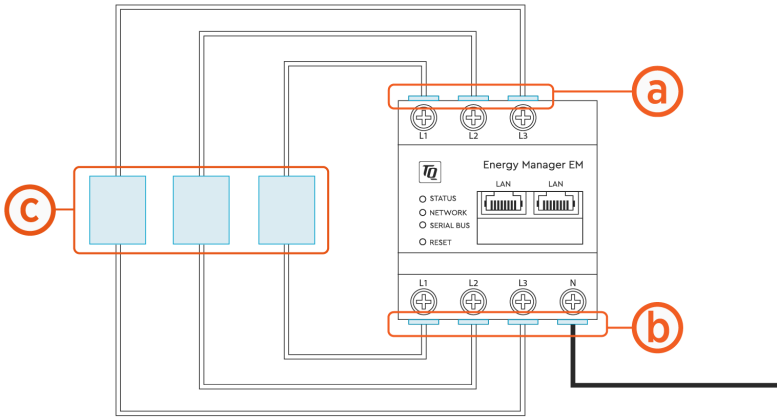
1. Identify the top three terminals on the Energy Meter. The phases L1, L2 and L3 are located on the top, while the neutral phase (N) is located on the bottom of the Energy Meter.
2. Connect the voltage from the MCBs to the Energy Meter using appropriate cables or connectors.

   IMPORTANT: Ensure that both the current and the voltage measurements are connected to the same terminal block.
3. Connect each phase (L1, L2, L3 and N) to the corresponding terminals on the Energy Meter.

   Note: Ensure that the wire cross-sectional area, where the phases are connected, and the tightening torque for the screw terminals comply with manufacturer's specifications.

   - For a three phase power network, connect the phases (L1, L2 and L3) to the respective terminals and the neutral phase (N) to the N terminal of the Energy Meter.

- For a single phase power network, connect the phase (L1) to the L1 terminal and the neutral phase (N) to the N terminal of the Energy Meter.



(a) I/s2 on top (+ Voltage for each phase)

(b) k/s1 on the bottom

(c) Current Transformers

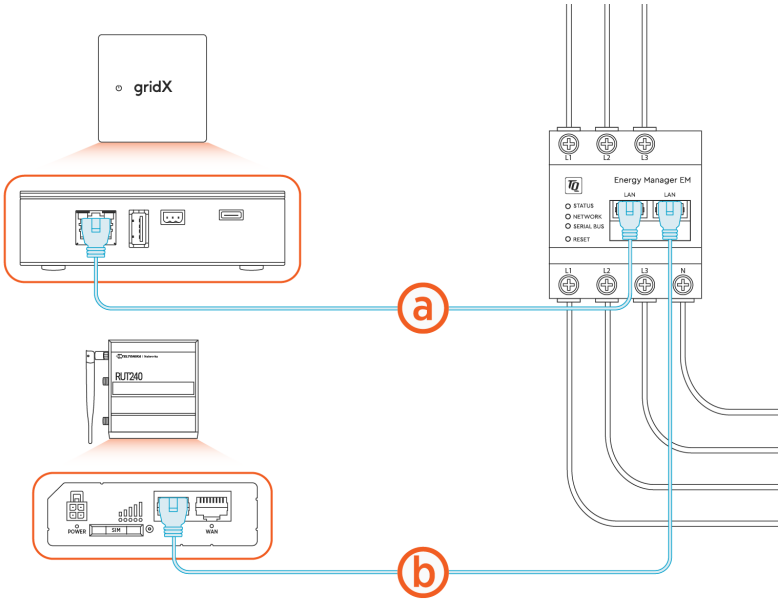
Wire the Components

1. Before you proceed with connecting the Ethernet cables between the various components including the Energy Gateway and the Energy Meter, make sure that the following conditions are met:
    - The communication between the Energy Gateway and the Energy Meter is enabled via ModBus TCP/IP.
    - The Energy Gateway has an Ethernet RJ45 port.
    - The Energy Meter has x2 connectors for RJ45 interface.
        - x1 connector for the Energy Gateway.
        - x1 connector for the router.
        - Both need to be wired using an UTP/FTP cable.

    Note: UTP Cat 7 cable with twisted wires is recommended. The Energy Gateway should be locked in the cabinet.

Connect Ethernet Cables

1. Locate the Ethernet ports on the Energy Meter, Energy Gateway, and router. The ports are labeled as **LAN** or **Ethernet**.
2. Ensure the Ethernet cable is of the required cable length.
3. Connect one end of the Ethernet cable to an available Ethernet or LAN port on Energy Meter (using RJ45 connector). Ensure it clicks in place for a secure connection.
4. Plug the other end of the Ethernet cable into an available Ethernet port or LAN port on Energy Gateway (using RJ45 connector). Again, make sure it is securely connected.
5. Take the other Ethernet cable and connect one end to an available Ethernet port or LAN port on Router (using RJ45 connector).
6. Plug the other end of the Ethernet cable connected to the router into an available Ethernet port on Energy Gateway. This establishes a connection between the router and Energy Gateway.



(a) Ethernet cable connection between Energy Meter and Energy Gateway using LAN (10/100 Mbit), RJ45 LAN port

(b) Ethernet cable connection between Energy Meter and Router using LAN (10/100 Mbit), RJ45 LAN port

DLM Commissioning 5

Commissioning the router and Energy Meter ensures that the router is fully operational, optimized, and integrated into the DLM system or the ChargePoint network. This may include verifying the router's connectivity to specific ChargePoint devices or services, checking the compatibility with other components of DLM (Energy Meter and Energy Gateway), configuring security protocols (firewalls or VPNs), or settings related to Remote Management System (RMS) to remotely manage and monitor network devices, including routers, from the ChargePoint Cloud Application.

Make sure to activate the cellular connection and configure the router to connect and communicate with ChargePoint over the cellular network. Configuring the router settings and parameters (defining the router's IP address, gateway, DHCP/LAN settings, Wi-Fi settings, etc.) ensures that the router is functional, connected to the internet, and a stable network is established to allow the DLM components to communicate data with each other and other devices in the ChargePoint network.

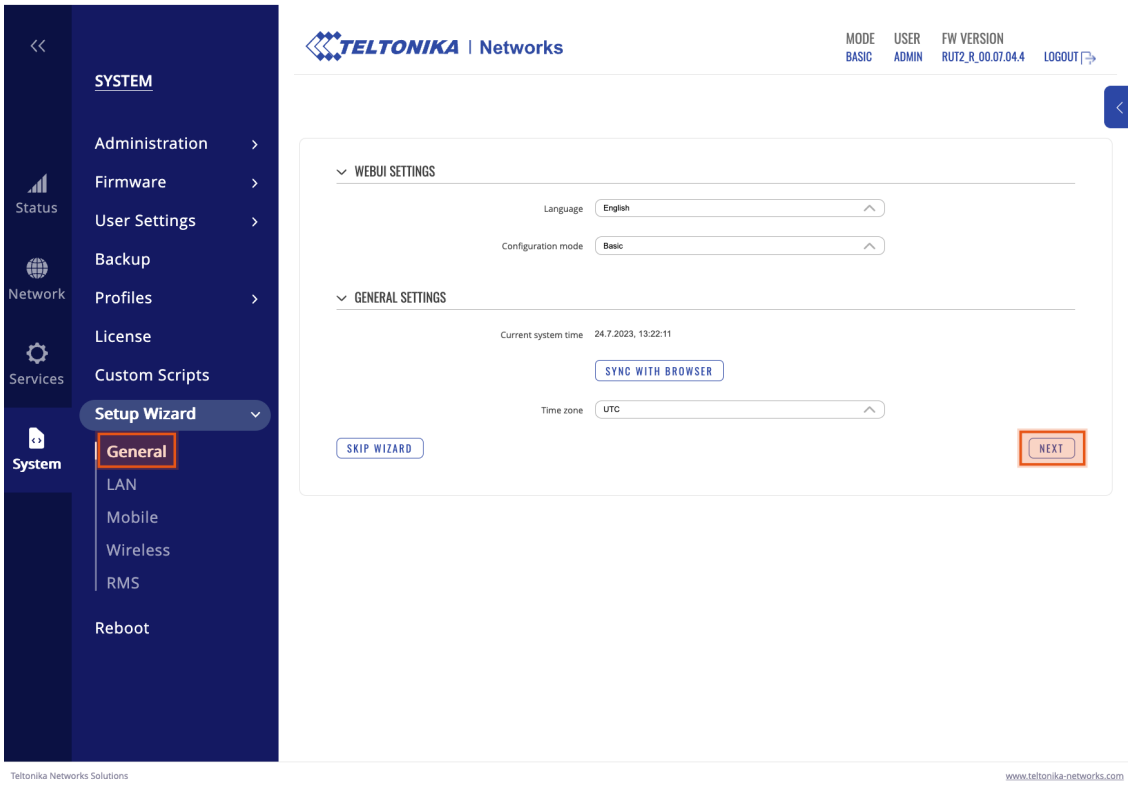
Router Commissioning

To commission the router, perform the following steps:

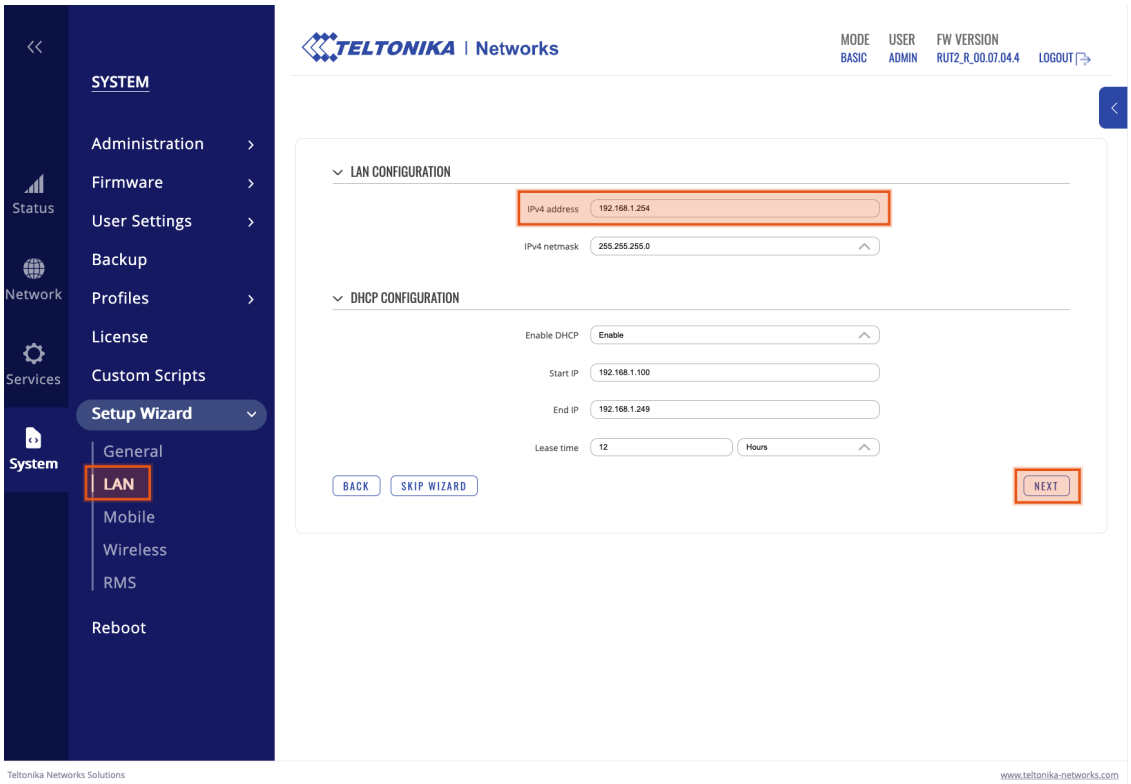
1. Connect the computer to the LTE router to ensure it is activated and has network access. There are two options to choose:
    - Use Wi-Fi details as per router label Wi-Fi SSID and Wi-Fi PASSWORD.
    - Alternatively, use LAN to connect to the router directly.
2. Type 192.168.1.1 in your browser to access the router's interface.
3. Enter the username and password printed on the router. When prompted, change the password to the standard *ChargePoint1* for future logins.
4. Refer to the Quick Start Guide instruction included with the router.

