

# User- and Installation Manual

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## **Revision- and Change Log**

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# Contents

User- and Installation Manual.....	0
Using Halo.....	2
Introduction.....	2
Product Content.....	2
Model Overview – Halo.....	3
Product Markings.....	3
How to use your Halo.....	4
Status and Error Indications.....	4
Product Support and Service.....	4
Warranty Conditions.....	5
Installation Manual.....	5
Safety Precautions.....	5
Requirements for Installation.....	5
Installation.....	6
Operation.....	8
Configuration of RFID.....	11
Maintenance of Halo.....	11
Product Data.....	12
Recycling.....	13
Safety Precautions.....	13



# Using Halo

## Introduction

Congratulations, you have just taken a big leap towards a more sustainable environment with your purchase of a Halo. Halo is a product developed for private and semi-private charging environments.

Halo is equipped with powerful hardware, appealing design and smart features. With my.charge.space (Charge Amps' Cloud Service), a world of possibilities regarding control and statistics are available.

## Product Content

In the packaging, below is included:

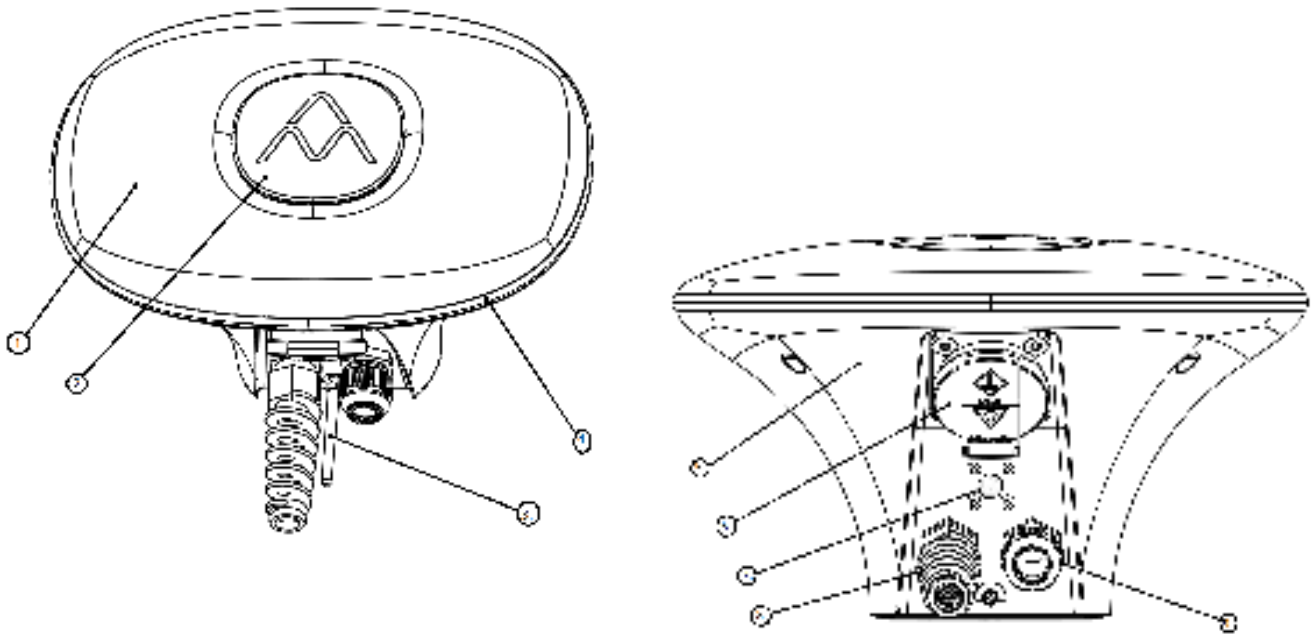
- Halo
- Drill Template
- External Wi-Fi Antenna
- 5-pole Terminal Connector to input current
- Wall Holder for Cable Handle
- RFID tag
- Document stating serial number and passwords for your Halo

The following should be handled by the installer:

- Three pieces of 5mm screws for mounting the Halo. The screws should have a flat head, in addition to this, the installer should choose the appropriate screw type depending on the wall's material
- Eventual external sealant, depending on the wall structure for the mounted Halo
- External Residual Current Device (RCD), Type A, 30mA
- Installation cable, according to chosen product's conceivable charging power
- Four pieces of 3.5 mm screws with sunken head for mounting the holder onto the wall, in order to rest the charging cable's handle



## Model Overview – Halo



1. Aluminium Front Cover: Opened during Installation.
2. Centre Cover: RFID Sensor, LED Indication.
3. Antenna: WiFi.
4. Halo LED Ring.
5. Aluminum Rear Part: To be mounted onto wall.
6. Schuko: Power Outlet 16 A (10 A certain markets, and some models not included).
7. LED Lighting.
8. Charging Cable Transit: Fixed on.
9. Cable Transit: Incoming electricity.

