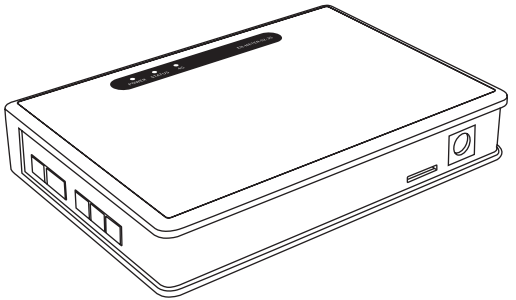
# MALMBERGS

## Load Balancing Controller



**EN** NOTE! Please read through the manual carefully before using the appliance and keep it for future reference.

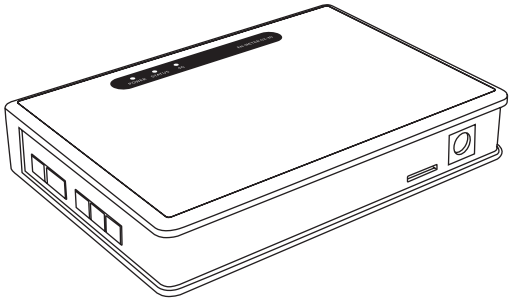
EN

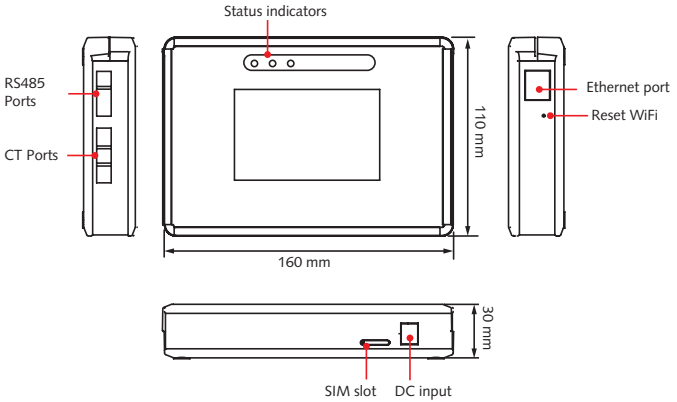
# LOAD BALANCING CONTROLLER

## CONTENT

# 1 PRODUCT OVERVIEW

This gateway device is a load-balancing controller with multiple current distribution strategies that improves the stability of your charging system. The load-balancing controller has three CT connections and supports three different communication methods (WiFi, 4G and Ethernet), allowing it to be used in a variety of installation scenarios. It is capable of accommodating up to 20 chargers online.

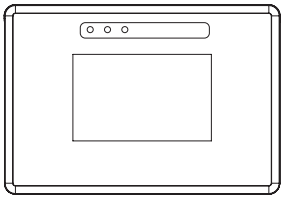




## 2 TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| | Art.no. | 99 090 01 |
| **Power supply** | DC | 5V DC(+10%~/-15%) /2000mA (adapter) |
| **Connection** | CT | Maximum 3 of current transformers |
| **Communication** | WiFi | 2412-2472MHz 802.11 b/g/n |
| | WiFi power | <20dBm |
| | 4G-LTE | FDD B1/B3/ B5/ B7/B8/B20 |
| | 4G power | <23dBm |
| | LAN | RJ-45 port |
| **LED indicator** | Power | Indicator “on” upon power |
| | Status | Indicator “on” upon transferring data |
| | Communication | Indicator “on” upon LTE communication |
| **Protection** | Ingress protection | IP20 |

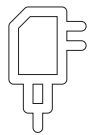
## 3 PACKING LIST



Load balancing controller

Wall mounting screw
x2

Wall plug
x2



Power adapter
x1

User manual
x1

# 4 CONFIGURATION TO NETWORK

If you select WiFi or 4G for communication, you need to use the AP mode to configure the network for the load balancing controller.

The AP mode, which is similar to a local area network, operates the internet locally between you mobile phone and load balancing controller.

**Configuration steps as below:**

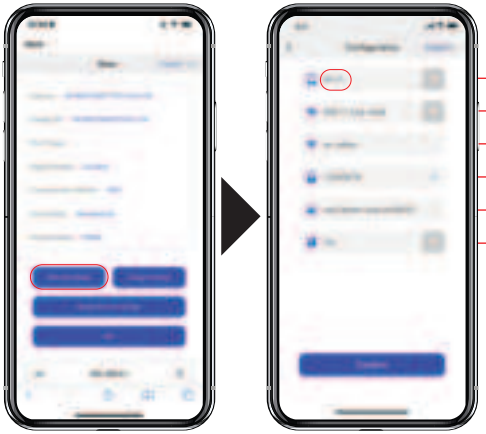
1. Set your phone to flight mode and make sure that the WLAN is turned on.
2. Restart the power supply of the load balancing controller to activate the hotspot.
3. Locate the load balancing controller's WiFi hotspot (wifi name: the serial number of the load balancing controller) in your phone's WiFi list.
4. Enter the 8-digit password (which you will find at the last page of the manual) to connect the load balancing controller to your phone. The password is unique to the device and case sensitive.
5. To access the Login page of AP mode, enter the IP address 192.168.4.1 in a browser, followed by the 4-digit network password PIN number, which can be found on the last page of this manual.