    Note: Note that this guide pertains to Firmware Version RUT2_R_00.07.04.5 (latest and fixed version) or RUT2_R_00.07.04.4. Please be aware that the Guide and UI may differ in other Firmware Versions.
5. On **System** tab (on the left pane), select **Setup Wizard** menu, and perform the following steps for each sub-option within the menu:

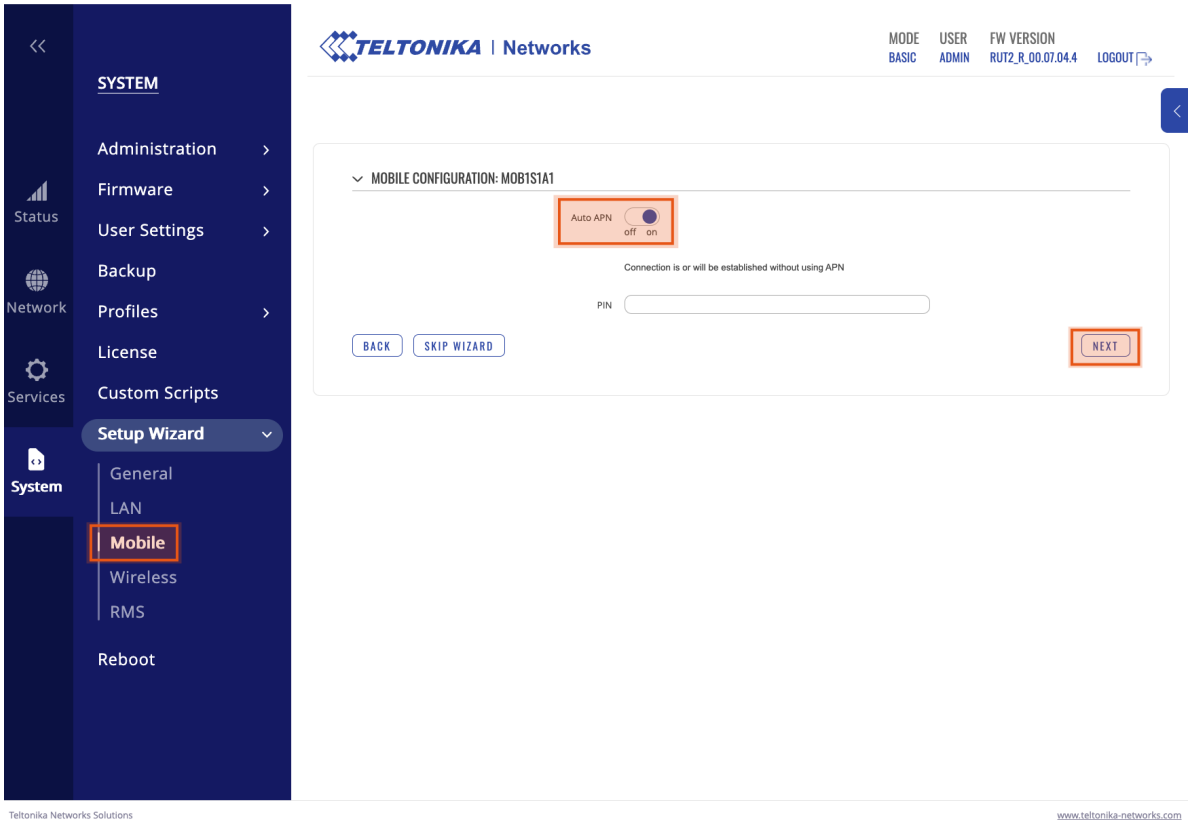
- On **General**, keep the default settings, and click **Next**.



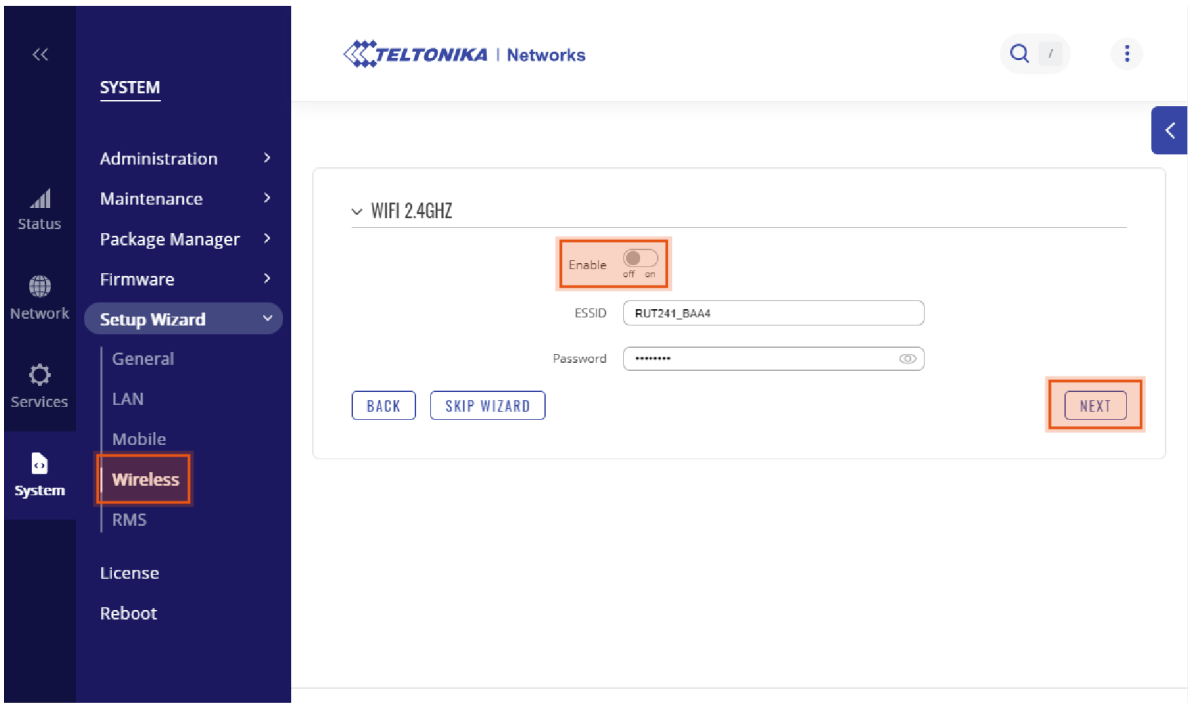
- On **LAN**, update the IPv4 address to 192.168.1.254, and click **Next**.



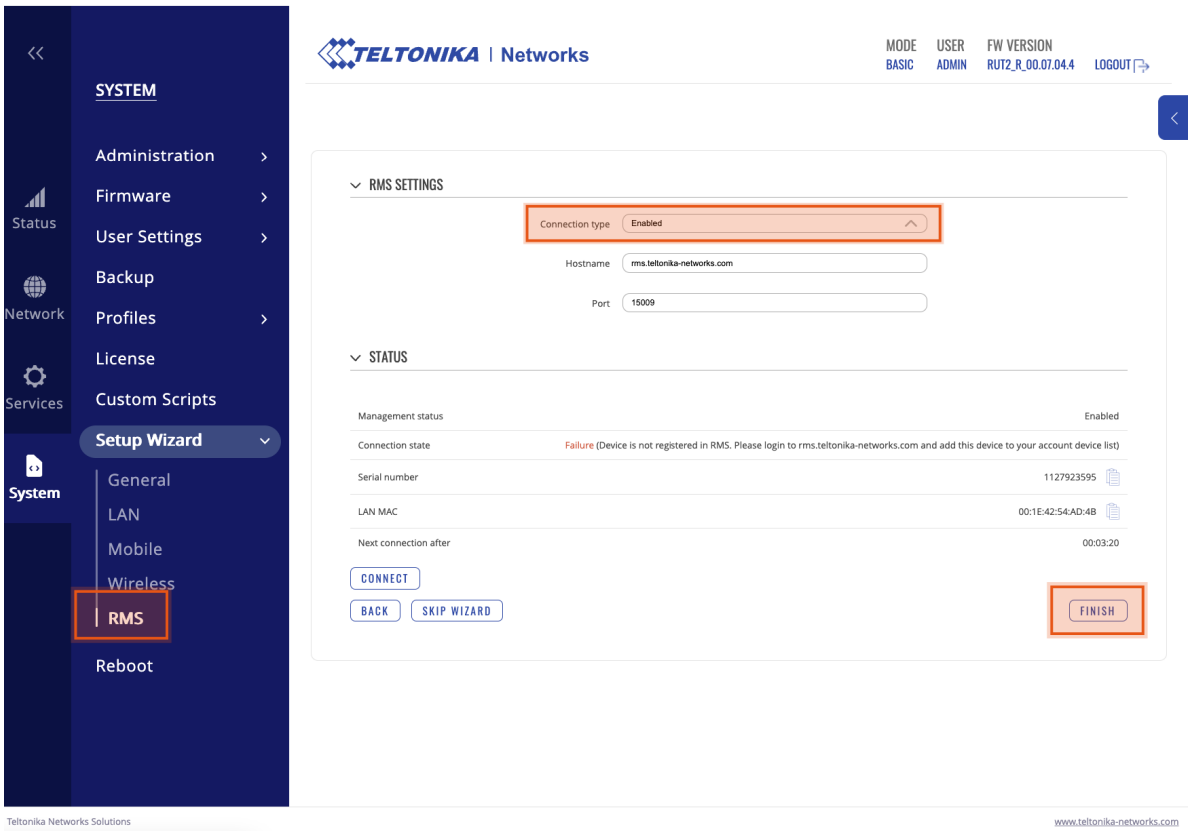
- On **Mobile**, keep the default settings (with **Auto APN** enabled), and click **Next**.



