



Charge Amps **Halo**

Installation manual

Halo 3,7 kW 7,4 kW and 11 kW

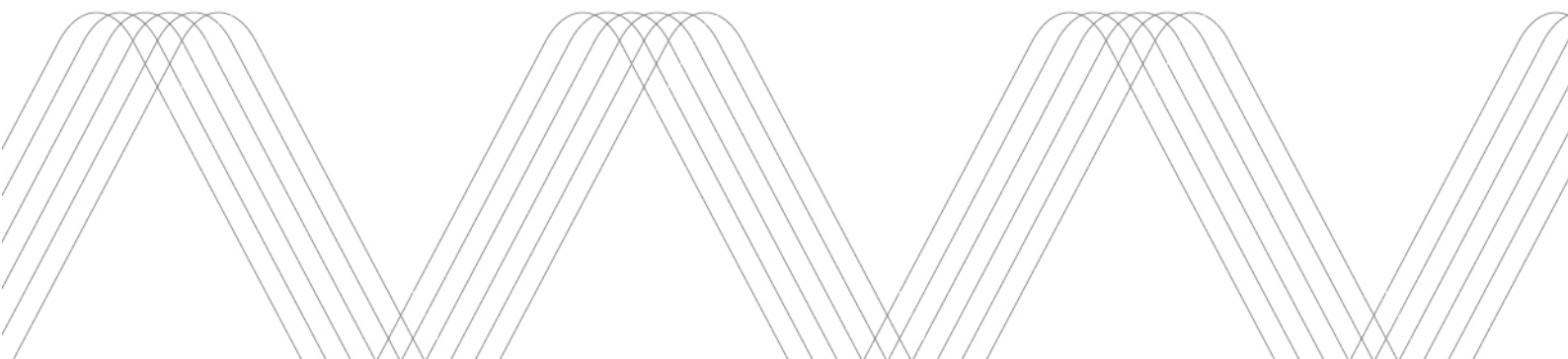




Table of Contents

For the professional installer	3
Safety precautions	3
About Halo	4
Model overview	5
Contents of the package	6
Provided by the installer	6
Before installation	7
Tools	7
Cabling	7
Mounting	8
Connection	8
Installing Halo	9
Configuring WiFi for Halo	13
Halo status indications	22
Halo error indications	23
Rights	24

For the professional installer

This installation manual is intended for qualified Halo installers and describes how to install the product safely and properly.

Installation may only be carried out by a qualified installer who follows:

- Basic safety precautions for safe and correct installation.
- Local, regional and national installation regulations.
- The instructions in this Halo installation manual.

Safety precautions

The installation manual contains important instructions on how to install the product. In addition to the instructions in this manual, basic safety precautions, including all applicable local, regional and national laws and regulations, must be complied with when installing, repairing and maintaining the product.

The installation manual also contains safety instructions (WARNING, CAUTION and NOTE) for how to install the product safely. See the definitions below.



WARNING! – Indicates a potentially dangerous situation that could lead to serious injury or death.



CAUTION! – Indicates a potentially dangerous situation that could lead to minor or moderate injury.



NOTE! – Indicates that you must follow the instructions to avoid damaging the product or other equipment.

About Halo

Halo is designed for both private installation and for installation in semi-private indoor and outdoor environments. Halo is compatible with all rechargeable electric vehicles. Halo comes with a type 1 or type 2 charging connector. (The connector type can be changed.) The 7.5 metre, fixed, reinforced charging cable coupled with the ergonomically designed charging connector make charging your electric vehicle hassle-free.

Halo gives a clear indication of the operating status, and its LED lighting makes it easier to use in the dark. It also has a socket that can be used to connect an engine/passenger compartment heater or other electrical equipment, such as an electric bicycle or vacuum cleaner. Halo is also prepared for RFID identification and can be connected to individual unlocking with RFID or mobile phone. RFID makes it possible for Halo to be shared by multiple users.

Halo is designed in Sweden and meets the requirements of the IEC 61851-1 and IEC 62196-2 standards. The enclosure is made of recycled aluminium, and the product meets the requirements of enclosure rating IP66 when properly installed.