The hotspot of the load balancing controller remains available for 15 minutes after it is restarted.

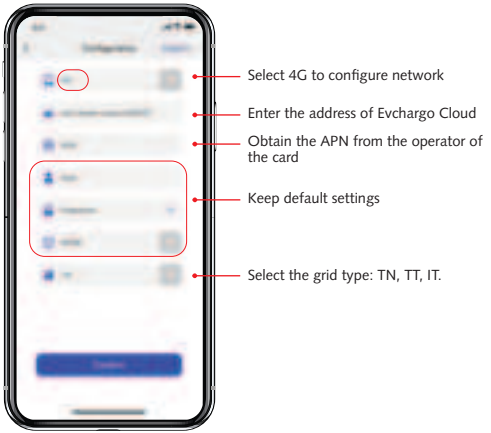
Your load balancing controller will automatically restart once the network configuration is complete, ending communication between your phone and the load balancing controller. At this point, your phone may automatically join other WiFi hotspots, preventing you from accessing the network configuration page. As a result, before accessing the network configuration page, please ensure that your phone is connected to the WiFi hotspot of the load balancing controller.

6. Select communication mode

Use WiFi for communication



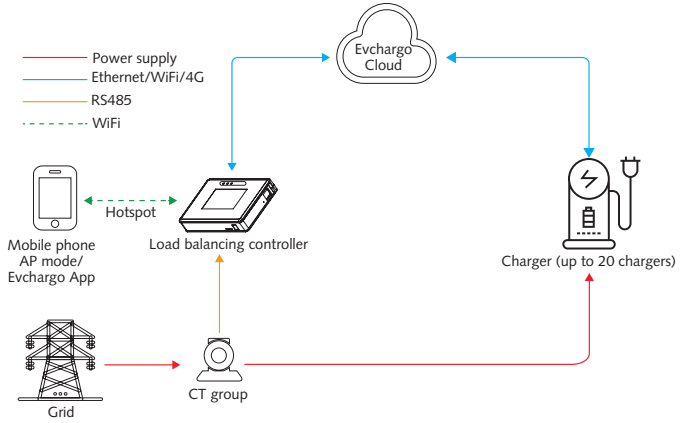

Use 4G for communication



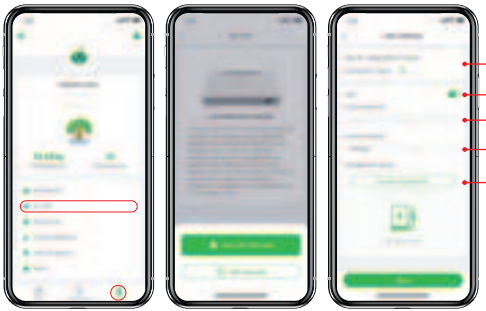
# 5 APPLICABLE SCENARIOS

## 5.1 Residential Scenario

Residential load management is recommended for home based installations with cloud, load managed via Evchargo APP.




## App-Based Load Balancing

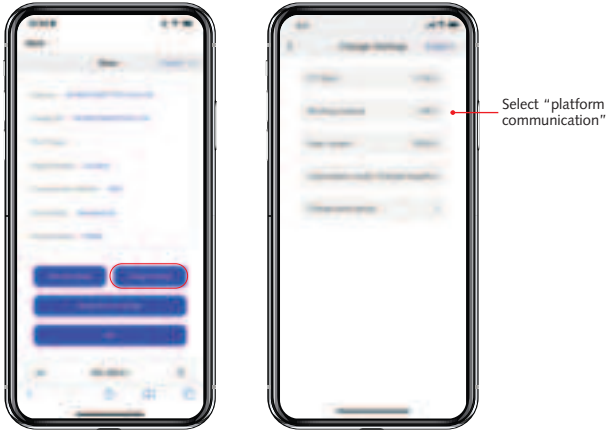



For details, please download the Evchargo App and refer to the instructions.