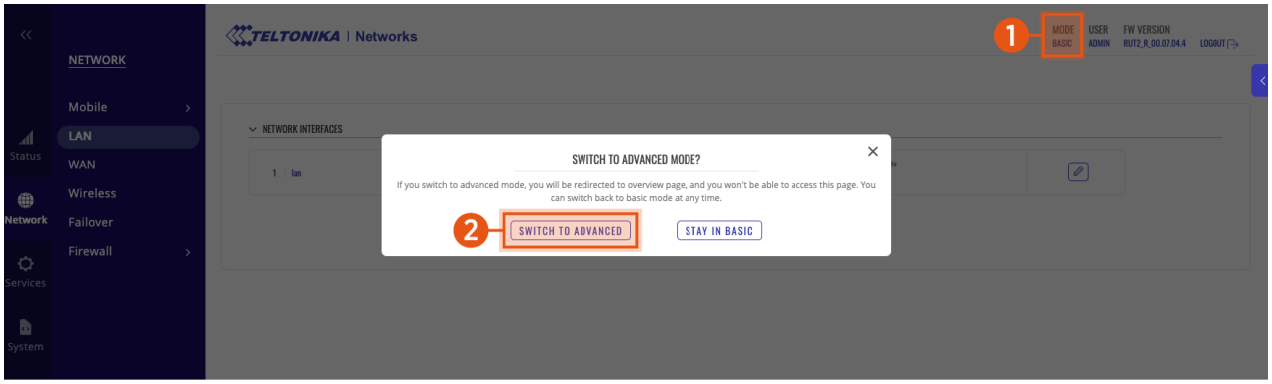
- On **Wireless**, turn the Wi-Fi setting off, and click **Next**.



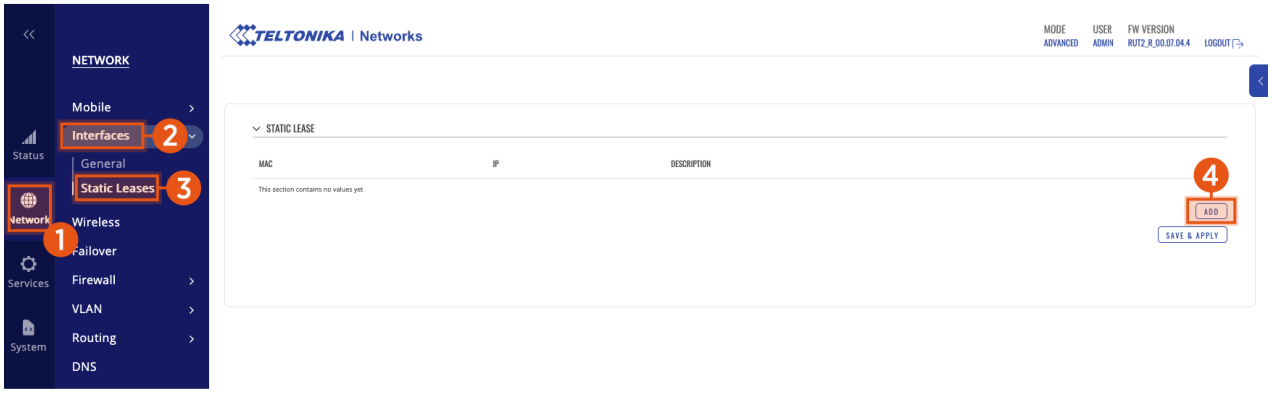
- On **RMS**, change the **Connection Type** to **Enabled**, and click **Finish**. Hostname and Port are displayed by default. They should be: Hostname: *rms.teltonika-networks.com* and Port: *15009*.



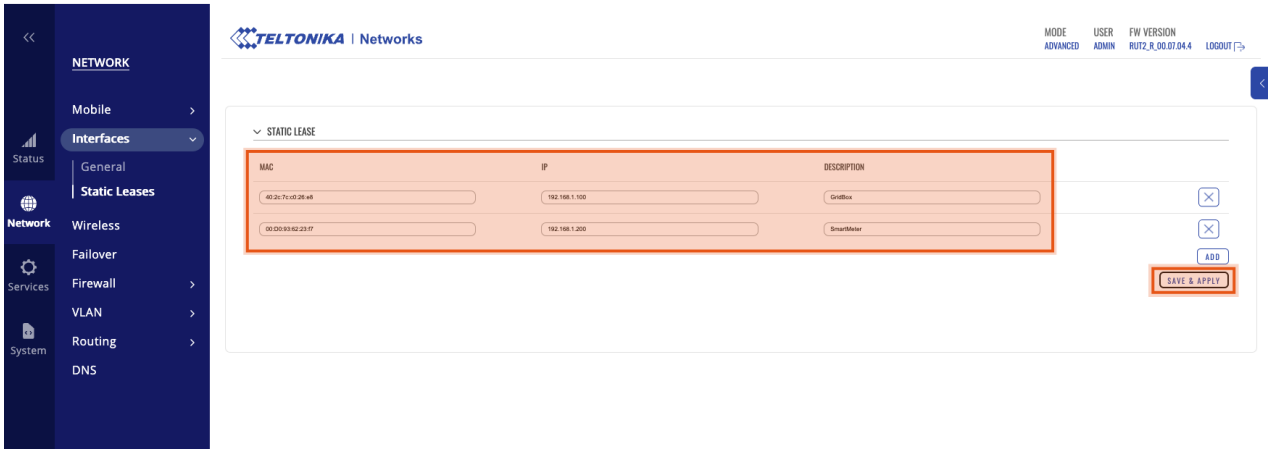
6. After saving the configuration, the system redirects the user to the new IP address 192.168.1.254. If not, manually navigate to log in again.
7. After the backup configuration is complete, access the router using 192.168.1.254 as the browser-address. Ensure the Wi-Fi is connected.
8. After logging in, click **MODE** at the top right, then when prompted, click **Switch To Advanced** to switch from basic to advanced mode.



9. On **Network** tab (on left pane), select **Interfaces**, then **Static Leases**, and click **Add**.



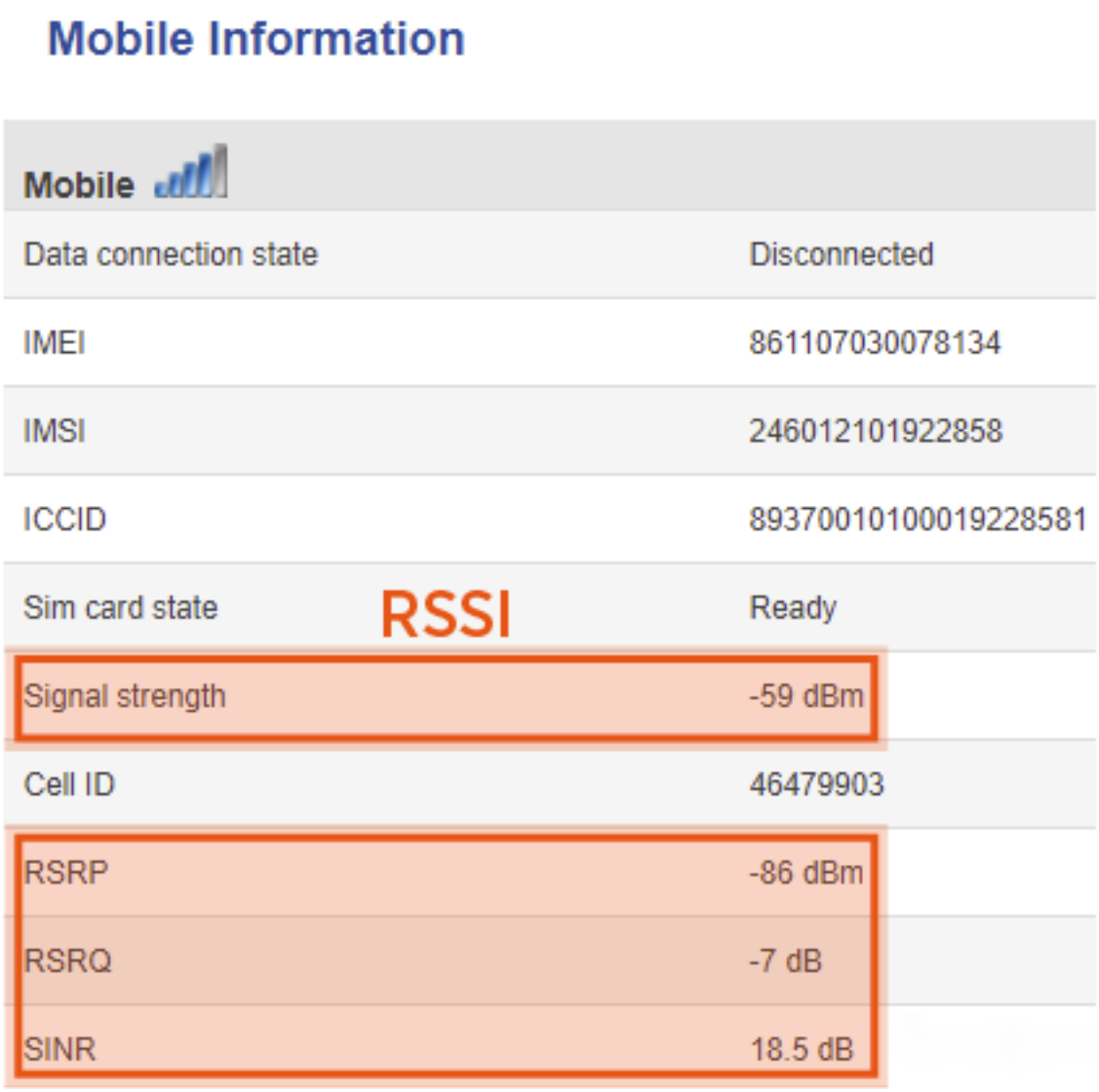
10. Assign static lease details as follows and click **Save** and **Apply**.
    - For Energy Gateway:
        - Enter the MAC address of the Energy Gateway (found on the back of the Energy Gateway).
        - Assign 192.168.1.100 as the IP address.
        - Enter *Energy Gateway* as description.
    - For Energy Meter:
        - Enter the MAC address of the Energy Meter (found on the back of the Energy Meter).
        - Assign 192.168.1.200 as the IP address.
        - Enter *Energy Meter* as description.



