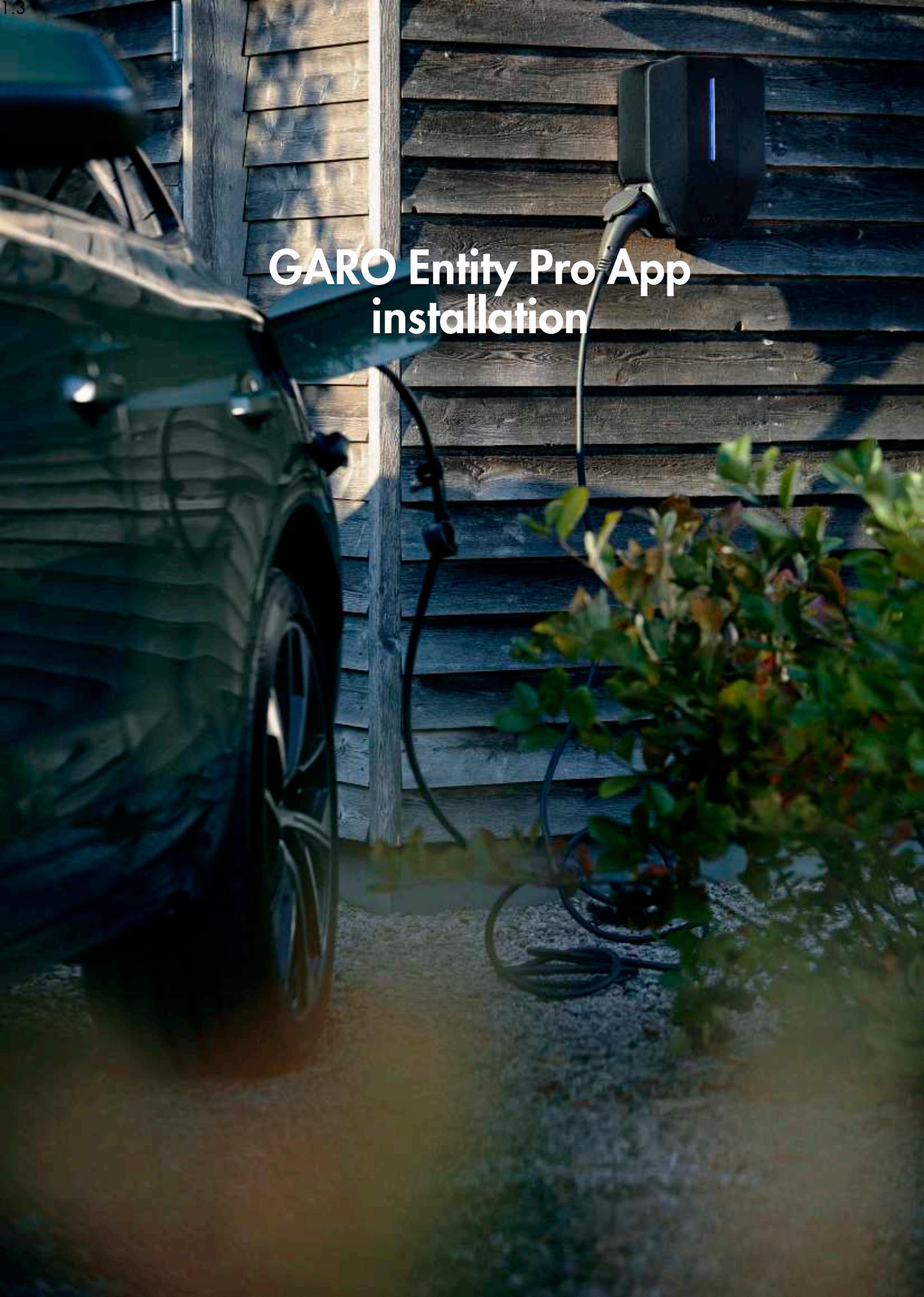
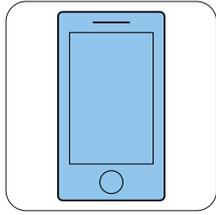
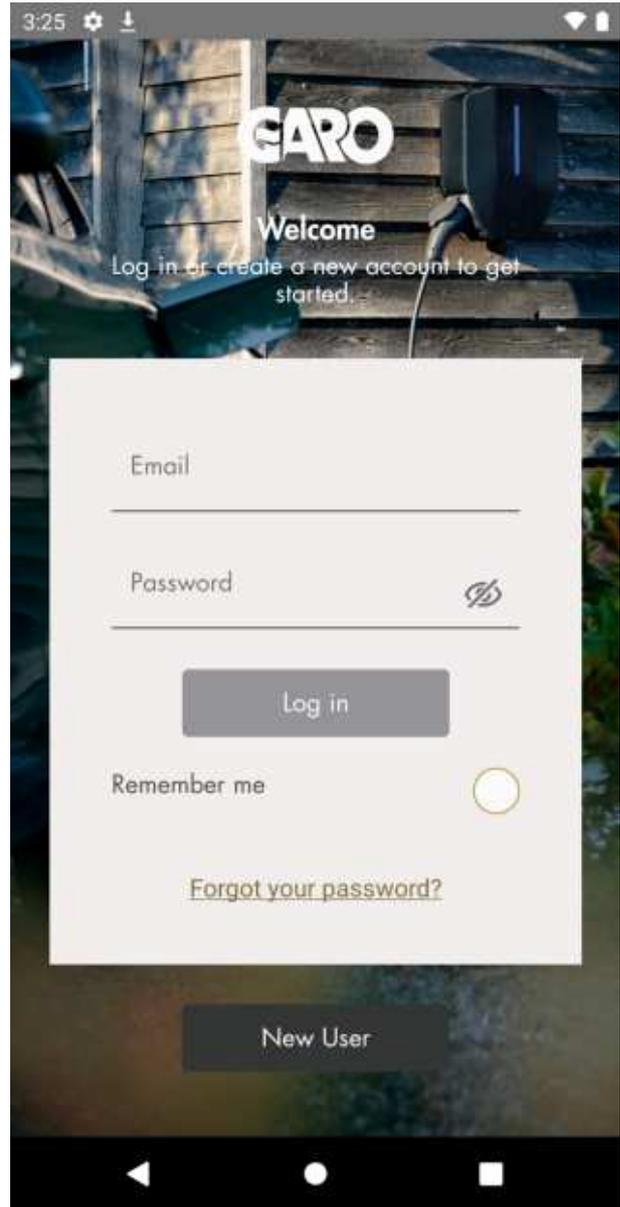


# GARO Entity Pro App installation

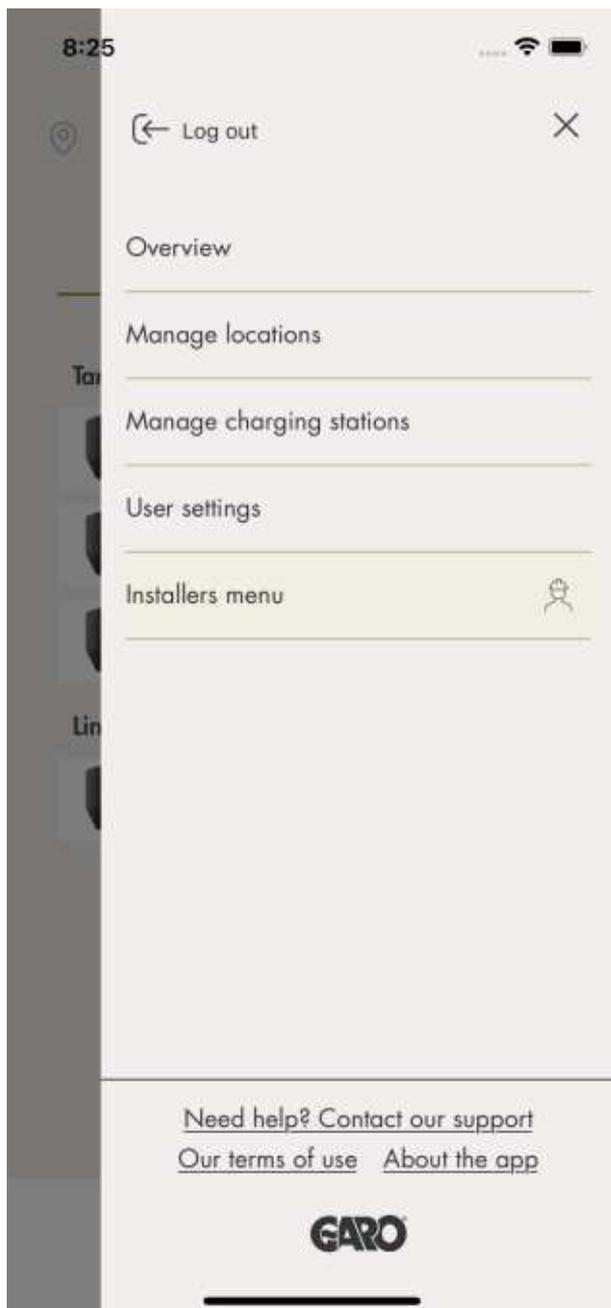




2. Create a new account in the GARO Connect app. Follow the instructions on the screen.
3. Log on to the GARO Connect app with provided credentials.



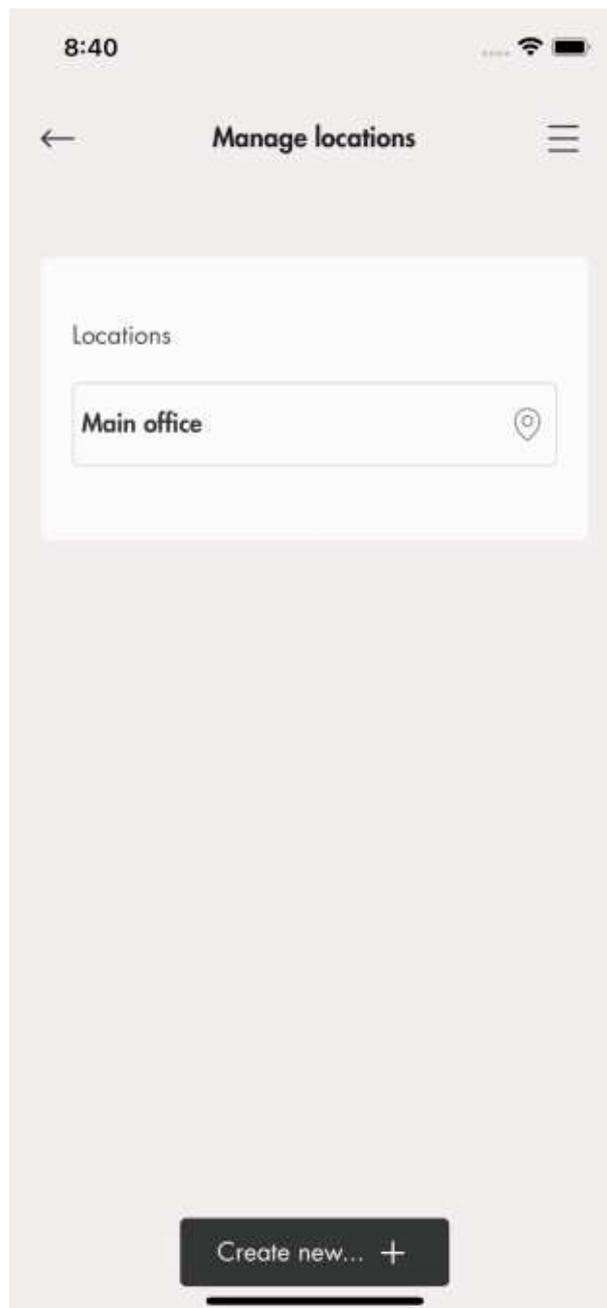
4. Select *Manage Locations*.