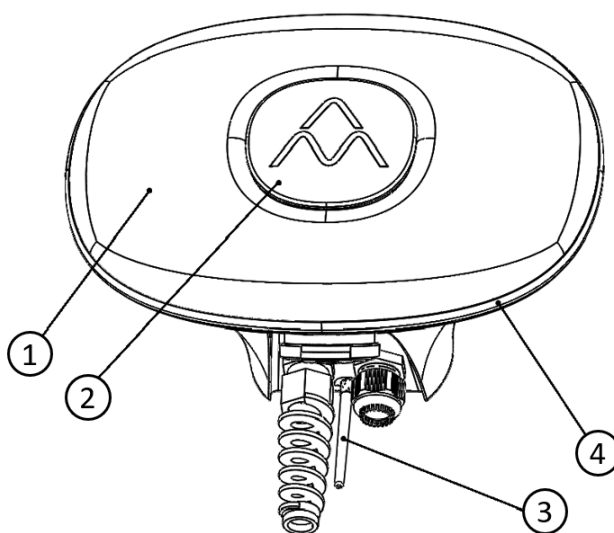
Contact your supplier for more information about your specific Halo.

In brief: Halo has advanced technology, a stylish design and smart functions. All in a compact and hassle-free charging station.

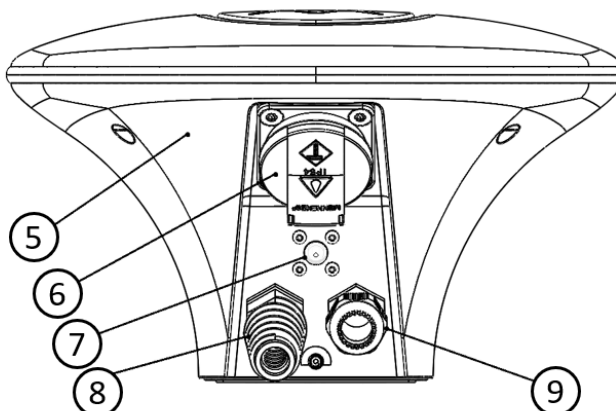


The product is intended to be used for the charging of electric vehicles and hybrids.

Model overview



1. Aluminium front assembly (Opened only by a qualified installer during installation)
2. Centre emblem: LED indication, (RFID detection, if activated)
3. Antenna: WiFi
4. LED ring
5. Aluminium backplate: mounted on the wall by the installer
6. Schuko: 10 A electrical socket (certain models only)
7. LED lighting
8. Charging cable entry: fixed charging cable
9. Cable entry: incoming electrical connection




Contents of the package

- Charge Amps Halo
- External WiFi antenna
- Five-pin terminal connector for feed current
- Wall holder for charging cable
- RFID tag (certain models only)
- Document with serial number and password for your Halo
- Installation manual

Provided by the installer

- Three 5 mm screws with associated plugs (if required) for mounting Halo. The screws must have a flat head and be suitable for the wall material.
- External sealant for the wall (if necessary), depending on the structure of the mounting wall
- External type A RCD, 30 mA

- Installation cable, according to the charging strength of the selected product
- Four 3.5 mm screws with recessed head for wall mounting of the charging cable connector

 The installer also provides the tools required for installation.

Before installation

Make sure that the right conditions and materials are in place before installation. The installation must be done in accordance with the instructions in this installation manual as well as basic safety precautions.

Tools

The following tools are needed for installation:

- Screwdriver, flat electric screwdriver 3.5 mm
- Drill for screw/plug for wall mounting
- Laser/spirit level for proper mounting on the wall
- Wire stripper for cabling
- Angled H4 Allen key
- Sealant (if necessary) if the wall for mounting is uneven and exposed to an outdoor climate
- Computer or mobile phone if Halo needs to be configured and (where applicable) connected to a cloud service. Contact the supplier for more information

Cabling

Check the following before installing Halo:

- The power is switched off

- The incoming cabling is dimensioned to be able to connect Halo
 - Minimum 2.5 mm² for 16 A
(electrical conditions in the facility and cable lengths may require a higher cross-sectional area to meet the triggering conditions)
 - Minimum 6 mm² for 32 A
(electrical conditions in the facility and cable lengths may require a higher cross-sectional area to meet the triggering conditions)
- The product is properly fused – 16 A 1-phase 3.7 kW; 16 A 3-phase 11 kW; 32 A 1-phase 7.4 kW
- An RCD is installed
- Make sure to use MCB 16 A Curve C/ MCB 32 A Curve B.
Let through energy (I^2t) shall be less than or equal to 75 000 A²s.