Router commissioning is now complete.

11. Check for sufficient cellular network connection strength. To check the 4G signal strength (RSSI) values of the RUT device, log on to the router's WebUI and go to **Status**, then **Network**, and click to view **Mobile Information**. The signal strength must be displayed as -85 dbM or better (>-85 dbM e.g. -70 dBM).

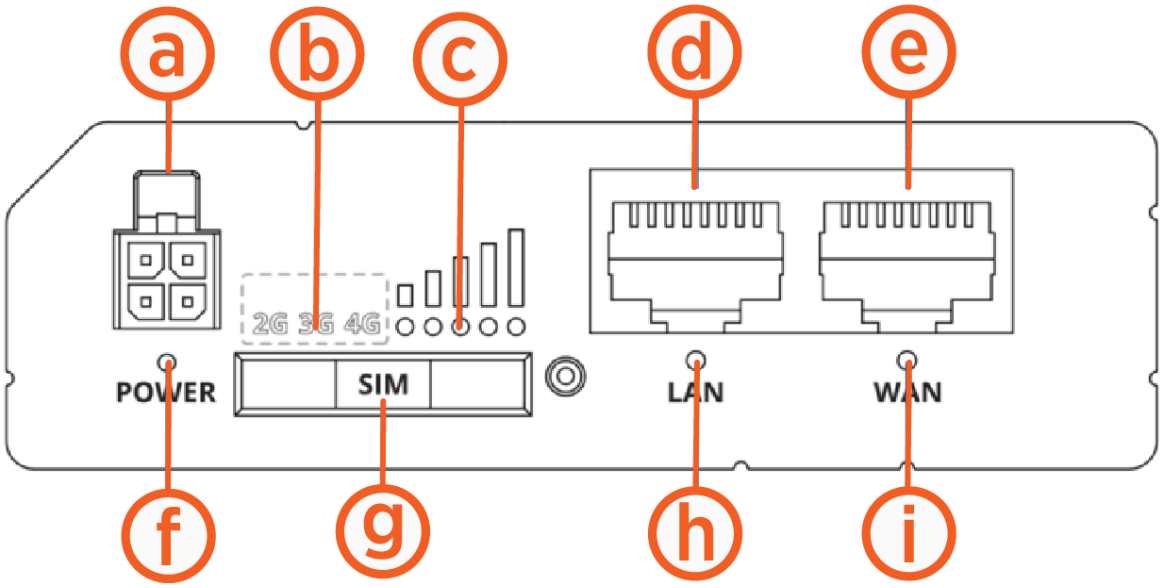
Note: It can take up to 30 minutes until the router is connected with the service provider.



RSSI

RSSI	Signal strength	Description
> -65 dBm	Excellent	Strong signal with maximum data speeds
-65 dBm to -75 dBm	Good	Strong signal with good data speeds
-75 dBm to -85 dBm	Fair	Fair but useful, fast and reliable data speeds may be attained, but marginal data with drop-outs is possible
-85 dBm to -95 dBm	Poor	Performance will drop drastically
<= -95 dBm	No signal	Disconnection

12. Check the signal strength on the router via the LED bars, which should display at least 4 out of 5 bars. If the signal strength is less than -85 dBM or 4 LED bars, reposition the router's antenna.

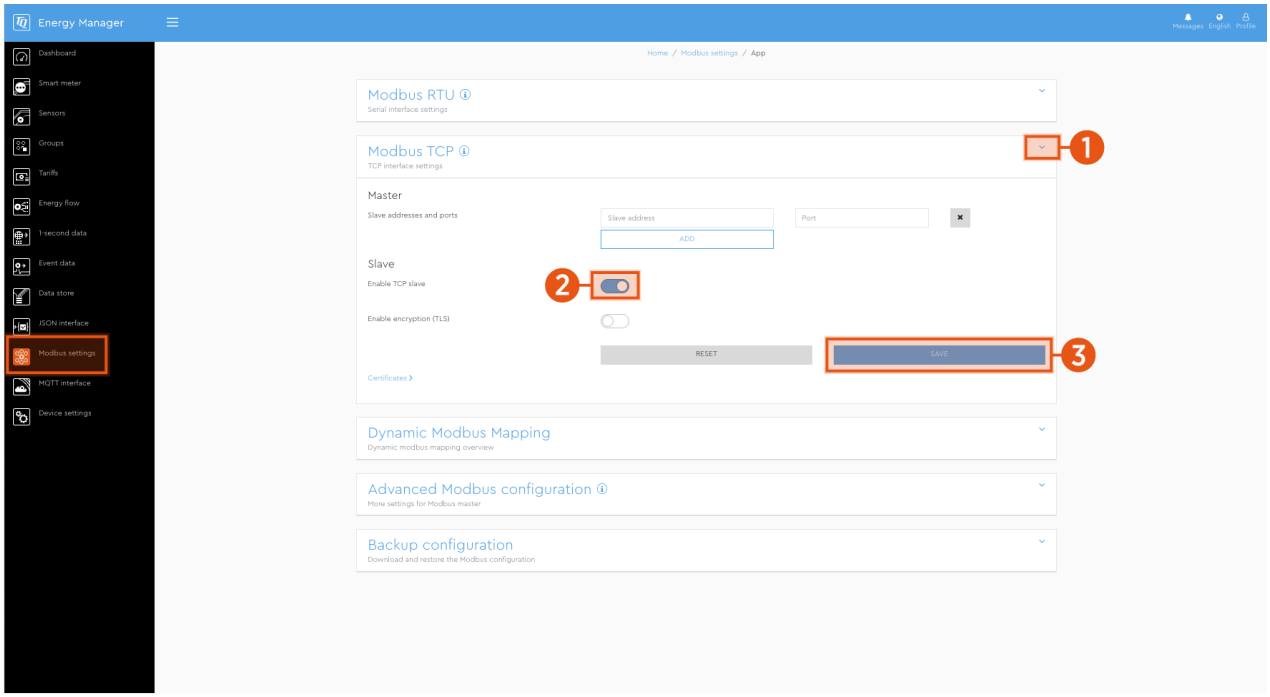


(a) Power socket
(b) Mobile network type LEDs
(c) Mobile signal strength indication LEDs
(d) LAN port
(e) WAN port
(f) Power LED
(g) SIM slot
(h) LAN LED
(i) WAN LED

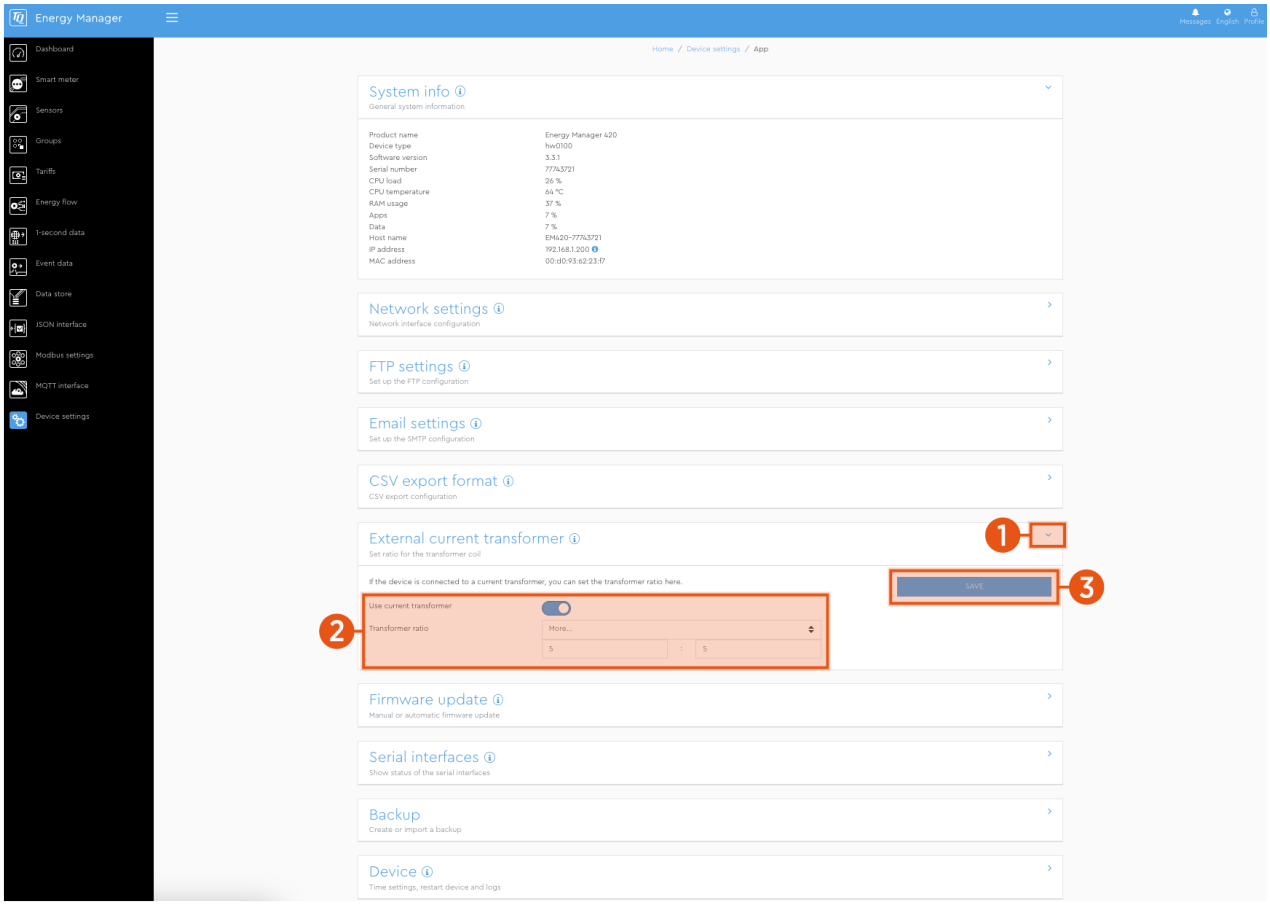
Energy Meter Commissioning

For commissioning the Energy Meter, perform the following steps:

1. Connect to both the power and the Ethernet port of the router. The IP address is assigned automatically:
    - Open your browser and go to http://192.168.1.200.
    - Enter the password (printed on the side of the Energy Meter).
2. On **Energy Manager** window, select **Modbus Settings** and the corresponding dropdown (arrow on top right) and under **Slave**, ensure that **Enable TCP slave** is enabled. Click **Save**.