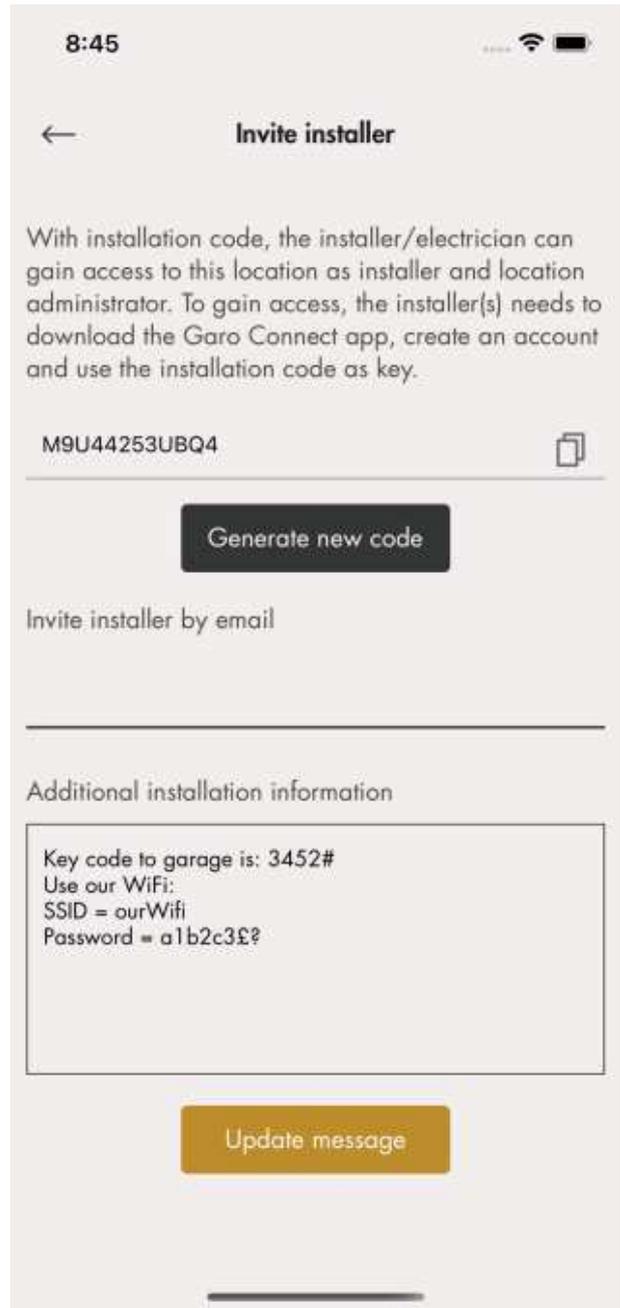
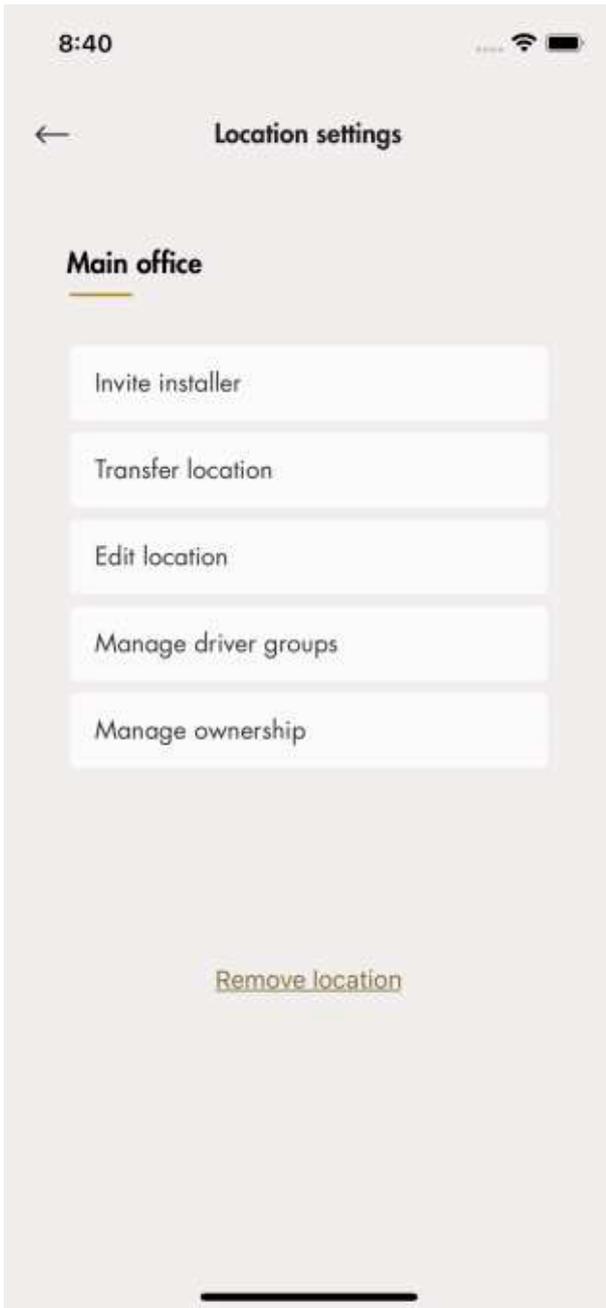
5. Choose location.

#### NOTE

It is recommended to change name on the default location. Preferably, the name should specify the physical place of the unit, including address and coordinates. In this example, the location is called *Main office*. To change the name of a location, click the location and choose *Edit location*.



6. Select *Invite Installer*.



**NOTE**

The installer can create and install charging stations once invited with the installation code from the owner.

7. Generate an installation code. An e-mail can be generated to the installer through the GARO Connect app. This is not mandatory, any communication channel is fine.

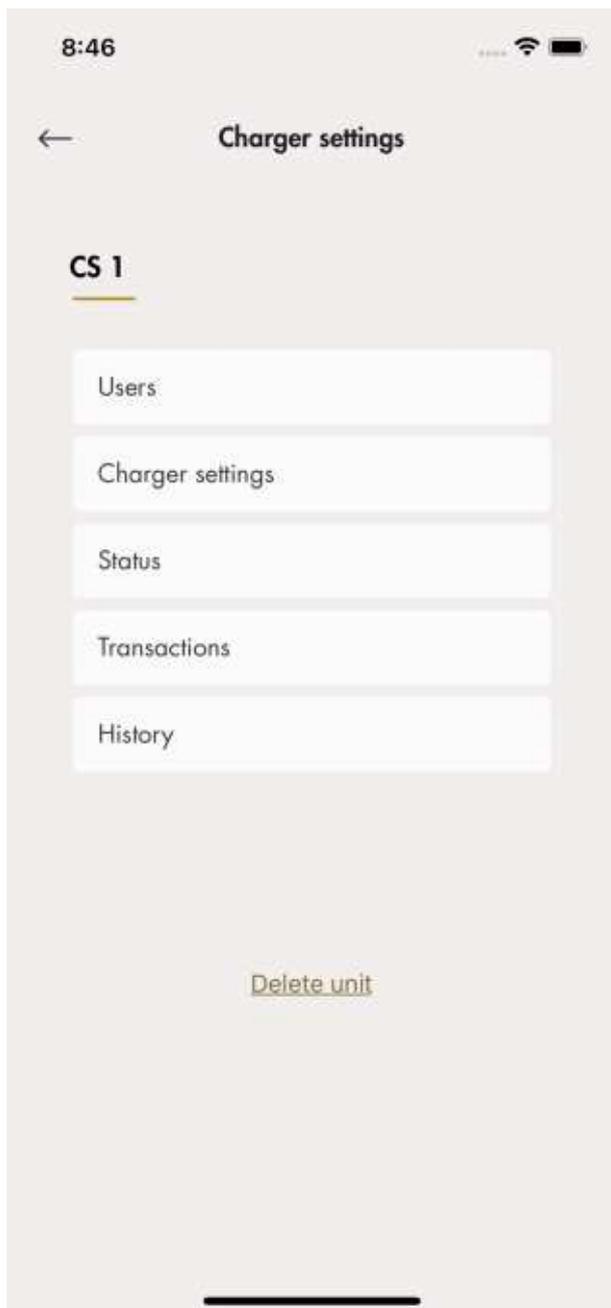
A message to the installer concerning the location or installation can be tied to the location, for example the Wi-Fi credentials if a local Wi-Fi is to be used.

**Charger settings**

The features available under *Charger settings (owner)* are not mandatory.

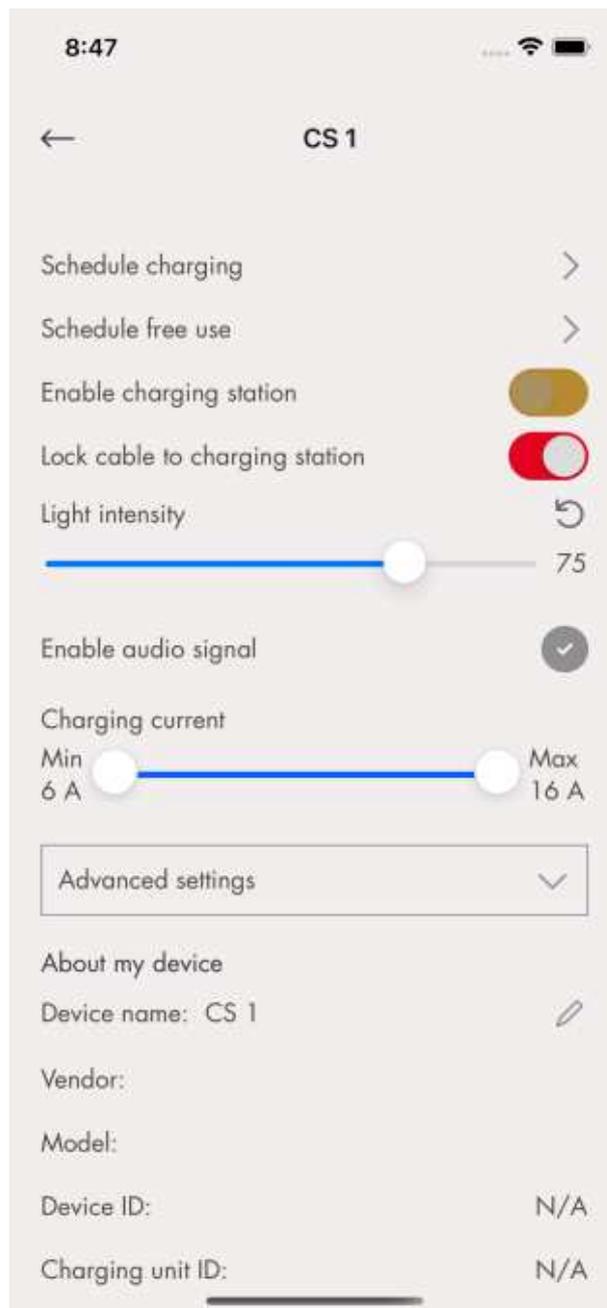
- Charger settings

The settings for each charging station can be changed. Click on applicable charging station, then *Charger Settings* and follow the instructions in the app.



- Enable charging station

Under *Manage charging stations > Charging Settings*, each charging station can be enabled/disabled by the owner. If the charging station is disabled, the charging station cannot be used.