Evchargo App

App instructions

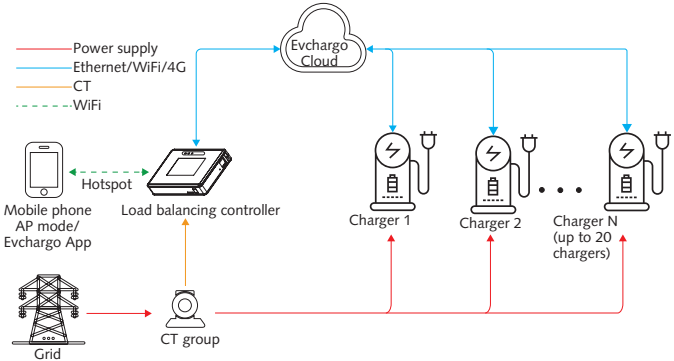
### Settings in AP Mode




When you select to control the load via the Evchargo cloud, you only need to configure the working mode to platform communication and disregard the other options.

### 5.2 Commercial Hybrid Scenario

Hybrid load management is recommended for multiple charger installations. Load managed via Evchargo cloud.



**Connect Load Balancing Controller To Evchargo Cloud**
The load balancing controller must be associated with your charging station via Evchargo cloud. There are two steps to complete the configuration:

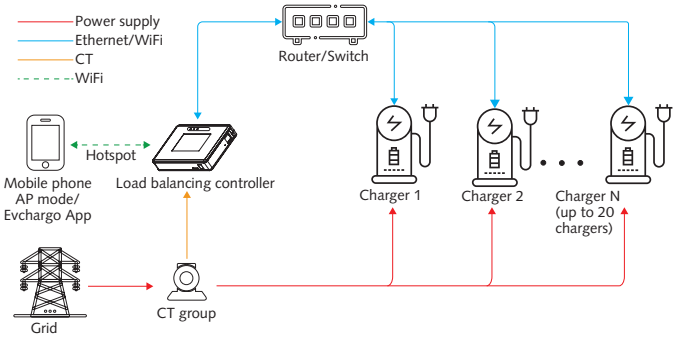
1. Add load balancing controller information to Evchargo cloud by clicking **LBC > Add LBC > Save**.
2. Link the load balancing controller with your charging station by clicking **Charge station > ... > Home page > Settings > Load balance (Edit) > Choose load balance > Save**

For details, please scan the QR code with instructions for Evchargo cloud.

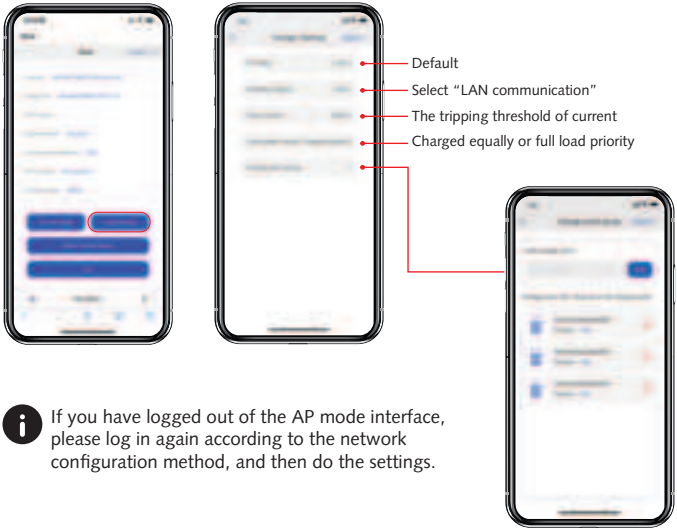
Instructions for Evchargo cloud

### 5.3 Commercial Local Scenario

Local load management is recommended for multiple charger installation without cloud connection.



**Load Balancing via AP Mode**




If you have logged out of the AP mode interface, please log in again according to the network configuration method, and then do the settings.

## 6 LOAD BALANCING STRATEGY

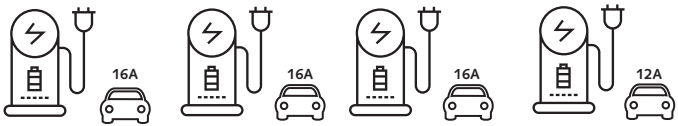
**Full Load Priority**

Sample scenario:

Assume that the quota of fuse current is 60A, and the rated current of the charger is 16A.

4 chargers.

In this scenario, the first three cars begin charging at the rated current, while the fourth car begins charging at 12A.



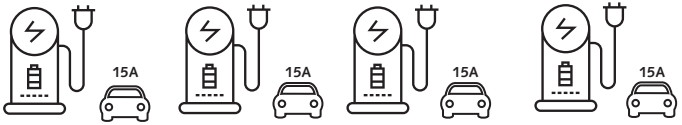
**Charged Equally**

Sample scenario:

Assume that the quota of fuse current is 60A, and the rated current of the charger is 16A.

4 chargers.

In this scenario, the 60A will be distributed equally to every car.



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