### Product Markings

The product markings are stated with the following information:

**HALO Class I**  
**Charge Amps AB**  
100-240V ~ 50-60Hz  
400V 3N ~ 50-60Hz  
16A t<sub>a</sub> = 40°C  
S/N: 180800XXXXM



The Halo is marked with the following information on a label located on the lower edge of the product.



Halo Version	Power Supply	Phases	Current	Contact	Power Outlet/Schuko
3,7 kW	230/400 V 50 Hz 16 A	1	1 phase 16A**	Fixed charging cable with type 2 contact	Yes*
11 kW	230/400 V 50 Hz 16 A	3	3 phase 16A	Fixed charging cable with type 2 contact	Yes*
7,4 kW	230/400 V 50 Hz 32 A	1	1 phase 32A**	Fixed charging cable with type 2 contact	No
3,7 kW	230/400 V 50 Hz 16 A	1	1 phase 16A**	Fixed charging cable with type 1 contact	Yes*
7,4 kW	230/400 V 50 Hz 32 A	1	1 phase 32A**	Fixed charging cable with type 1 contact	No

\*Power Outlet/Schuko, completely removed for certain markets.

\*\*3-phase input current for easier transition of active charging phase and load balancing.

## How to use your Halo

Halo is designed so you can easily charge your electric vehicle or plug-in hybrid.

When you have parked within the right cable length (7.5 m) between your car and your Halo, then your charging session can initiate when you have plugged the fixed cable's connector into your vehicle's charging outlet. The rotating LED ring around the HALO is an indication that your charging session has started.

## Status and Error Indications

Halo communicates its status with the LED light.

- A. Normal Operation: Centre Cover and Halo ring shines white.
- B. Halo LED ring shines but left and right lower corner are turned off: Schucko outlet is activated but nothing is plugged in.
- C. Halo LED ring shining fully indicates that something is plugged into the schucko outlet.
- D. Rotating Halo LED ring indicates that a vehicle is charging.
- E. If the Halo LED ring is not shining white and the centre cover is shining blue, that indicates that the Halo has gotten stuck during start-up. Break the fuse for a minute and then turn on. The Halo will then restart itself.
- F. If the Halo LED ring is not shining white and the centre cover is shining red, that indicates that there might be an internal fault, caused by the car or the Halo was installed incorrectly.

For point E and F, follow the recommendations in the following chapter *Product Support and Service*.

Halo is provided with a RFID sensor for identifying charging users, we support MIFARE type A tags. To be able to charge your vehicle with a RFID tag, you must first configure this function (See chapter *Operation*)

Scenario for charging your vehicle with RFID:

1. Plug the charging cable into your car.
2. Place your RFID tag against the center cover of the Halo.
3. Halo's centre cover will show your status with a pulsating light in a color depending on the result.
  - a. Green: Accepted (activation in three minutes if the charging cable is not yet plugged)
  - b. Rotating White: Charging in session
  - c. Red: Denied access/ RFID not activated

## Product Support and Service

Charge Amps offers support for all products. If you have any questions or problems do the following:



- Search through the *User and Installation Manual* to find information regarding your question.
- Check our *Support* page on our website and look through the FAQ.

If you still have not found an answer, you can mail our support: [support@charge-amps.com](mailto:support@charge-amps.com)  
If you are in need of service, contact the re-seller that you have purchased your product from.

## Warranty Conditions

Check the warranty conditions on our website: [www.charge-amps.com/warranty-policy/](http://www.charge-amps.com/warranty-policy/)

## Installation Manual

This part of the manual describes how to install Halo. To see the model overview, go back to chapter *Model Overview – Halo*.

## Safety Precautions

To be able to install and mount Halo, you have to be a licensed electrician and follow all safety precautions to ensure a safe and correct installation. Installation should follow according to instructions in this document.

## Requirements for Installation

### Tools

- Screwdriver, 3.5 mm
- Drill
- Laser/Spirit Level
- Computer or smartphone
- Cable Stripper
- Hex Key H4 angle
- Eventual sealant

### Cable

Before starting the installation, the following is important to check beforehand:

- The electricity is shut off.
- The incoming electrical cable is of correct dimension:
  - 2,5 mm<sup>2</sup> for 16 A
  - 10 mm<sup>2</sup> for 32 A
- Ensure the fuse has the correct amp rating, 16A 1-phase 3.7 kW, 16 A 3-phase 11k W, 32 A 1-phase 7.4 kW.
- The RCD is installed.