- Charging station access

Each charging station can be set to free use (default). This enables access for everybody. If the EV driver identifies before connecting to the EV, the charging transaction is registered to the EV driver.

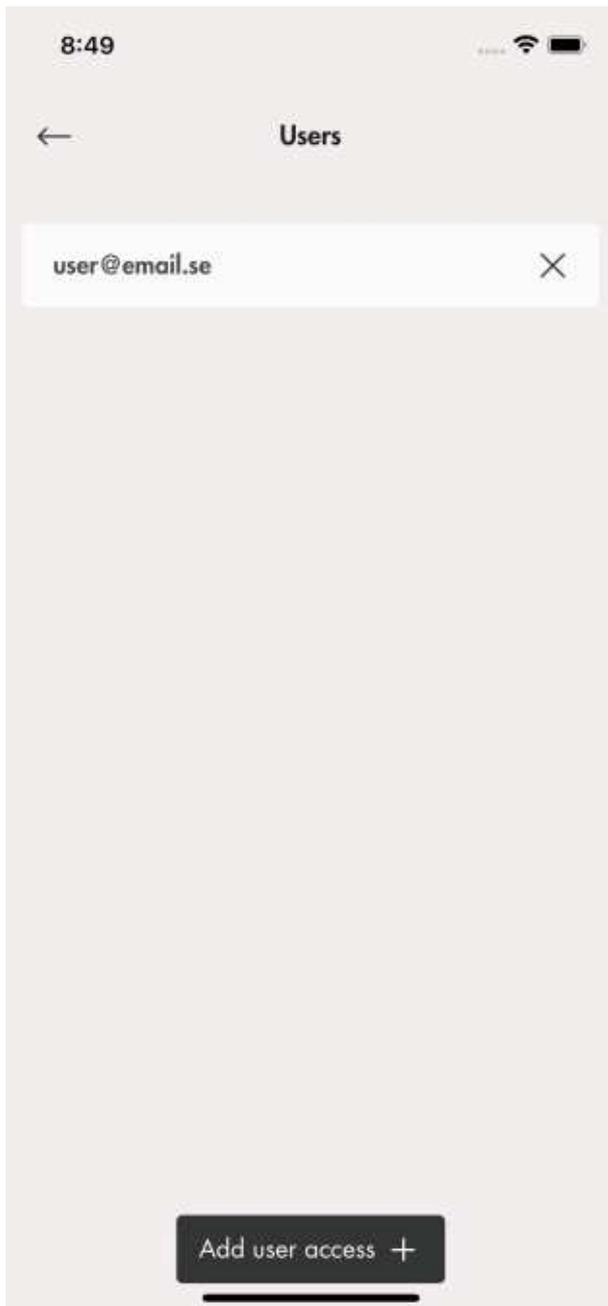
At delivery the free use is enabled by default. The charging station is at that time not set up for access control. Free use can be used, even if the charging station has defined EV drivers, those rights can be seen as “overridden” by the free use.

- Invite drivers

The owner can invite EV drivers from the app. Click *Charger Settings*, select *Users* and follow the instructions in the GARO Connect app. EV drivers can be added individually or through an EV driver group.

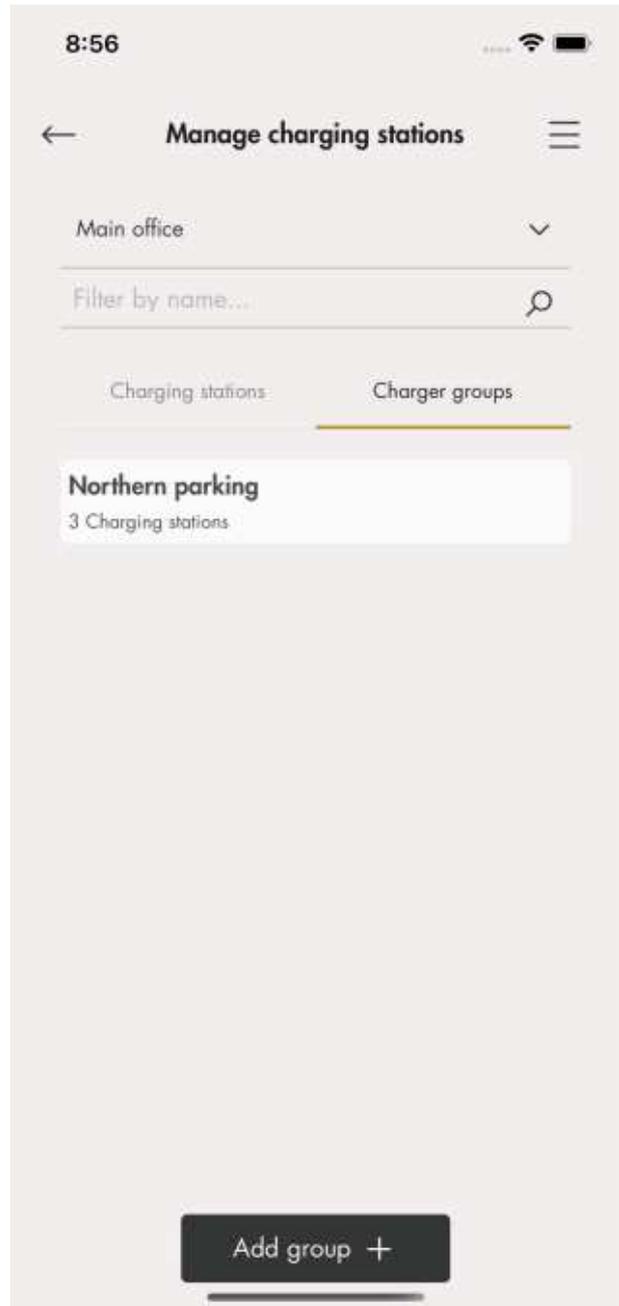
**NOTE**

If the EV driver does not have a GARO Connect account, an invitation email will be sent to that EV driver.



- Create a charger group for the charging stations

A charger group is used to manage access control of several charging stations, for example "Northern parking". Access control can be done both on individual level and on group level. It is not mandatory to create charger groups during the installation process. It is possible to create charger groups at a later time.

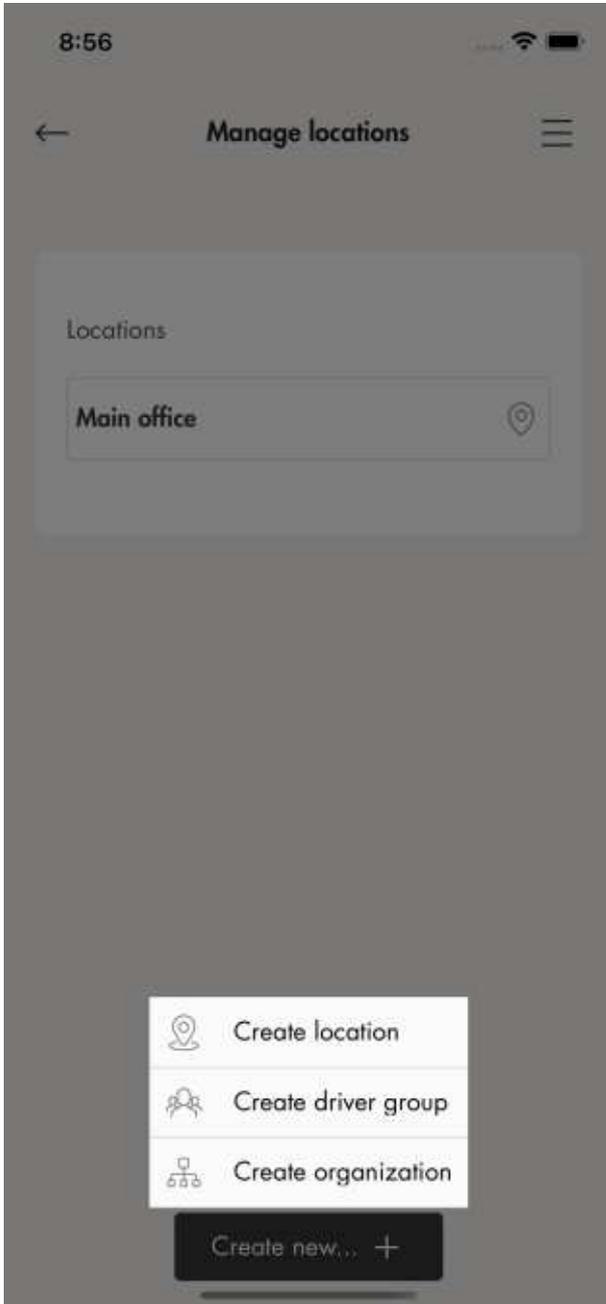


- Cluster EV drivers  
EV drivers can be managed in clusters called EV driver groups, which makes access management easier. EV driver groups are related to the

organization, which means they can be used in several locations within an organization.

The organization is a good tool when administrating several locations.

The owner is normally given default access to use the charging stations of the location.



- Advanced owner tools

Additional owners can be added and removed to a location and organization. However, an organization and location must always have at least 1 owner.

A location can also be handed over to another owner (example "sold to").

### 4.14.5 INSTALLER

The installer is a certified installer or acts on behalf of a certified installer. The installer is hired by the owner to perform the electrical steps of the installation of the charging station(s) that is connected to a location.

To access a location for installation, the owner of the location creates/generates an installation code. The installation code is a 12 letter code that works like a key to the location. The code can be handed over to an installer by email, paper or any other media. Installer must have the code to start an installation.

If a new installation code is generated by the owner, the old one is invalid, like a key.

The installation process of the installer is described in the illustration below. For a full instruction, refer to [To prepare the installation \(installer\), page 68](#).

#### NOTE

When a new installation is started, the installer can act as a temporary owner and then hand over ownership of the product(s) to the owner.



1. Enter the installation code in the GARO Connect app. The installation code is related to a location.
2. Select the location that the owner has set up.
3. Create or choose charging station.
4. Perform the physical installation. Refer to [4 Installation, page 19](#).
5. Connect the selected, logical charging station to a physical installation bracket, by scanning the IB QR code.
6. Set up the internet connection for the charging station(s).

7. Perform necessary firmware update.

#### NOTE

Updating using modem as internet access takes long time.

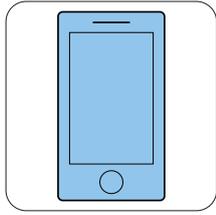
8. Perform the configuration settings.
9. Create connection groups and install load interfaces (if needed).
10. Perform test charging to make sure that the charging station(s) operate correctly.
11. Declare the installation as complete in the GARO Connect app and hand over the installation to the owner. If the installer created the location, it should be transferred to the real owner.