Mounting

Check the following conditions for mounting:

- That the wall can handle a weight of 5 kg
- That the installation screws and plugs (if required) are suitable for the wall material
- There is free space at the recommended mounting height (750–1,450 mm as measured up to the bottom edge of Halo)
- That the position of Halo does not cause it to be subjected to flammable, explosive, corrosive or combustible materials, chemicals or fumes

i If possible, do not mount Halo in direct sunlight. The charging current is decreased if the temperature inside the charging station goes up, and can even be switched off completely if Halo gets too hot. This is a safety feature to ensure a long service life. See the Halo technical specifications for operating temperatures.

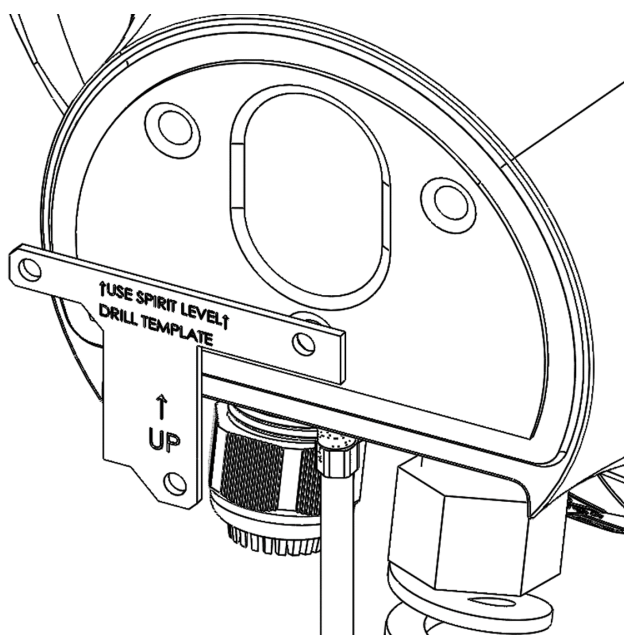
Connection

To get the most out of your Halo, an internet connection is required. Check with your supplier what internet connection requirements there are for your particular Halo.

Installing Halo

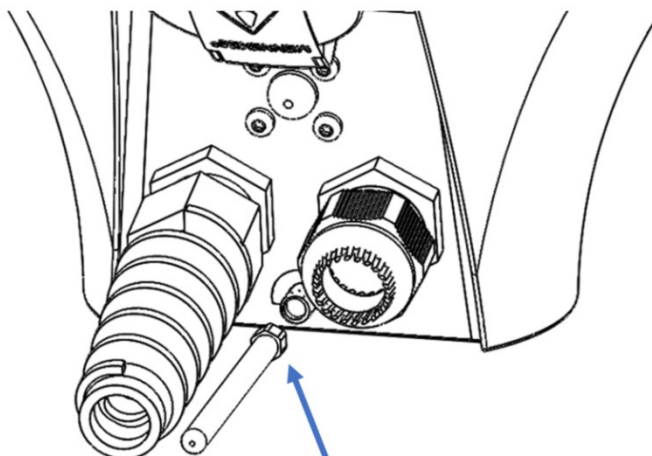
Install and mount Halo as follows:

1. Read the installation instructions in this document thoroughly.
2. Make sure that the feed cable is isolated and switch off the power at the main switch.
3. Mount a separate type A RCD on the feed line to Halo. (The integrated DC protection (protection against fault currents) in Halo coupled with a type A RCD has the same functionality as a type B RCD.)
4. Unpack Halo from the box. Check that the product is in good condition and that all cables are properly seated.
5. Mark the mounting holes on the wall. Also use a laser or spirit level. For a suitable height, see “Mounting” above.



6. Drill holes with a drill bit designed for the selected fastener.

7. Open Halo with an H4 Allen key (be careful to make sure that the O-rings securing the screws do not come loose).
8. Remove all connected terminal blocks/connectors from the circuit board in the aluminium cover.
9. Temporarily place the front assembly on a protected surface.
10. Mount the external antenna.



11. Mount Halo on the wall with the selected fasteners. Use sealant if you are installing in an outdoor environment or on an uneven surface.
12. Strip and insert the electrical cable in the cable entry underneath (15–20 cm is recommended for easy mounting).



Halo must be earthed through permanent electrical installation.



Only use the product within the specified operating parameters. Follow local, regional and national standards and regulations so that no charging current limitations are exceeded.



Avoid inserting the electrical cable through the plastic membrane. Plastic shrinks and expands at different temperatures, and water could start to leak in. Enclosure rating IP66 only applies if the electrical cable is inserted through the specified cable entry!