3. If External CT-clamps are used, go to **Device settings**, open the dropdown for **External current transformer**, enable **Use current transformer**, set your Transformer ratio, and click **Save**.



Note: Check and compare the measured values with a local meter if possible.

Energy Gateway Commissioning

For commissioning the Energy Gateway, perform the following steps:

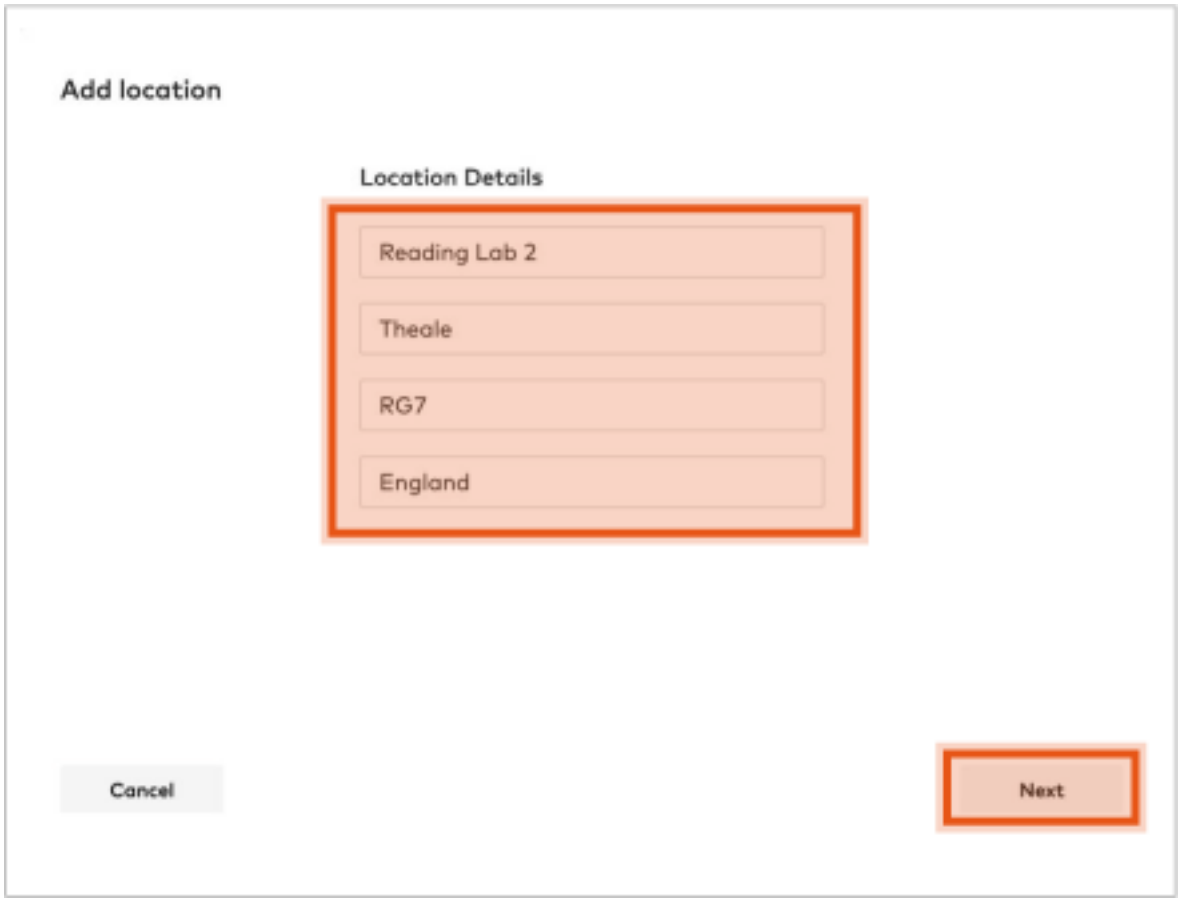
1. Connect to the Ethernet port of the router or the 2nd Ethernet port of Energy Meter.
2. Keep note of the following:
    - The IP address is assigned automatically.
    - No local configuration is needed.
    - If the router has internet access, the Energy Gateway will connect to its backend. During activation, the LED will display a mix of pulsating red and pulsating blue until the Energy Gateway is fully activated.

      Note: Call ChargePoint Owner Support to provide Energy Gateway Startcode and confirm the following:
    - Energy Gateway is online in the backend.
    - Energy Meter is online.
    - Fill out the Site Commissioning Form.

Software Commissioning (ChargePoint Owner Support)

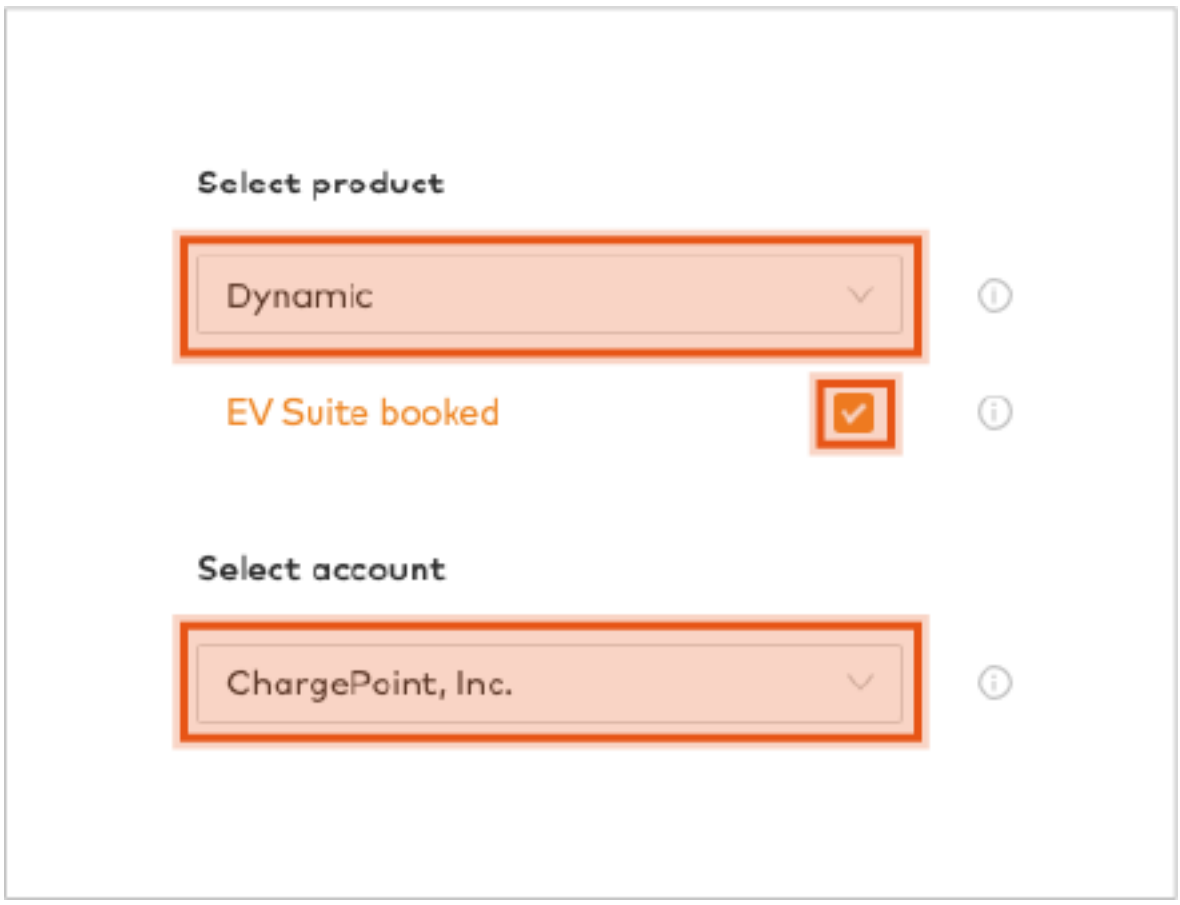
For commissioning the software with gridX Platform XENON, perform the following steps:

1. Log in to https://xenon.gridx.ai using the password provided by gridX or an existing XENON admin at ChargePoint.
2. Go to **Locations** and change the filter status to **No Gateway**.
3. On **Add Location** window, provide the location details and click **Next**.