### To prepare the installation (installer)

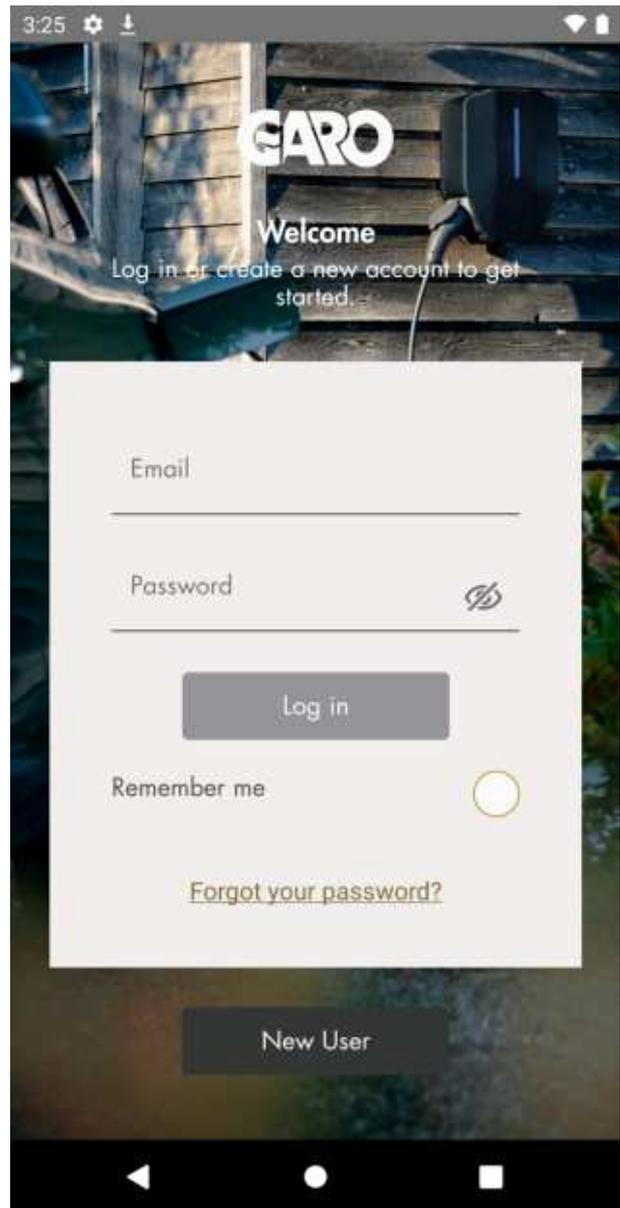
#### NOTE

These instructions are for the installer. To see the whole process overview of the GARO Connect app, refer to [4.14.2 GARO Connect app process overview, page 57](#). To see the overview of the symbols and buttons in the GARO Connect app, refer to [4.14.3 GARO Connect app symbols overview, page 58](#).

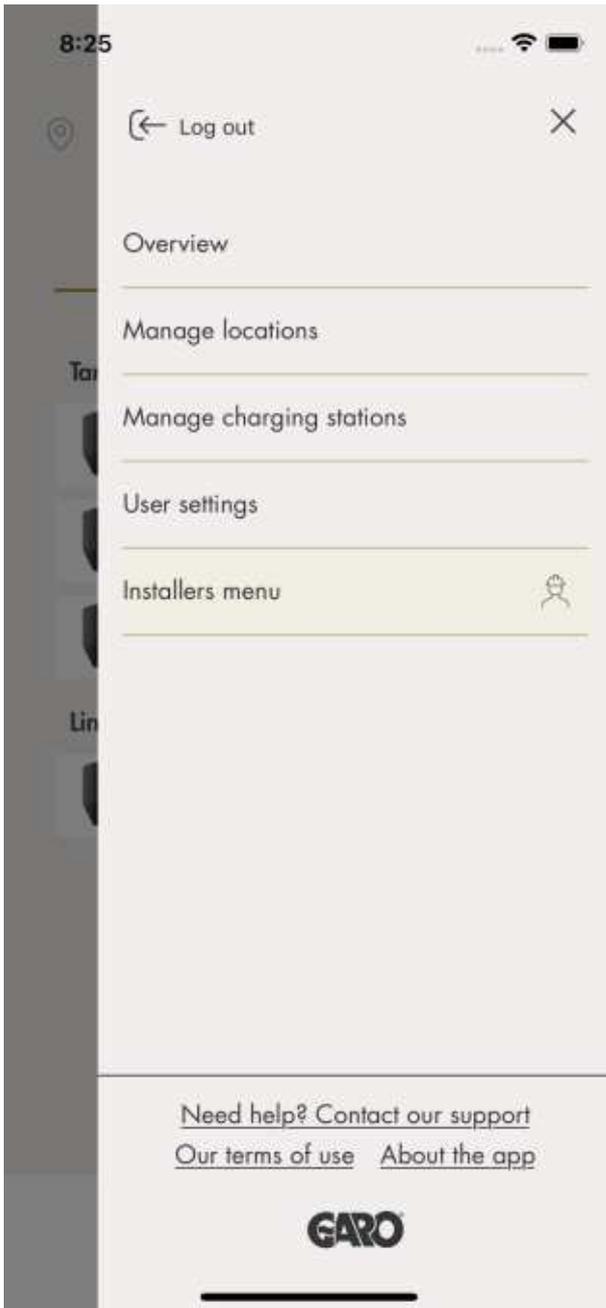
1. Download the GARO Connect app.



2. Log on to the GARO Connect app with provided credentials. If it is the first time logging in, edit personal settings.



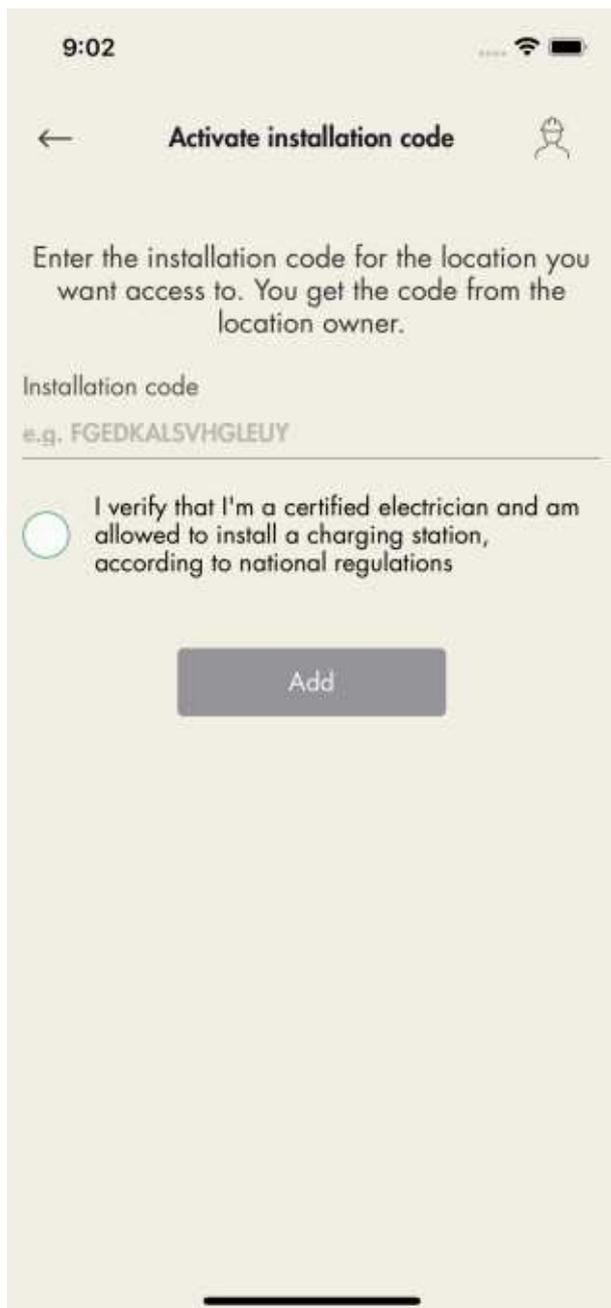
3. Choose *Installers menu*.



4. Select either *New installation for new location* or *Change installation for existing location*.

5. *Change installation for existing location*: Select a location.

6. Enter the installation code provided by the owner.



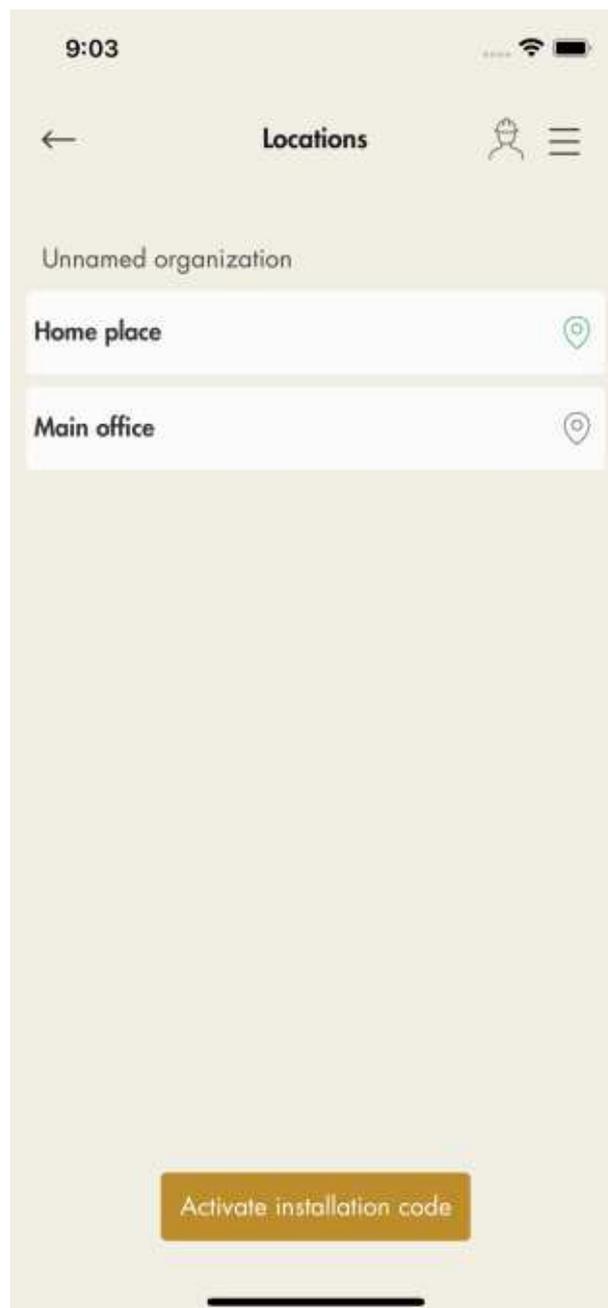
### NOTE

To access a location for installation, the owner of the location creates/generates a 12 letter installation code that works like a key to the location. The code can be handed over to an installer by email, paper or any other media. The installer must have the code to start an installation. If a new installation code is generated by the owner, the old code becomes invalid and cannot be used. A location is normally equal to an electrical mains system of a building/site/area. The installation code is only required one time per location.