13. Tighten the cable entry screw connector tightly.

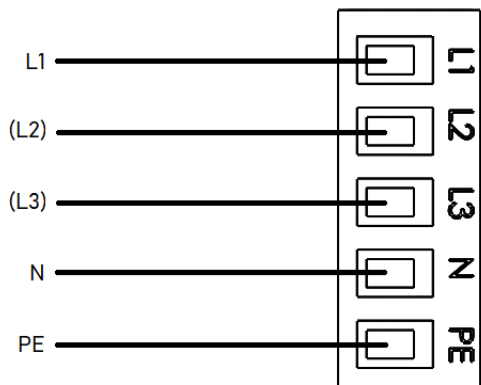


When inserting the cable, be careful not to damage the WiFi antenna.

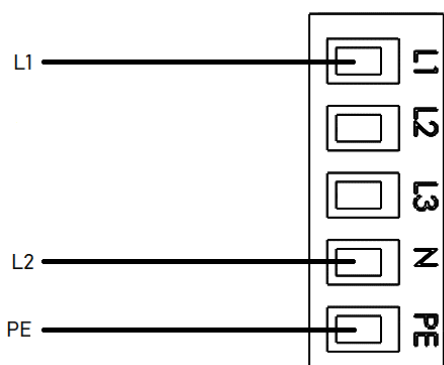
14. Screw the power supply into the 5-pin terminal block as illustrated below.

a. Connection of 1-phase in TN network

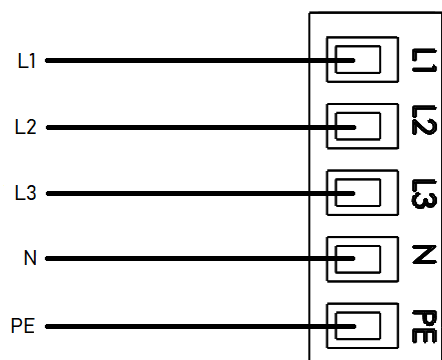
In a 1-phase connection, make the following connections. L2 and L3 can also be connected to enable load balancing in larger installations, and to be able to use the cloud service to select the phase that has the smallest load in a property.



b. Connection of 1-phase in IT network



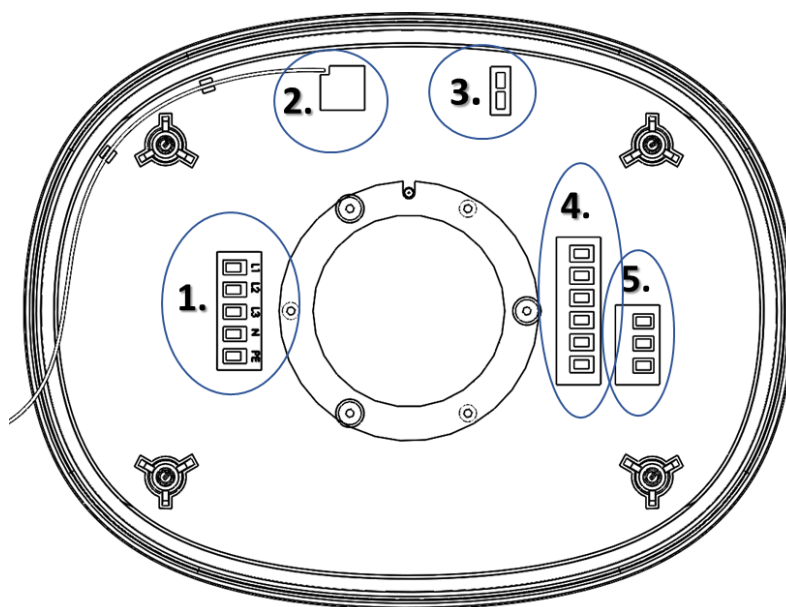
c. Connection of 3-phase in TN network (TN network only)



15. Refit the terminals in the front assembly.

1. 5-pin terminal block for incoming power supply
2. WiFi antenna cable
3. Connection for LED lighting
4. 6-pin terminal block for charging cable
5. 3-pin terminal block for Schuko socket (certain models only)



i Be particularly careful and cautious when connecting the WiFi antenna cable.



16. Refit the front assembly to the backplate. Carefully check that:
- All O-rings around the fastening screws are in place
 - No cables are pinched
 - The front assembly is mounted the right way, with the Charge Amps logo facing the right way (see below).