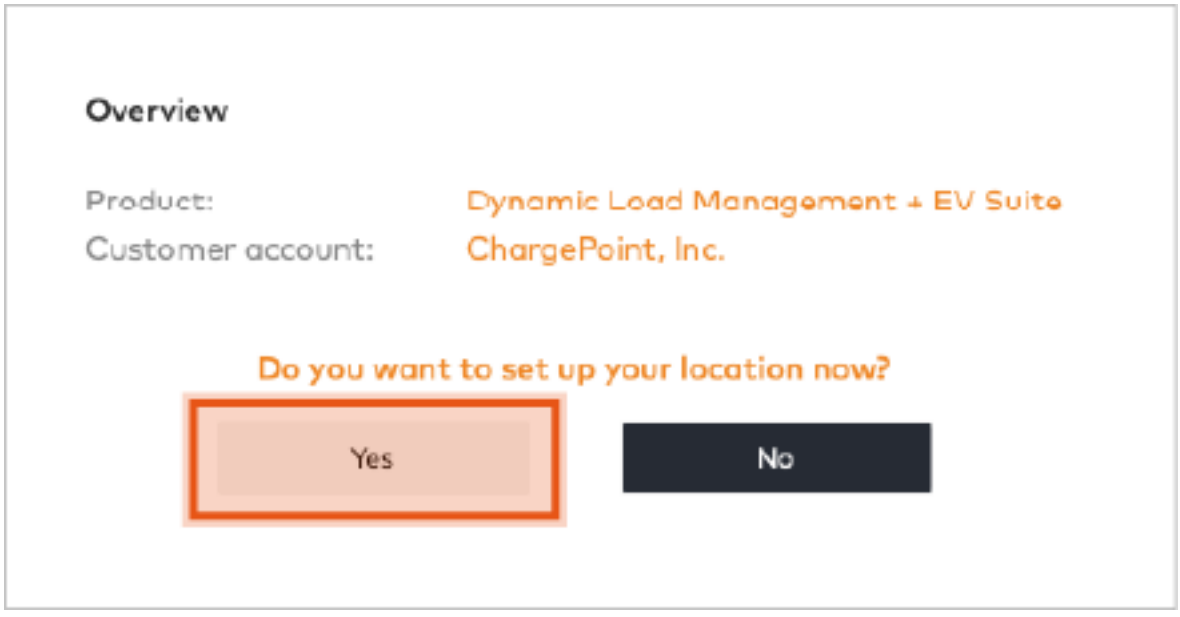


4. On the ChargePoint Cloud Application, locate the ORG and copy and paste the *Org Name* as the new *Location Name*.

5. Select **Dynamic**, enable **EV Suite**, and choose the account ChargePoint, Inc.



6. Choose **Yes** when prompted with **Do you want to set up your location now?**.



7. On the **Location setup** window, enter the required details to activate the Energy Gateway and then click **Next**.

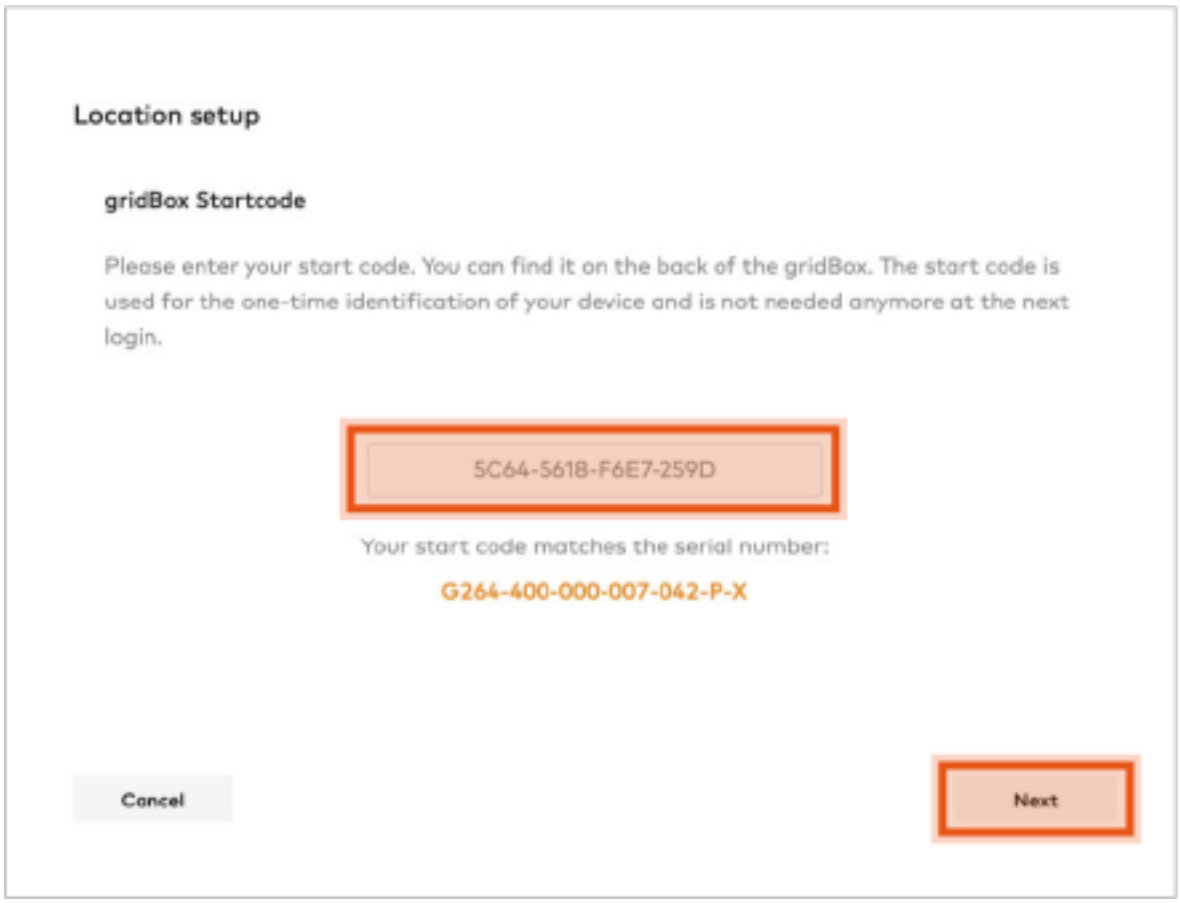
   Keep note of the relevant information before you begin the activation process:

(a) **Start code sticker**: The technician will find this written on the cardboard box containing the Energy Gateway and on a label attached to the Energy Gateway (as shown in the image below).

(b) **Energy Gateway Serial Number**: Once the start code is entered, the full serial number of the Energy Gateway will be visible in the backend for verification.

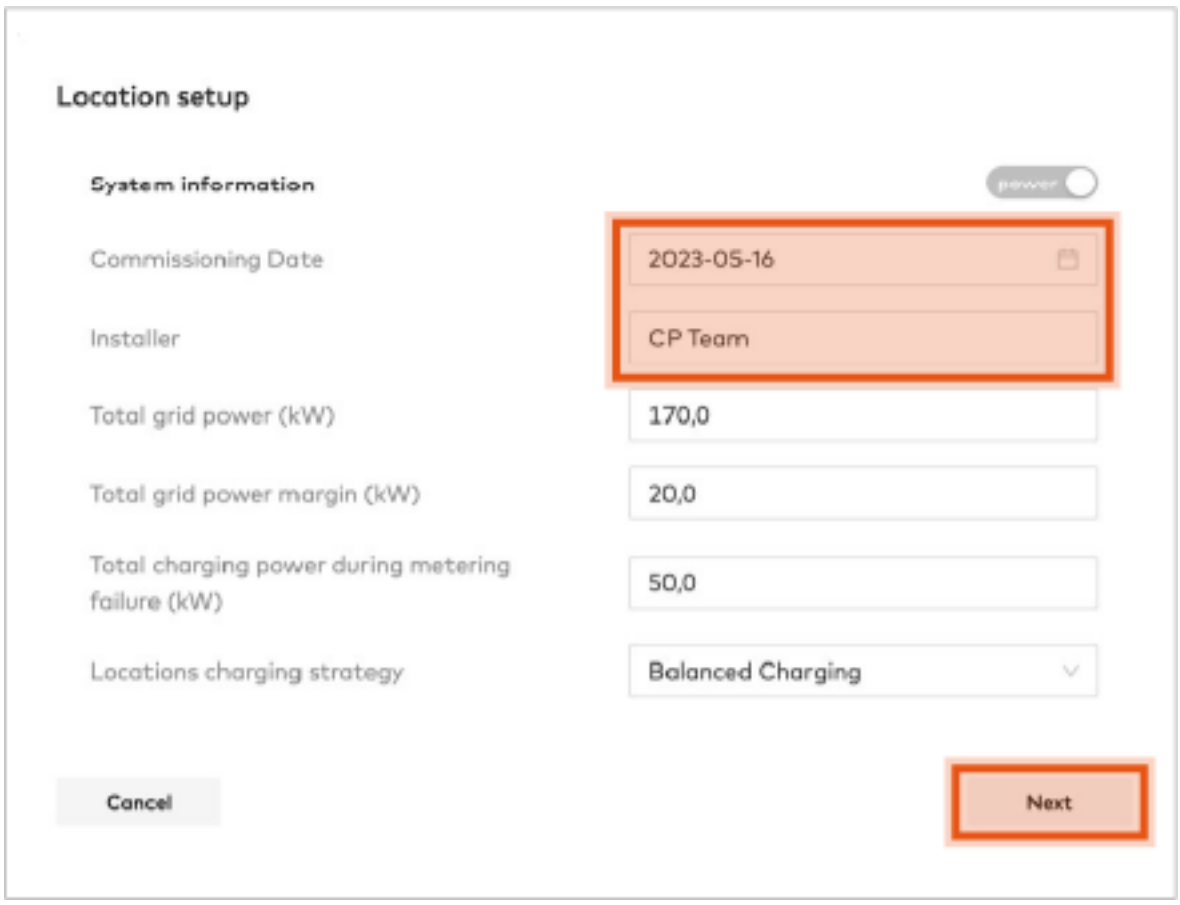
(c) **Total grid power on site**: This information can be found near the electricity meter or in the Site Qualification Form.

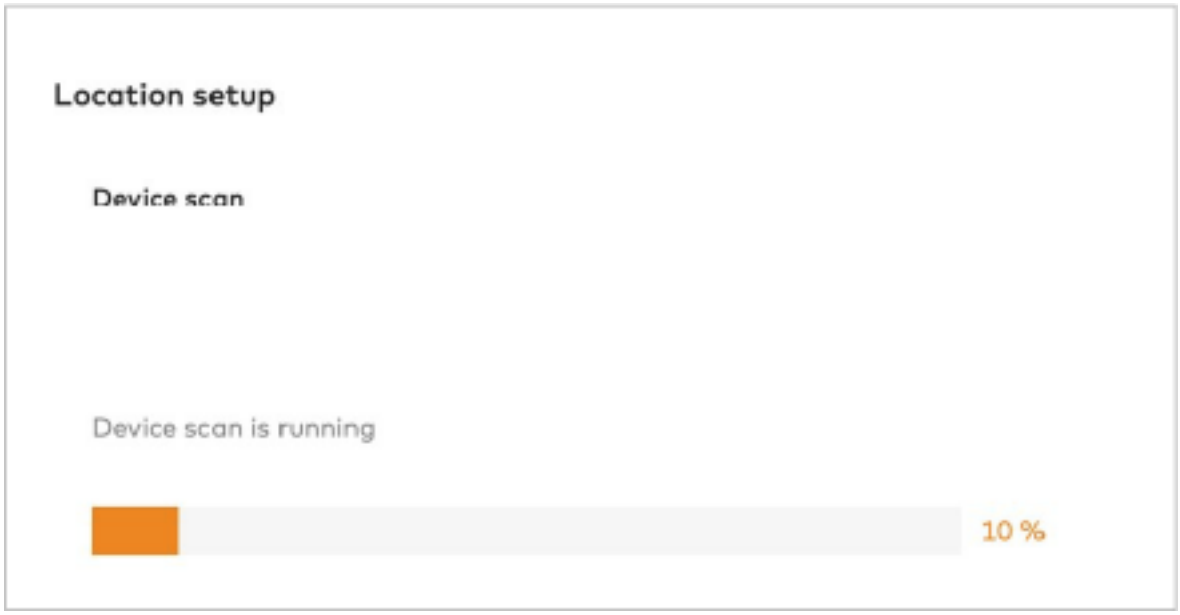
(d) **LED light color**: The color of the LED light on the Energy Gateway will turn blue shortly indicating the device's status as activated.



8. Enter the location details (the installer will need to check the meter for this information). The last field, **Location Charging Strategy** (on **Location Setup** window), will always be set to **Balanced Charging** unless the customer has specified otherwise.