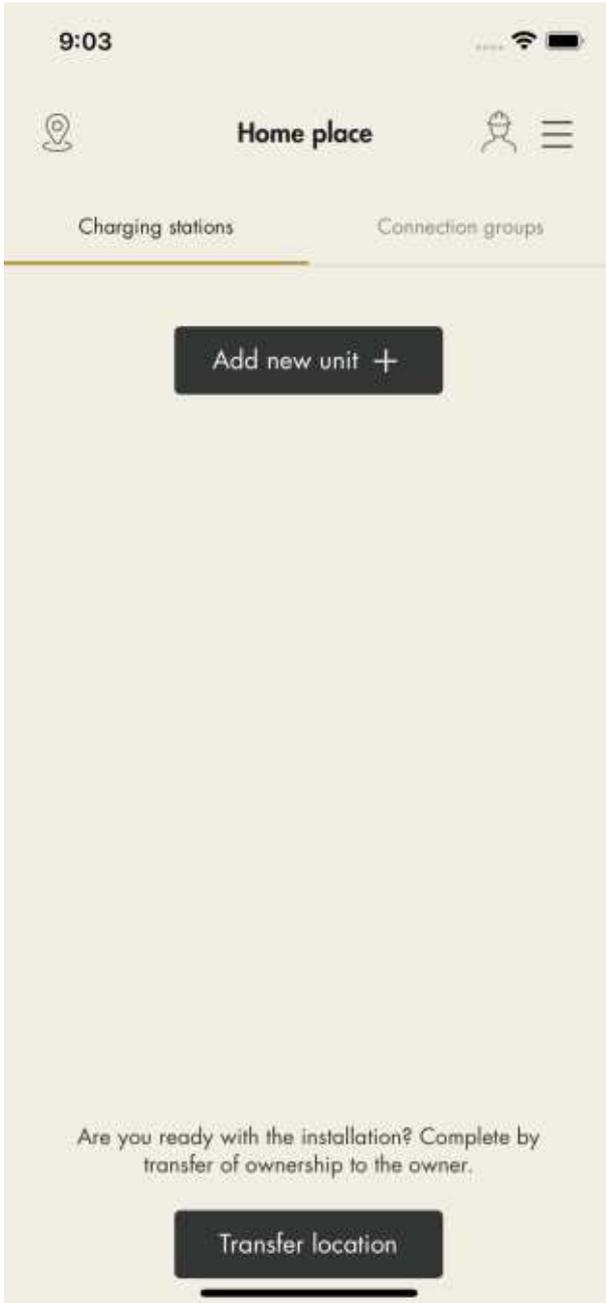
7. *New installation for new location:* Create a new installation for a new location. During the installation, which starts with the creation of the location, the installer acts as a temporary owner. After the installation, the location is transferred to the actual owner.

### To install a unit (installer)

1. Select the location to install the unit(s) in.



2. Click *Add new unit*.



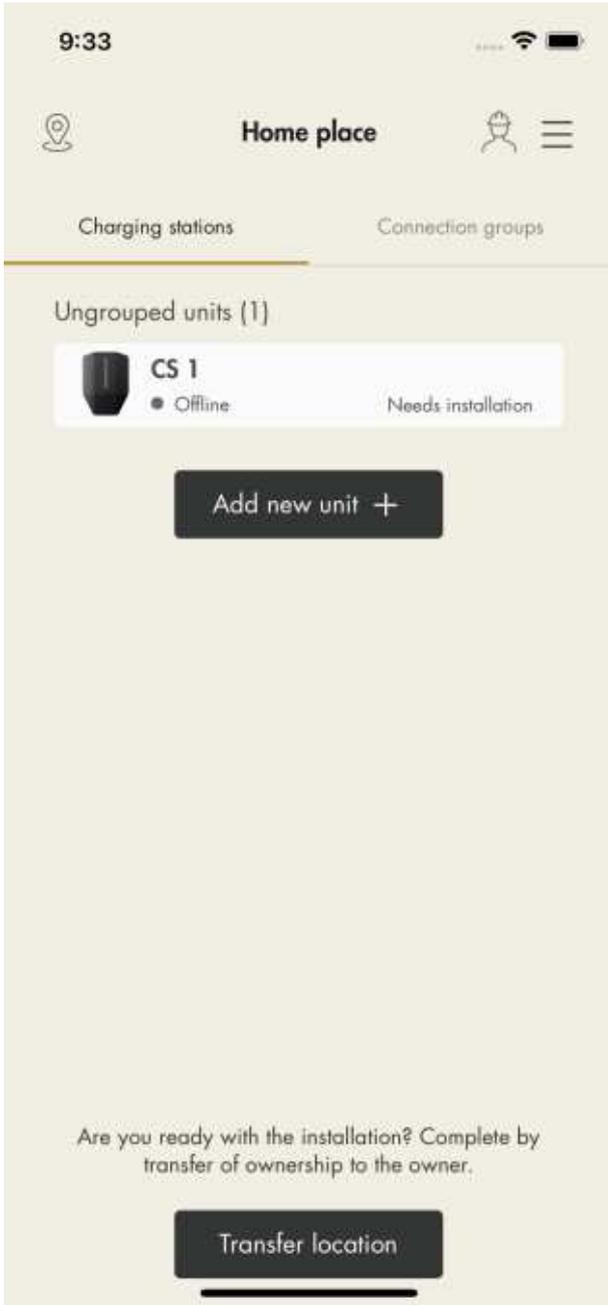
3. Enter a device name and select *Garro Entity* for charging stations or *Garro Entity Balance* for load interface units. The Garro Connect app provides the applicable installation guide based on this choice, even though the installation for each unit type is almost the same.



4. Once the unit is added, connect the unit to a group. Click the unit to connect it to a group.

**NOTE**

In this example, CS 1 will act as an internet gateway, therefore the group structure is set up with this unit first.



**NOTE**

All units, even a single charging station, must be tied to a group. The workflow of adding units must follow the connectivity and the DLM structural paths. Always start with the unit that will act as the internet gateway followed by the closest units of the different levels. If more units are installed and shall work together in a DLM system, all must belong to the same communication group structure.

	<p><i>Crown icon</i> = DLM master (Manage group load balancing)</p>
	<p><i>Internet icon</i> = Internet gateway/group (Internet master, communication master (manage communication groups), acting master to a mesh Wi-Fi network, "first node" in a "Wi-Fi-mesh").</p>

**NOTE**

To make a DLM work, all units in the DLM must be part of a structured communication group. In small installations, only 1 internet gateway/communication master is required.

5. Enter a group name and set the maximum current (Ampere) for the group.

This is also required for a single charging station installation. If a charging station is only installed to act as an internet gateway, that is create internet access and net access, then this group size can be set to the maximum current of the charging station. In such an instance, the group is never used for any direct DLM function.

If the first created group is to be used as an active DLM group, then it is recommended that the actual DLM current limit is entered.

9:06

← CS 1

Each unit that is installed belongs to a group. This applies to the installation of individual units.

Group name  
DLM home

Group/Charging station max current (A)  
25

(0 - 5000 A)

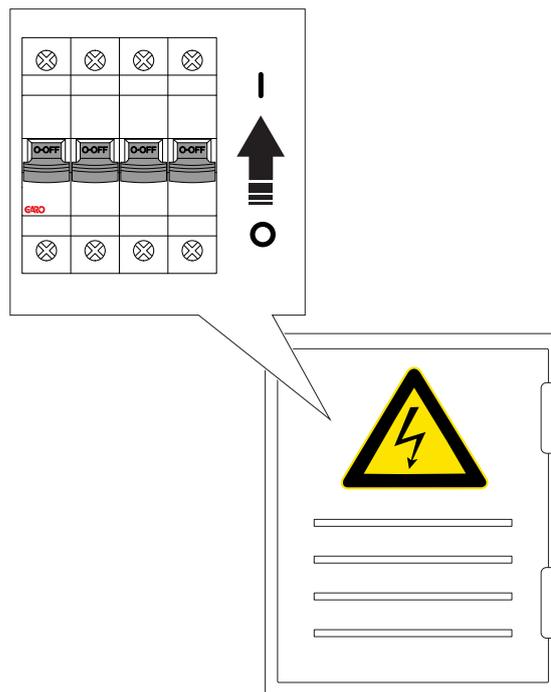
Next

6. An installation guide opens and shows the required steps to install the unit. *All steps must be completed to finalize the installation.*
7. Configuration.
  - a. Install the charging station(s). Refer to [4 Installation, page 19](#).
  - b. Scan the QR code on the bracket.

If the QR cannot be scanned, manually enter the ID.



c. Attach the charging unit and turn the power/voltage on.

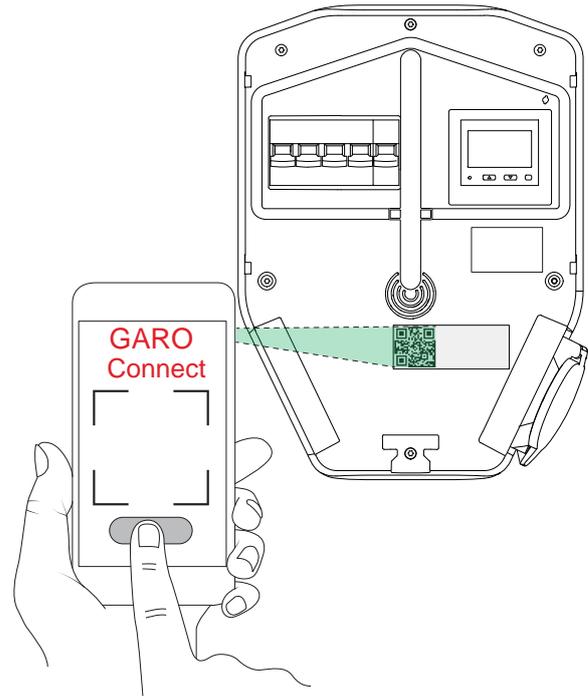


8. Internet setup.

a. To set the internet connection settings for the first unit, the internet gateway, a direct connection must be set up between the device (mobile with the GARO Connect app) and the charging station.



To set up a direct connection, use the charging unit ID label to enter the credentials to the GARO Connect app. The QR code is scanned via the GARO Connect app.



**NOTE**

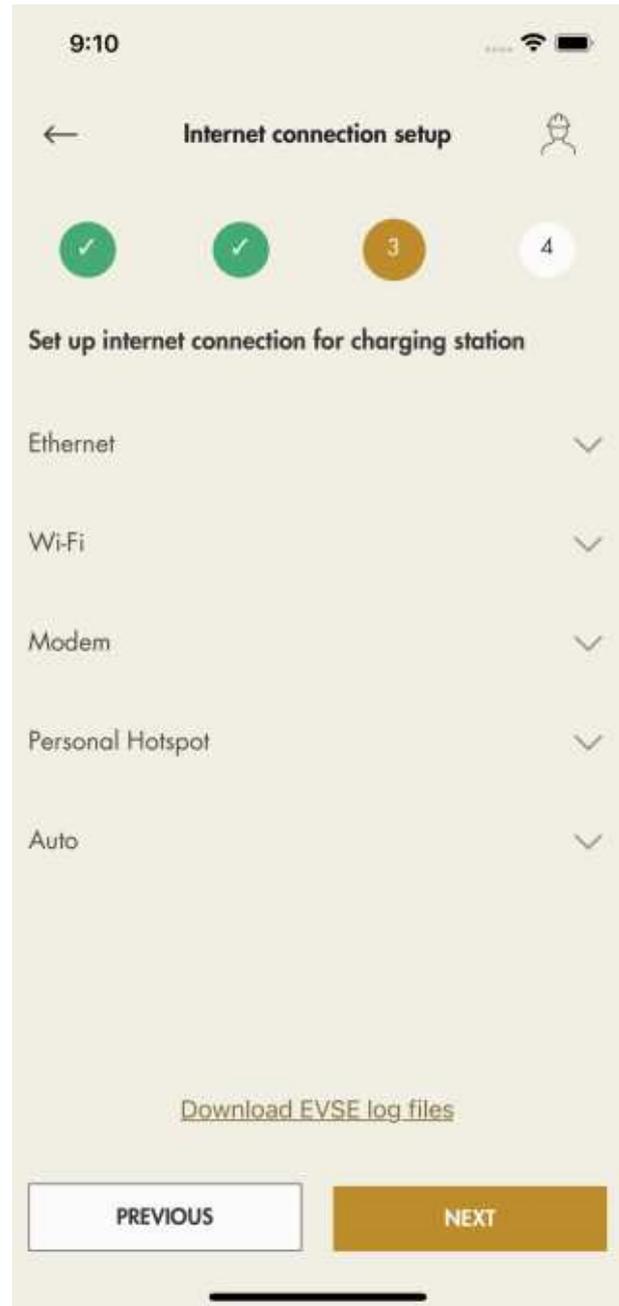
It is also possible to enter the Wi-Fi credentials as plain text in the GARO Connect app, if the QR code can not be used.