### Connect

To be able to utilize the potential of Halo, an internet connection is required.

Check the following connection options:

- Wireless: WiFi access with good reception.
- A WiFi standard of 2,4Ghz. (IEEE 802.11)

### Mounting Site

When mounting Halo, check the following:

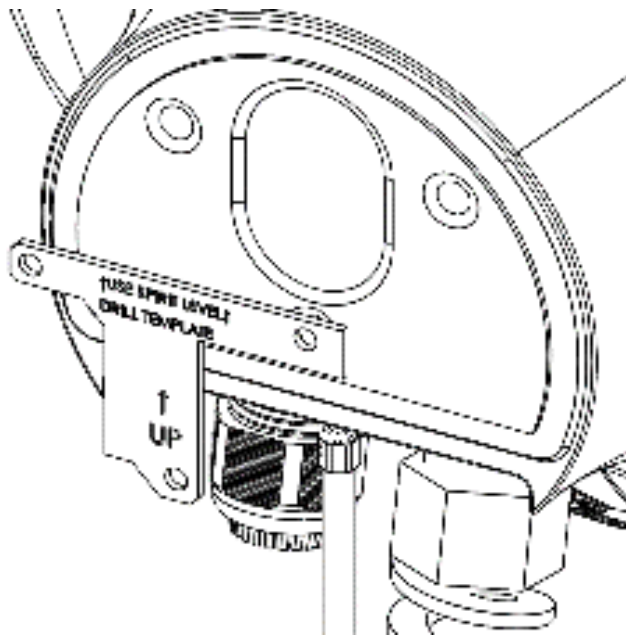


- The wall is suitable for mounting. The wall should be able to withstand a weight of 10kg and the pull force from a connected cable.
- The installation screw is chosen according to the material of the wall.
- Halo must be installed in an upright position, according to picture below.
- Recommended mounting height from the lowest edge of Halo is 750-1450mm.

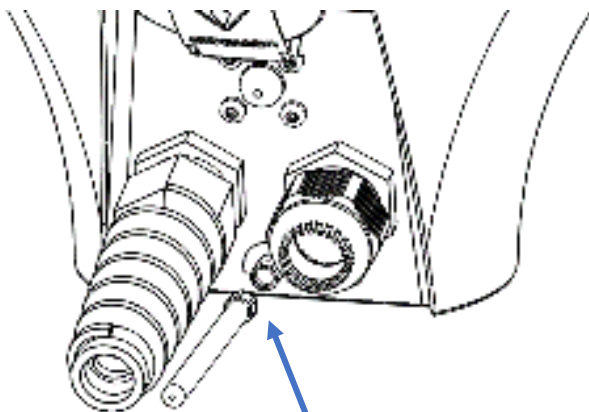
## Installation

Follow these steps for correct installation:

1. Unpack Halo from its box.
2. Mark mounting position of Halo on wall according to dimensions below and with the help of drill template. Use laser or spirit level.



3. Drill holes according to your prior marking with appropriate hole dimension.
4. Open Halo with H4 hex key, remove connected terminal transit and contacts, disconnect antenna pole gently from Halo. Be aware so that O-rings around screws do not come off. Place Front Cover in a safe place

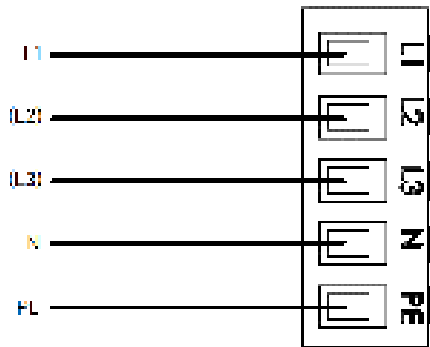


5. Before mounting Halo, place back antenna.

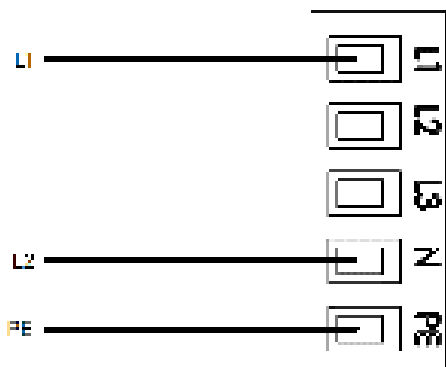


6. Mount Halo on wall, use sealant if Halo is mounted outdoors or on an uneven surface.
7. Strip and input electrical cable, for cable input 15-20 cm is recommended for easier mounting. Then tighten the screw around the electrical cable input. Be careful not to damage the antenna.
8. Install the power cables in (attached picture below) the 5-pole terminal in the following order. There are different types of powerline set-ups, the following are the most common.
  - 8.1. 1-phase input in TN System