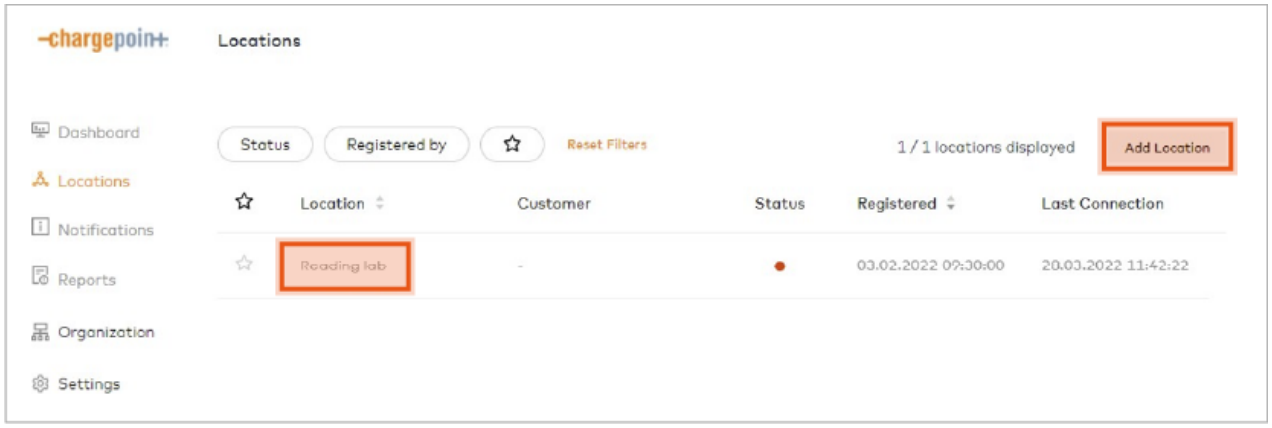
9. Upon clicking **Next**, the device begins scanning.



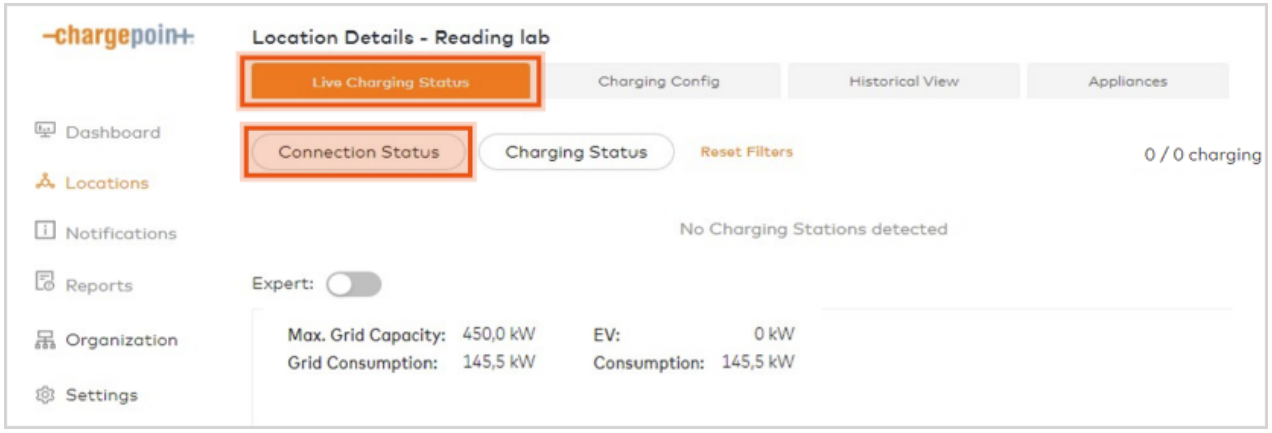


Note: This will likely take one to two minutes to connect to the gridX background.

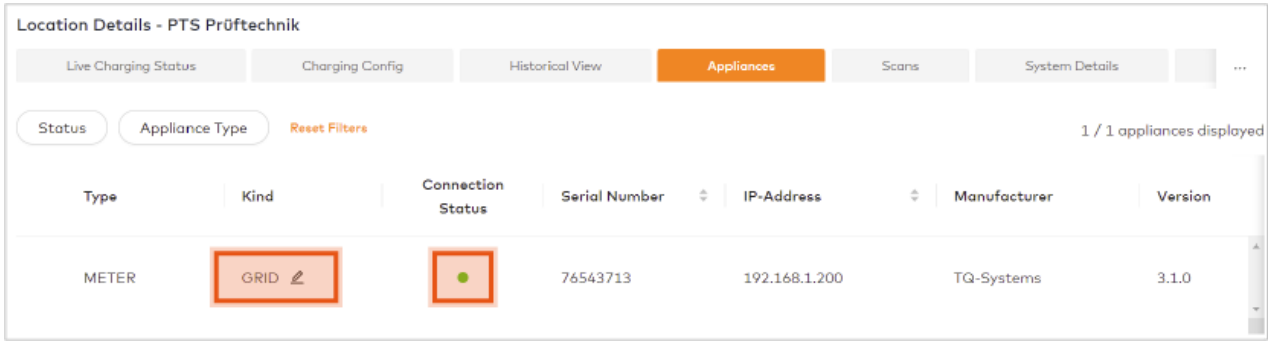
10. Once connected, click **Add Location** to assign the meter's location to the Energy Gateway.



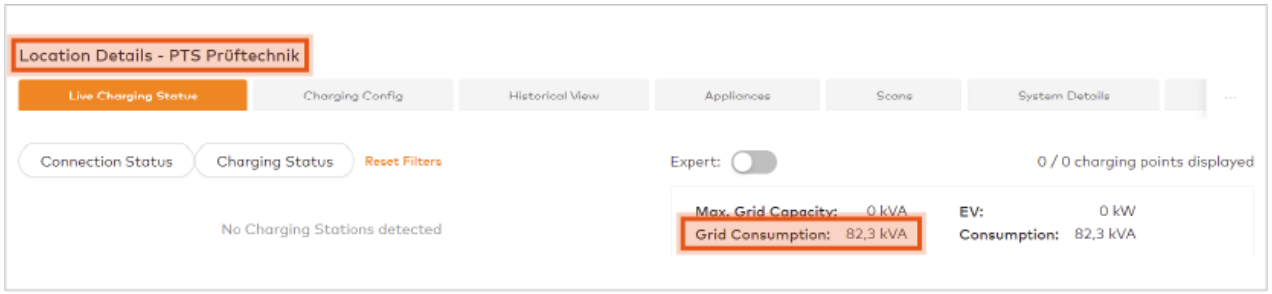
11. Select the specified meter location (i.e., Reading Lab) and under **Live Charging Status**, check the meter connectivity status.

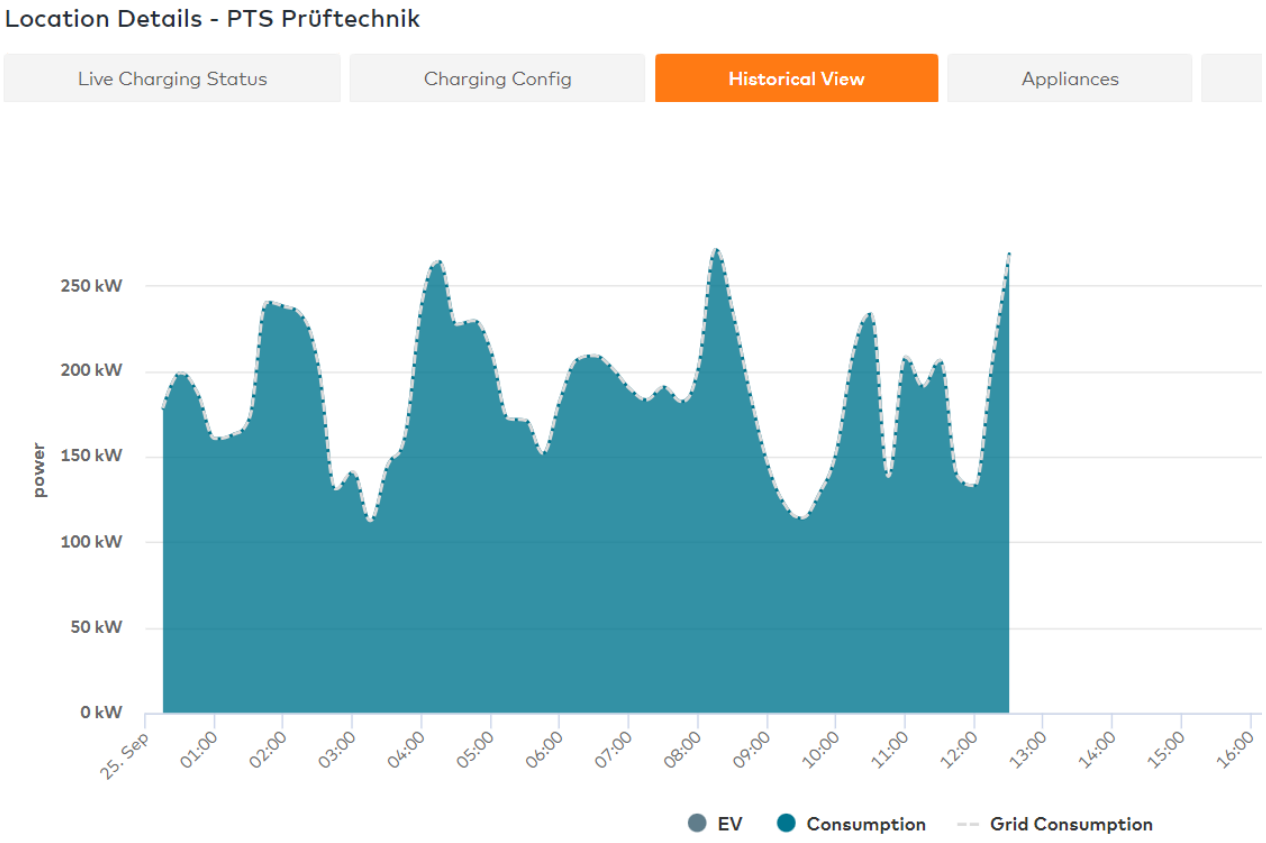


12. Ensure that the **kind** column is set to **GRID** and the connection status is green. For more information on different LED statuses, refer to Appendix A.



13. On **Location Details** window, select **Live Charging Status** to view measurements for **Grid Consumption**. Additionally, select **Historical view** to view the graph below. A value other than 0 should be displayed.