- b. Wait until the box lights up with a solid green light. This can take up to 5 minutes.



c. Select how to connect to the internet:

- ethernet cable to router
- local Wi-Fi connection to existing Wi-Fi with internet router
- modem
- as a temporary solution, a hotspot from the mobile device



d. The internet media icon will turn green once connected to the internet.

e. Close the connection between the mobile device and the charging station.

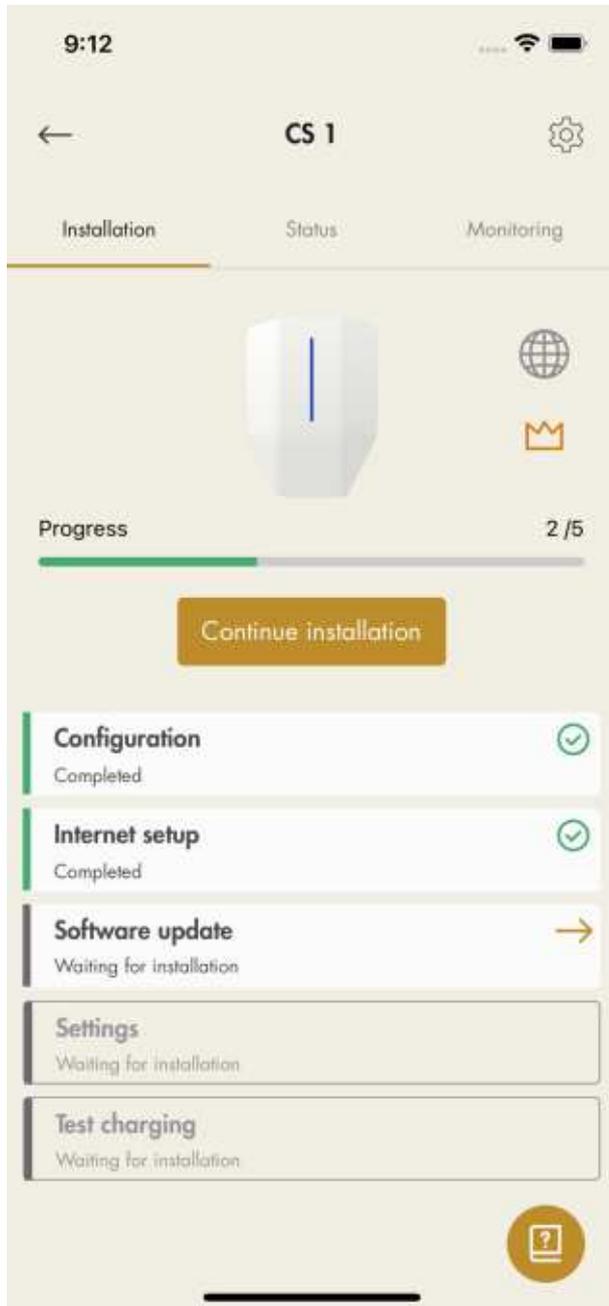
Once the internet is connected to the unit, the mobile device will communicate with the unit over the internet, so the direct connection shall be closed.

#### NOTE

Changing internet settings will force the charging station to a restart.

9. Software update.

Software can always be updated, but never downgraded as this is not allowed due to cyber security. It is highly recommended to enable automatic update of firmware (default setting).

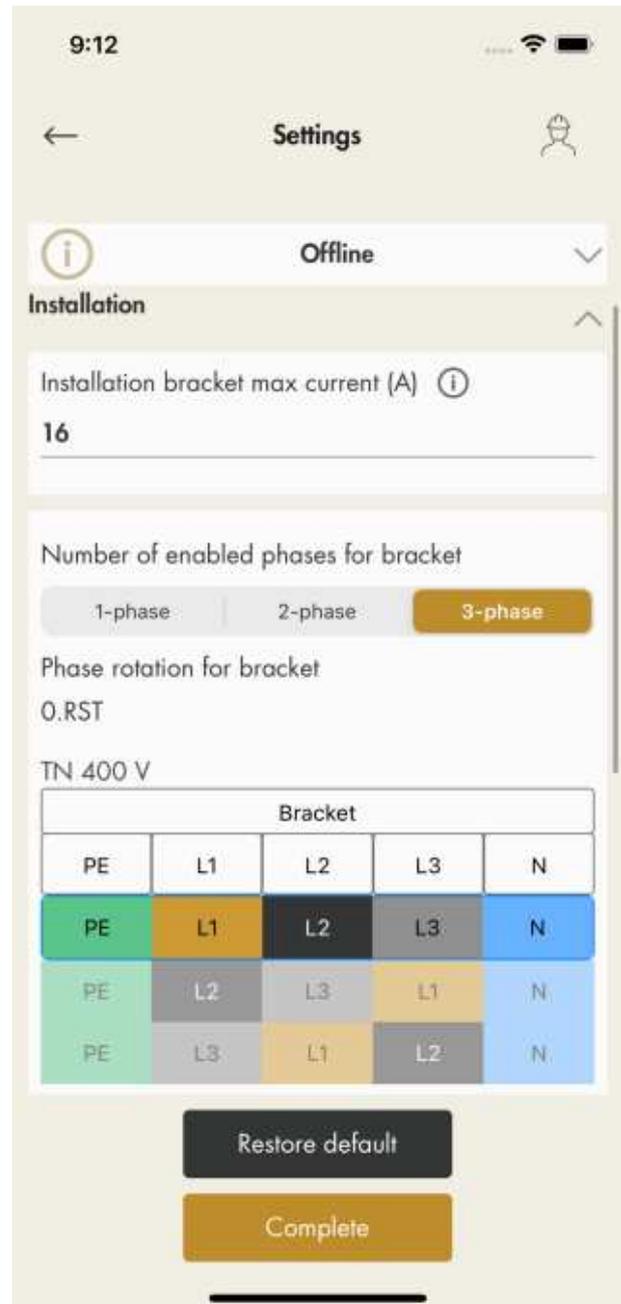


**NOTE**

A software update over a modem can sometimes be very time consuming. It is possible to update at a later date.

10. Settings.

There are several configuration settings that are possible to adjust with the GARO Connect app. In the GARO Connect app, information is available as support for each available setting. If it is necessary, speak to the GARO support organization for further assistance. Some settings require a restart to take effect.



**NOTE**

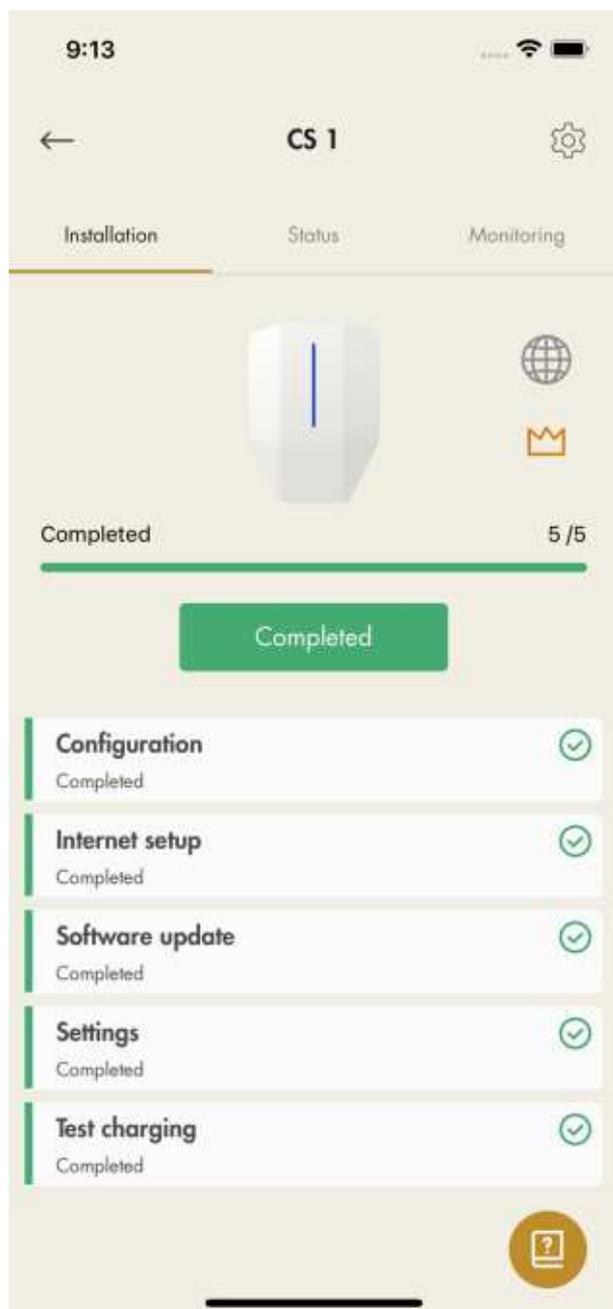
For information on the different parameters, click the “i” icon.

11. Test charging and the ground fault protection, refer to [6.4 To do an earth fault test, page 89](#). Test the

charging station using an EV tester or an EV, refer to [4.12.15 To do a final functionality test of the product, page 41](#). Finalize the installation.

## 12. Declare installation as completed.

After final testing, the installation of the charging unit can be declared ready in the GARO Connect app by clicking *Completed*. The charging unit becomes available to use and visible to the owner.



## NOTE

After the installation is complete each charging station can be activated and deactivated. A deactivated charging station is indicated as red.

## 13. Remove the ID label from the charging unit.



## 14. Functional test

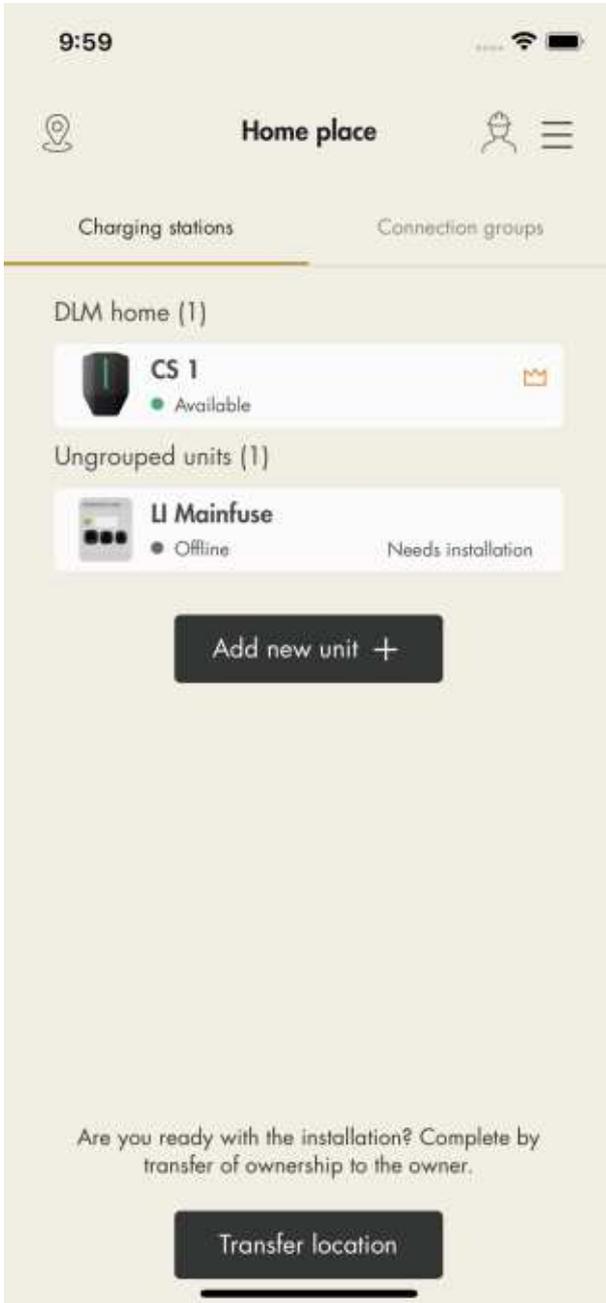
The Wi-Fi credentials on this label can be used to gain unauthorized access to the charging station. For this reason, the information should be considered as sensitive. Place it on a safe space location, for example on the rear side of the charging unit.