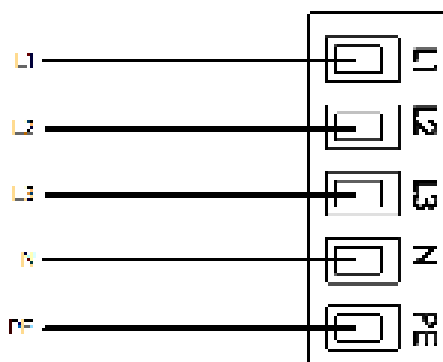
An input of 1-phase should be connected in the following order, with the advantage of connecting L2 and L3 for the possibility of load balancing in larger installments, and even able to choose the least loaded phase through our Cloud Service.



#### 8.2. Input of 1-phase in IT System



#### 8.3. Input of 3-phase in TN System (Only TN System)

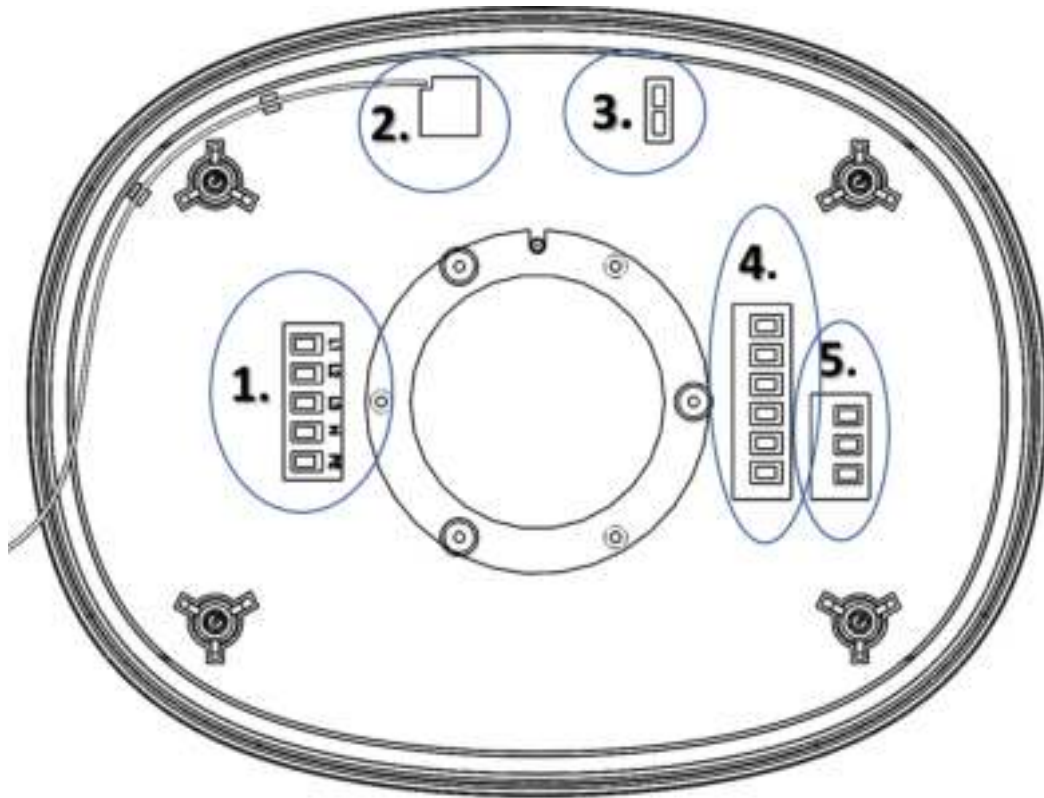






9. Re-mount the following through the front cover:

- 5-pole terminal block
- WiFi Antenna
- LED connection
- Charging Handle Connection
- Schucko Outlet Connection



10. Re-mount front cover against back section. Now observe the following:

- 10.1. The O-rings around the screws are in place.
- 10.2. No cables are clamped.
- 10.3. The front cover is installed in up-right position (See *Modell Overview. Halo*)

11. Screw the four H4 hex screws in place.

12. Turn on power from the distribution box.

## Operation

Now that you have electrically installed Halo, it is now time to configure it to a WiFi network. The end result with the configuration is to connect your Halo to Charge Amps' portal and Cloud Service.