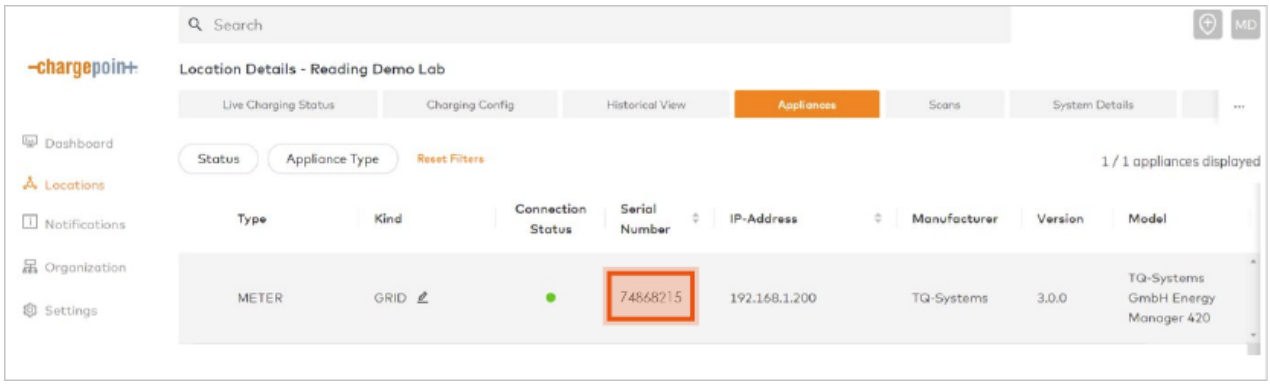




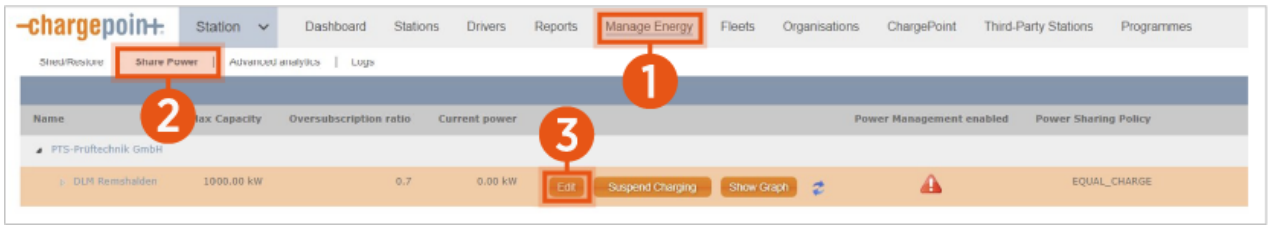
ChargePoint Cloud Application Commissioning

For commissioning the ChargePoint Cloud Application, perform the following steps:

1. On **Locations Details** window, select **Appliances**, and then retrieve the Meter **Serial Number** from gridX Xenon. Make sure to select the appropriate meter associated with the correct location.

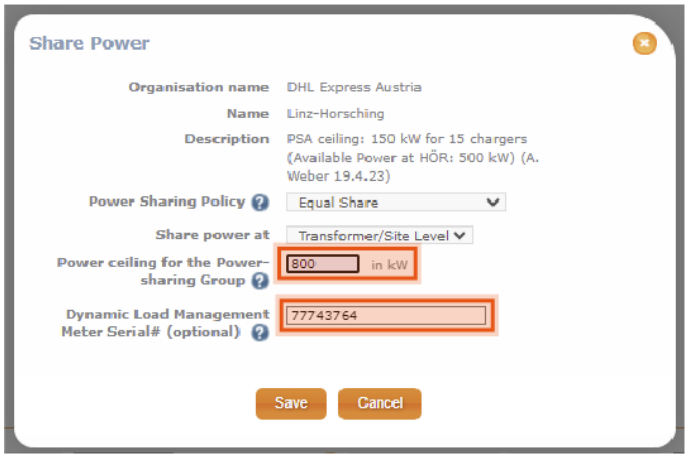


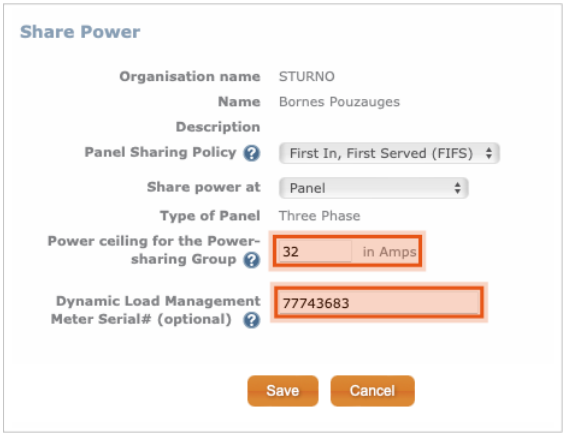
2. Associate the Meter Serial Number with the customer's Energy Group in ChargePoint Cloud Application.
3. Go to **Manage Energy** Tab, and then select **Share Power** on ChargePoint Cloud Application and apply a filter for the specific energy group. If the group is not present, create a new Energy Group as specified in the power sharing manual. Click **Edit**.



4. Add the **Meter Serial #** and the **Power ceiling for the Power sharing group** based on the information provided by the customer (in the Site Qualification Form). Click **Save** to save the changes.

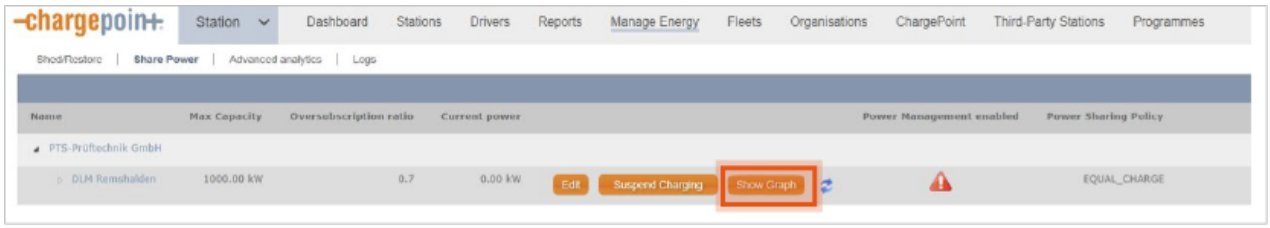
   The following images indicate the power limit (on left) or current limit (on right), as defined by the breaker.



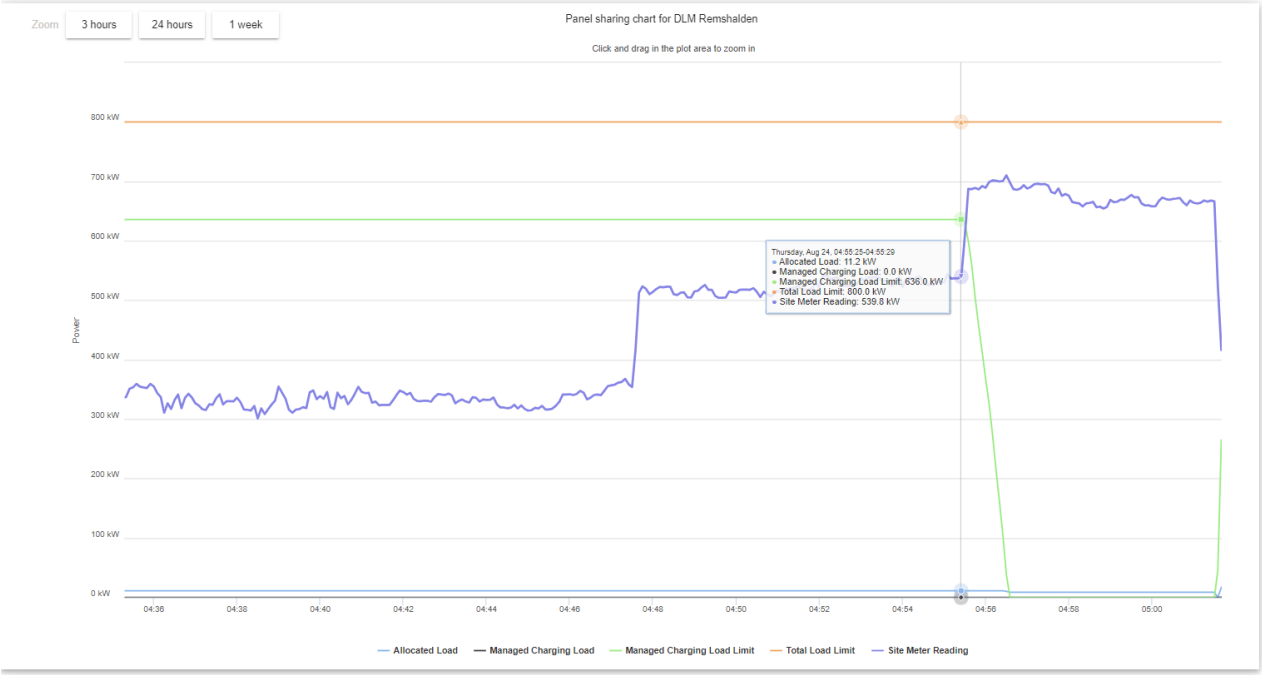


Note: There is no validation for the correct serial number. Therefore, check the power group's graph to confirm a site meter reading (it takes 15 minutes after activation before it can be viewed). If a site meter reading is displayed, the meter has been successfully associated with that energy group for DLM.

5. Go to **Manage Energy** Tab, and then select **Share Power** on ChargePoint Cloud Application and click **Show Graph** to view the graph.



6. Analyze the ChargePoint Cloud Application graph to ensure that the associated site meter readings are aligned with the DLM setup. DLM takes into consideration the uncontrollable load at a site. Therefore a meter must be associated with the charging group to calculate the available power for the charging stations. The graph visually represents the power consumption and load distribution as shown below:



Note: For better traceability, add DLM at the beginning of Energy Group name so that it can be entered in ChargePoint Cloud Application.

Appendix A

Energy Gateway Status LED

The LED status of the Energy Gateway indicates various operating states and facilitates interpretation and isolation of errors.

Color	Pattern	Meaning	Action
	Pulsating	Normal business	
	Pulsating	Scan, update or running maintenance	Can occur several times, especially during commissioning. If the behavior persists or occurs together with errors in the dashboard, please contact your support.
	Pulsating	Not yet commissioned	Commission the Energy Gateway.
	Continuous or pulsating	Software failure	Please contact your support.

	Flashing (x1)	Defective or unplugged network cable	Please check the network cable and the device connected to the far end.
	Flashing (x2)	No IP address assigned	Please make sure there is a router in the network that assigns IP addresses via DHCP.
	Flashing (x3)	No backend connection	Check whether firewall settings or other restrictions for the Energy Gateway are active in the router. Outgoing connections on TCP port 443 must be allowed!
	Pulsating	Cached measurements	Check whether the bandwidth of the Energy Gateway is limited or influenced by other applications in the network.

chargepoint.com/support

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