Perform the necessary functionality tests such as testing the load management setup to ensure the current is limited at high load conditions, refer to [4.12.15 To do a final functionality test of the product, page 41](#).

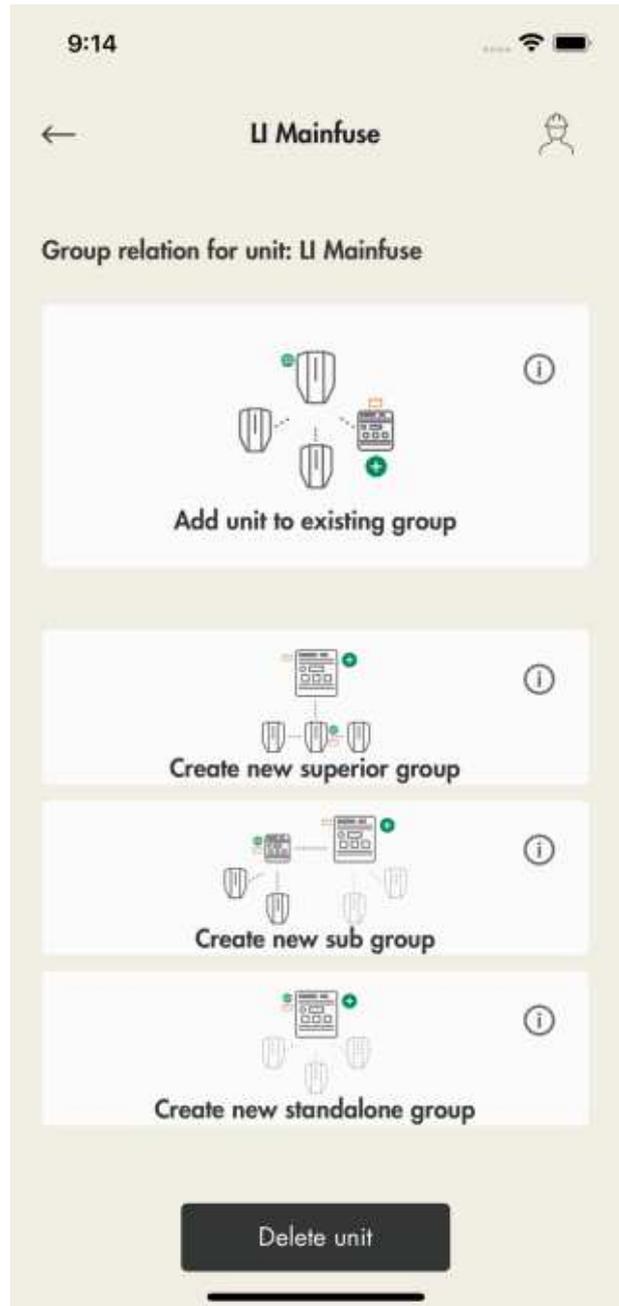
## To install additional charging stations and load interfaces into a DLM group

If additional units are installed into a DLM system, each unit must be defined into a group structure. The GARO Connect app tool controls the workflow order, adding one unit at a time following the closest relationships.

The example below show how to add the ungrouped load interface main fuse unit into the DLM home group structure. The DLM home group unit has already been created for unit CS 1.



1. To connect a unit to a group, click the unit to connect and select a suitable group structure.
  - a. Add the unit to an existing group.
  - b. Create a new superior group.
  - c. Create a new subgroup.
  - d. Create a new stand-alone group.



2. To add a unit to an existing group, select a group and click Next.

**NOTE**

To add a unit to an existing group as a subgroup, name the unit, group current (maximum current) and define the superior group.

When a new subgroup is defined, the default proposal is to also define a new subcommunication master. This is usually a good thing to do in order to avoid reaching the limit of 32 units in a communication group. Another reason to create a

subgroup is that if a Wi-Fi meshgroup is to be "started".

3. Choose connection type.

The connection type defines how the interconnection to the communication master is done. By selecting ethernet cable or Wi-Fi mesh, the connection should be quite automated, without additional need of connection configurations later during the installation process. Use the same method as when adding the first internet gateway.

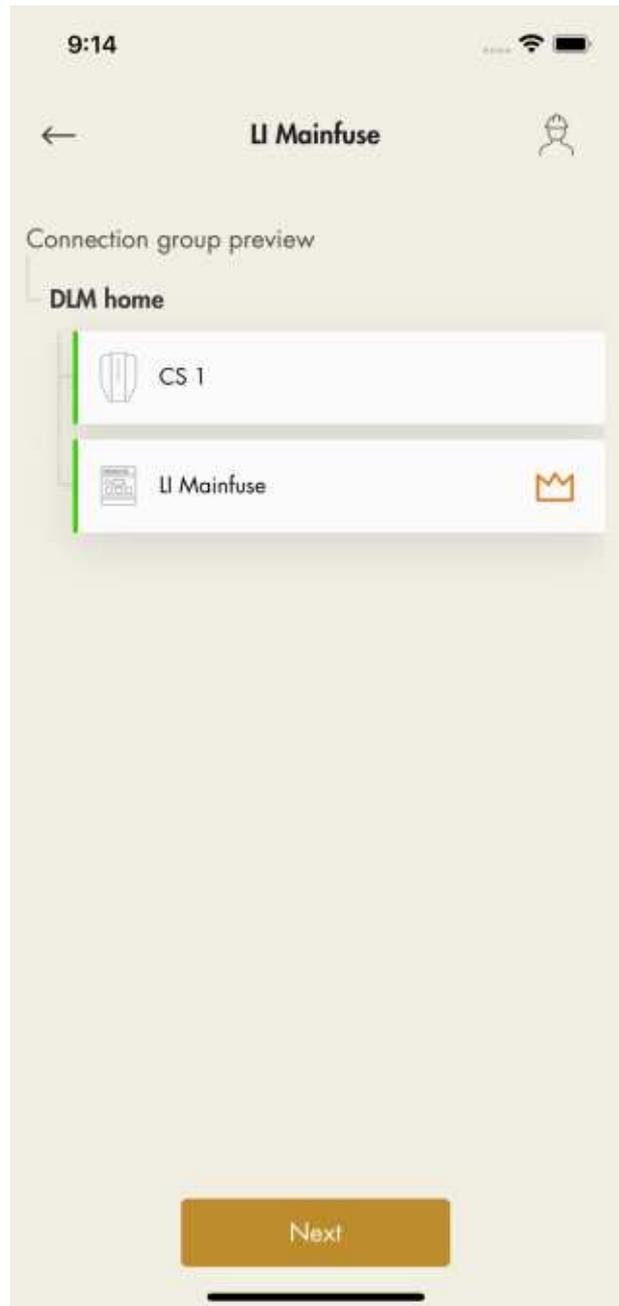
**NOTE**

If the interconnection uses Wi-Fi to an external IT-infrastructure, then the Wi-Fi credentials must be defined later in the installation flow, using the direct connection AP to the charging station.

4. In the preview of the connection group icons indicate that unit is set as DLM and connection group masters.

**NOTE**

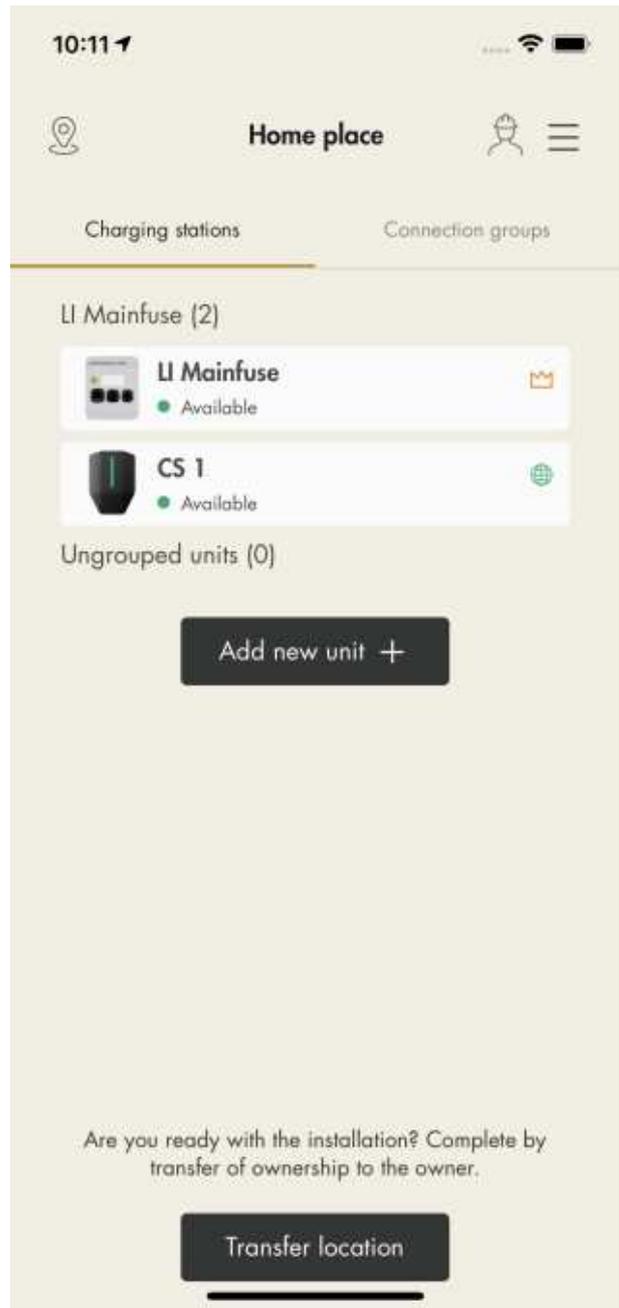
The group is not fully created until the ID is set.