How to configure Halo to Wireless Internet (WiFi):

1. Turn on power to start your Halo, make sure that it has started up correctly



2. This description is applied for using a smartphone for this type of configuration
3. Start with turning off 3G/4G on your smartphone
4. Open your settings for wireless internet and search for WiFi



Gå in på mobilens inställningar > Wi-Fi

5. Search for network Halo\_\*\*\*\*\*, \*\*\*\*\* are the last six digits in the serial number



Välj det nätverk som heter HALO\_\*\*\*\*\*(sista siffrorna i produktens serienummer)

6. When you need to fill in the password, type in the PIN/WiFi password stated in the configuration document (may be found in box or online)



Skriv in lösenordet som du hittar på konfigurationspappret som följer med i kartongen och anslut.

7. In the internet browser, write the following in the adress bar: IP adress: 192.168.250.1



Öppna webbläsaren, skriv in följande nummerföljd i adressfältet:

192.168.250.1

8. You will now see a field for SSID (name of your WiFi network) and password. Please note that the fields are case-sensitive.
9. You will also see a list of available networks, choose the one you will use, it will then automatically fill in the name in the SSID field.



Klicka sedan på namnet på det wi-fi nätverk som HALOn skall kopplas till från listan och skriv in dess lösen

10. Type in the password you have chosen for your WiFi network. Then click "update".
11. Wait until a window pops up stating "Connected to".



Connected to i grön text betyder att HALOn nu är ansluten

12. You/the customer can now sign up your Halo at [my.charge.space](http://my.charge.space) and gain access to all Cloud Service functions.



## How to Register and Operate Halo in the Cloud Service:

1. Type in website address: <http://my.charge.space>
2. Click the "Sign Up" link above "login form"
3. Fill in all fields and click on "GO".
4. You will receive a verification link within a few minutes.
5. Click on the link and log in.
6. Fill in serial number
7. Fill in PIN/Password
8. Click "GO" and now you are finish.

## Configuration of RFID

Not supported in this manual, please contact installer.

## Maintenance of Halo

For maintenance please follow these steps:

1. Perform a test of RCD to determine a secure function before installation.
2. Check the charging cable for visible damages.
3. Check the electrical input cable to visible damages.



## Product Data

Specification	Data
<b>Manufacture</b>	Charge Amps
<b>Versions</b>	1 phase 3,7kW type 1 1 phase 3,7kW type 2 1 phase 7,4kW type 1 1 phase 7,4kW type 2 3 phase 11kW type 2
<b>Charging Current</b>	1 x 16A (3.7 kW) 1 x 32A (7.4 kW) 3 x 16A (11 kW)
<b>Frequency</b>	50/60 Hz
<b>Climate Conditions</b>	Indoor and Outdoor ≤ 95% RH
<b>Mounting Method</b>	Wall or pole mounting with flat surface
<b>Isolation Class</b>	Class 1
<b>Charging Standard</b>	Mode 3
<b>Standards</b>	IEC 61851-1 IEC 62196-2
<b>Protection from fault currents</b>	DC protection is integrated into the charging station. An external RCD type A is needed Together, they have the same functionality as and replace the requirement of a type B RCD.
<b>Voltage Protection</b>	Built-in overload protector. Short Circuit Protection of type C16A should be installed.
<b>Ventilation Control</b>	Not supported
<b>Please Note</b>	PE must be connected for HALO to work correctly.
<b>Wi-Fi Signal</b>	802.11 b/g/n, 2,4 GHz. 10 m in front of Halo
<b>Power Measurement</b>	3-phase voltage, electricity and current
<b>IP Classification</b>	IP 66
<b>Weight</b>	4 kg
<b>Cable</b>	7.5 m length Diameter 13 ± 0.5mm



## Recycling

We owe it to the environment to recycle Halo. Halo is made of aluminum, plastic and other electronics and should be recycled according to these materials.

## Safety Precautions

READ THESE SAFETY PRECAUTIONS BEFORE USING THIS PRODUCT



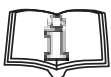
**WARNING** – This manual contains important instructions of how HALO should be used and maintained. When using electronics, you must always follow the fundamental safety precautions, including the following.



Contains instructions on how to prevent fires and electrical shocks. Read carefully and save this instruction manual.



**WARNING** – Do not use HALO for any other use than electric vehicle charging



**WARNING!**

Please read this instruction manual before using Halo.

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