- Tighten the four H4 hex head screws to a torque of 1.5–2.0 Nm
- Switch on the power at the main switch/electrical distribution box.
A start-up sequence with a self-test begins.
- Once Halo is illuminated with a steady white light, Halo is ready for use.

-  Be careful not to pinch the WiFi antenna cable between the front assembly and the backplate when refitting the front assembly.
-  Be careful to refit the front assembly the right way, i.e. with the Charge Amps logo pointing up. If the front assembly is fitted the wrong way, you risk crushing the circuit board.

Configuring WiFi for Halo

After Halo has been installed electrically and on the network, it is time for it to be configured. The aim of configuration is to connect the unit to Charge Amps' portal and cloud solution.

How to register and commission your Halo in the cloud solution:

- Go to: <http://my.charge.space>
- Click the "Sign Up" link above "login form"
- Fill in all the fields and press "GO".
- You will be sent an email with a verification link within a few minutes.
- Follow the link and log in.

6. Fill in the serial number and PIN code as indicated in the configuration document.
7. Click "GO" and then you are finished.

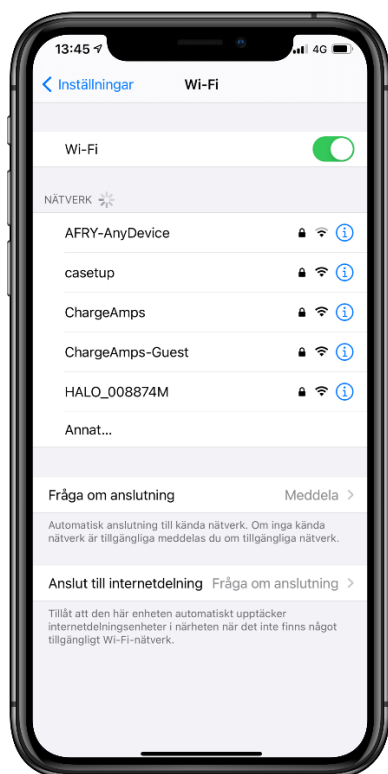
How to configure Halo with a wireless internet network (WiFi):

1. Switch on your Halo
2. Use a smartphone, open "Wireless settings" and scan for a wireless network.



On the mobile, go to Settings > WiFi

3. Find the HALO_***** network, where ***** are the last six characters of the serial number.

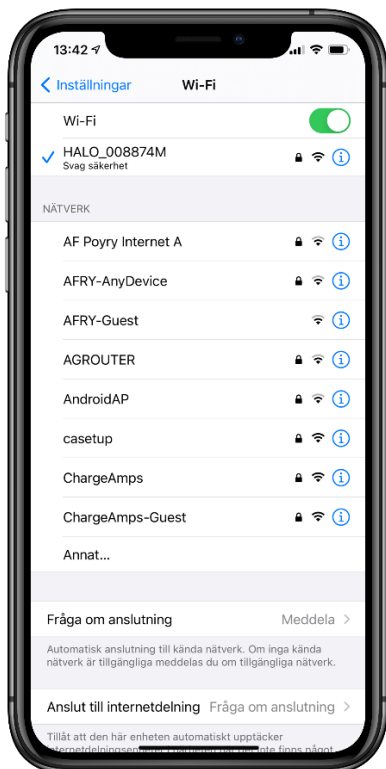


Select the network called HALO_*****M (last characters of the product's serial number).

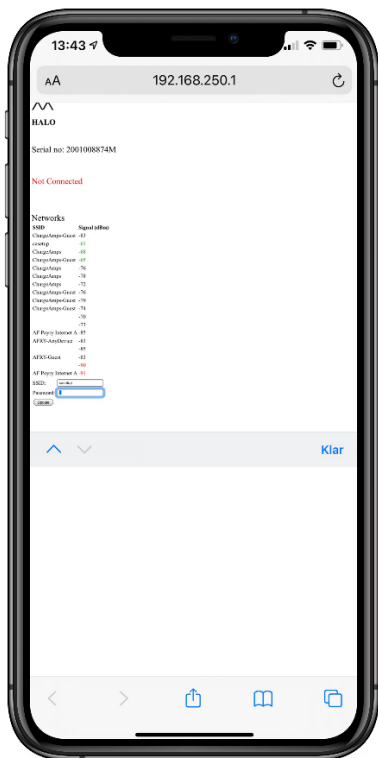
4. When you are asked for the network key, enter the PIN code.



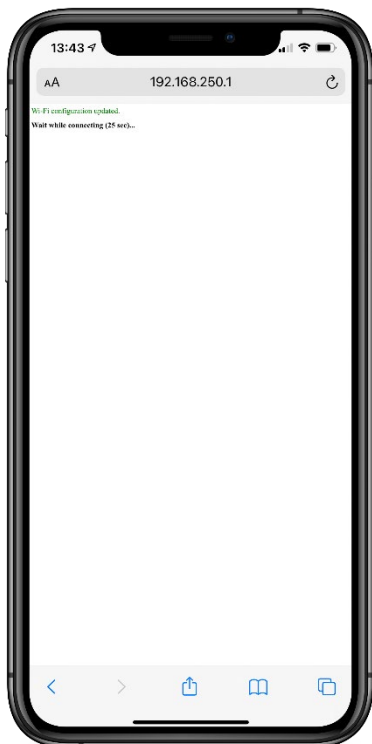
Enter the password, which you will find on the configuration sheet supplied in the box, and connect.



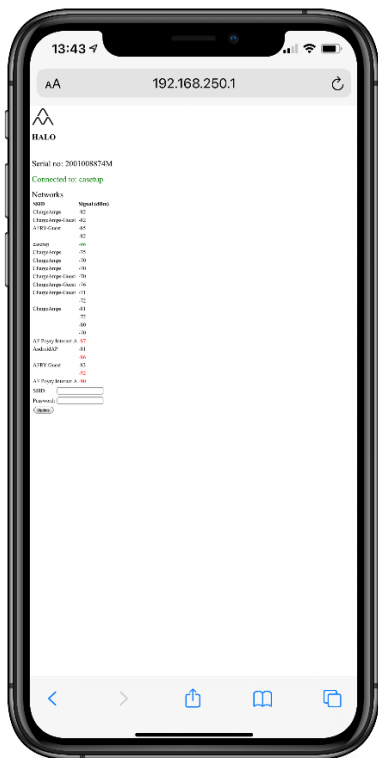
5. Open the browser. In your browser's address field, enter 192.168.250.1
6. You should now see a field with the SSID (name of the WiFi network) and the password. Note that the field is case-sensitive.



Click the WiFi network that Halo should connect to from the list and enter its password.



7. Wait for connection. (The mobile's own 3G/4G may disrupt this. In that case, switch off mobile data).
8. Enter the details of your wireless network and click update.



Connected means that Halo is now connected.



You can now go to my.charge.space and sign up Halo to access all the functions in the cloud solution.

Supported WiFi standards:

802.11 b/g/n

2.4 GHz

Halo status indications

Halo uses light to communicate its status in different ways.

Indication	Status
The centre cover is white and the LED ring lights up incrementally in pace with start-up	Halo is starting up
The centre cover is white and the LED ring is illuminated with a steady white light	Halo is in standby mode/ready for charging or charging is complete.
The centre cover is white and the LED ring is illuminated with a steady white light, but LEDs in the bottom left and right corners are off.	Halo is in standby mode/ready for charging or charging is complete. The Schuko socket is activated
The centre cover is white and the LED ring's white light rotates	Charging in progress
The centre cover flashes green and the LED ring is illuminated with a steady white light	<i>For Halo with load balancing only</i> Charging is initiated, waiting for power allocation (can take up to 2 minutes)
The centre cover flashes blue and the LED ring is illuminated with a steady white light	<i>For Halo with RFID only</i> Waiting for identification with RFID tag on centre cover (if RFID is activated)
The centre cover is illuminated red for 3 seconds and the LED ring is illuminated with a steady white light	<i>For Halo with RFID only</i> The RFID tag is not approved (if RFID is activated), charging is not activated

Halo error indications

Halo uses light to communicate its status in different ways.

Indication	Type of error	Action
The centre cover is illuminated or flashes blue and the LED ring is not illuminated with a white light	Halo has frozen during start-up or during updating	Cut off the power to Halo via the main switch. Restart Halo after a few minutes.
The LED ring is not illuminated white and the centre cover is illuminated red	An error has occurred that affects Halo. It could be an error in the vehicle or an earth fault that occurred during electrical installation.	Check that the charging cable is intact, cut off power to Halo via the main switch, and restart Halo after a few minutes.

If none of these actions remedy the problem, contact the supplier for support.

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