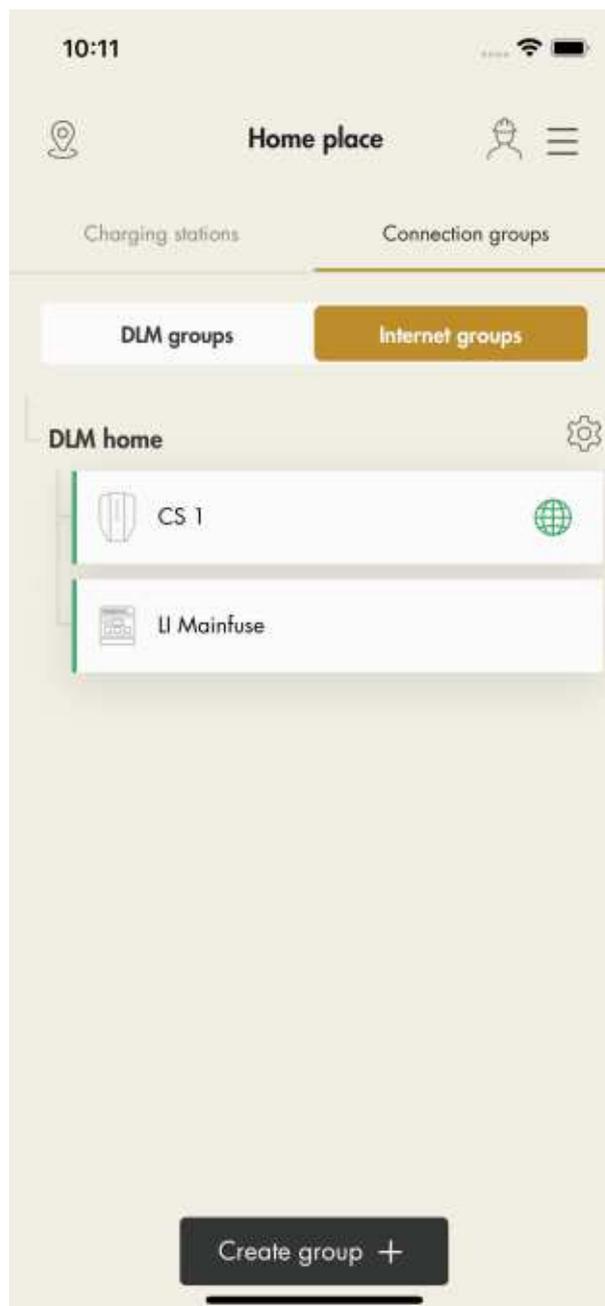
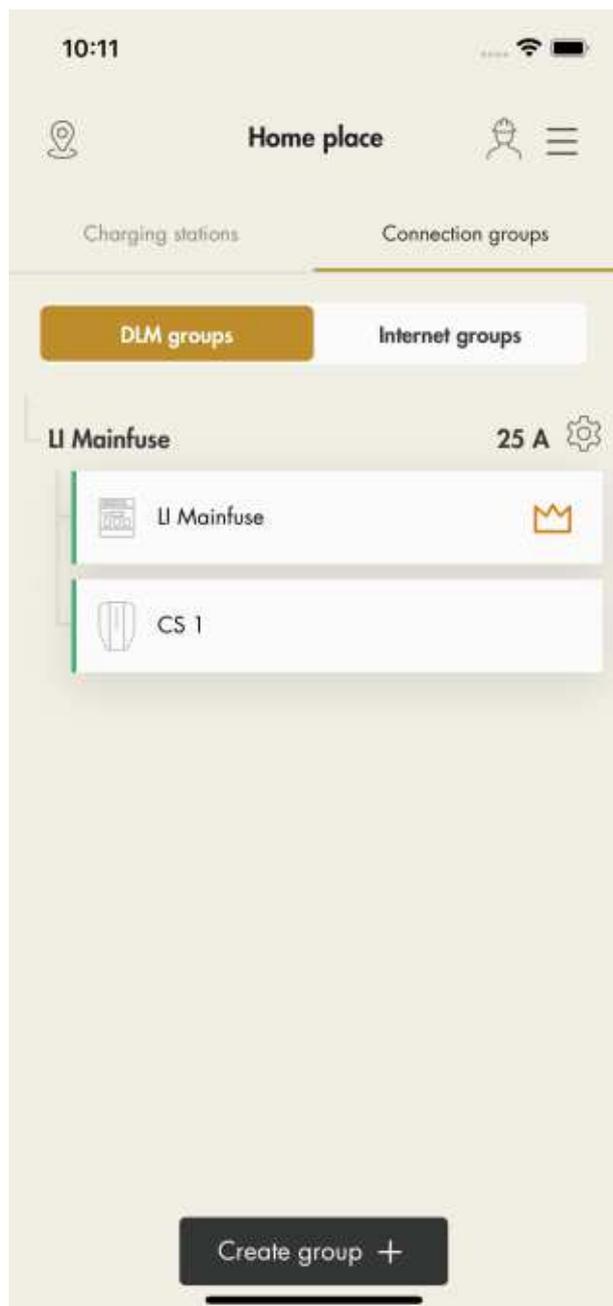
5. Click *Next* to continue the installation. Complete the remaining installation steps and declare the installation finished in the GARO Connect app.



6. The unit is added to the selected group.



7. View the hierarchy of the DLM groups and Internet groups under *Connection groups*.



- Continue to install the remaining settings.

However, the internet connection should be automatic if an ethernet cable or a mesh Wi-Fi is used. If a Wi-Fi connection is used, follow the instructions in the GARO Connect app.

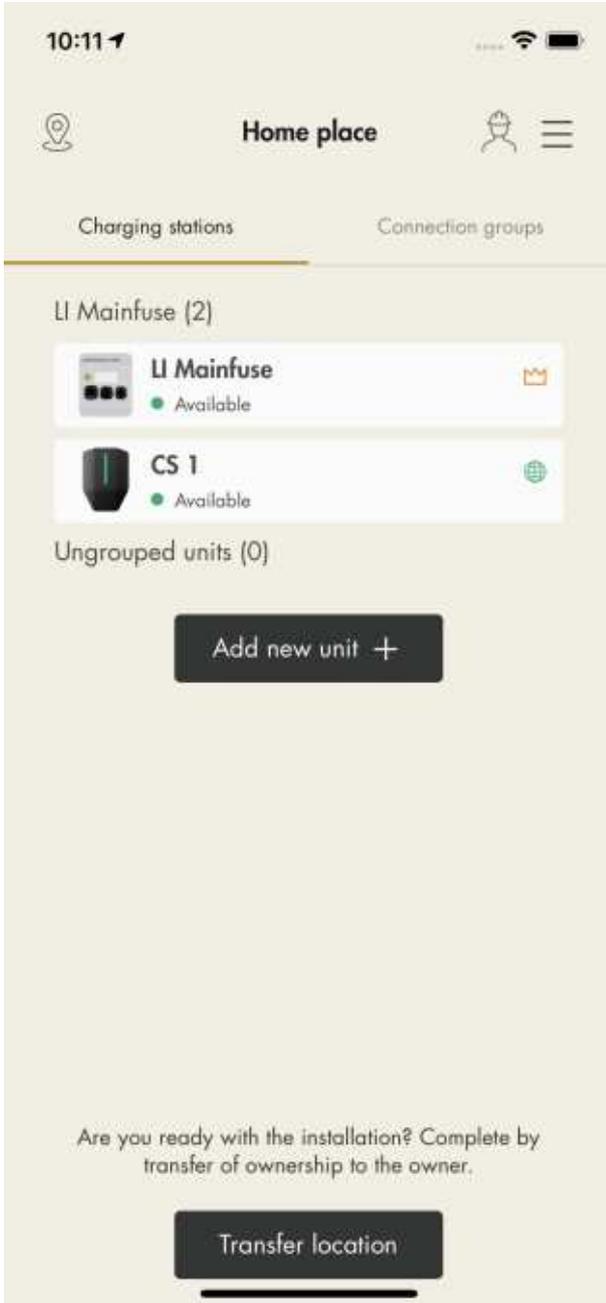
### Transfer location

If the installation is performed on behalf of the owner, transfer the location back to the owner.

To do this, click *Transfer location* and follow the instructions in the GARO Connect app.

**NOTE**

If the owner is not a user of the GARO Connect app, an invitation will be sent out via email.



## EU DECLARATION OF CONFORMITY



Dokument/document		Utgåve datum/edition date
Försäkran om överensstämmelse/ Declaration of conformity		2023-04-13
Avdelning/department		
Produkt/Product		
Ansvarig/prepared	Version	Sida/page
Peter Magnusson	5	1 av/of 1

**Manufacturer/Tillverkare:** GARO AB  
Box 203  
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Sweden

Telephone: +46 (0)370 33 28 00  
Internet: www.garo.se

**UK Address:** Unit 16, Urban Express Park, Aston Hall Rd, Birmingham B6 7FH

**Agent of equipment/Materiellag:** Electric Charging Station for EV with Radio Equipment/Laddstation för elbil med tillhörande radio utrustning

**Trade Mark/Varumärke:** GARO

**Type Designation/Typbeteckning:** EPC...serie

**We hereby declare under our sole responsibility that our product fulfils the requirements of following EC directives/**

**Vi intygar härmed under vårt ensamma ansvar att vår produkt uppfyller krav enligt följande EU direktiv:**

- The Low Voltage Directive (LVD) 2014/35/EU / Lågspänningsdirektivet (LVD) 2014/35/EU.**
- Electromagnetic compatibility (EMC) 2014/30/EU / Elektromagnetisk kompatibilitet (EMC) 2014/30/EU.**
- Radio Equipment Directive 2014/53/EU (RED) / Radiodirektivet (RED) 2014/53/EU.**
- RoHS Directive (RoHS) 2011/65/EU / RoHS direktivet (RoHS) 2011/65/EU.**
- The Electrical Equipment Safety Regulations 2016/UK / 2016 No 1101**
- The Electromagnetic Compatibility Regulations 2016/UK / 2016 No 1091**
- The Restriction of the Use of Hazardous Substances in Electrical and Electronic Equipment Regulations 2012/UK / 2012 No 3032**

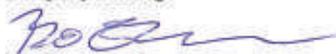
**The following harmonised standards (latest edition) or technical specifications which comply with good engineering practice in safety matters in force within the EU/UK have been used in the design:/**  
Följande harmoniserade standarder (senaste utgåva) eller tekniska specifikationer som uppfyller god säkerhetsteknik praxis inom EU/UK har använts i konstruktionen:

EN IEC 61851-1:2019  
IEC/TS 61439-7:2020  
EN 62311:2020  
IEC 62955:2018  
EN 60898-1  
EN 61008-1

IEC 61851-21-2:2018 Other than residential environments  
IEC 61000-6-3:2006/A1:2010  
IEC 61000-6-2:2005  
ETSI EN 301 489-17 V3.2.4  
ETSI EN 301 489-52 V1.1.2  
ETSI EN 301 489-1 V2.2.3  
ETSI EN 301 489-3 V2.1.2

GARO AB  
Company/Företag

Gnosjö 2023-03-25  
Place Date/Ort Datum

  
Sign/Underskrift

CTO  
Position/Befattning

Bo Eriksson  
Sign in printed letters/Namnförtydligande



Dokument/document		Utgåva datum/version date
Försäkran om överensstämmelse/ Declaration of conformity		2023-04-13
Avdelning/department		
Produkt/Product		
Ansvärlig/prepared	Version	Sida/page
Peter Magnusson	4	1 av/of 1

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*Sweden*

**Telephone:** +46 (0)370 33 28 00  
**Internet:** www.garo.se

**UK Address:** Unit 16, Urban Express Park, Aston Hall Rd, Birmingham B6 7FH

**Agent of equipment/Materiellslag:** Load Interface Unit Entity Balance / Effektenhet Entity Balance

**Trade Mark/Varumärke:** GARO

**Type Designation/Typbeteckning:** ELI... serie

**We hereby declare under our sole responsibility that our product fulfils the requirements of following EC directives/**

Vi intygar härmed under vårt ensamma ansvar att vår produkt uppfyller krav enligt följande EU direktiv:

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- Radio Equipment Directive 2014/53/EU (RED) / Radiodirektivet (RED) 2014/53/EU.**
- RoHS Directive (RoHS) 2011/65/EU / RoHS direktivet (RoHS) 2011/65/EU.**
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IEC/EN/UL/CSA 62368-1  
 EN 61000-6-2:2005  
 EN 61000-4-6:2007 + A1:2011  
 EN 61000-3-2:2004  
 EN 61000-3-3:2013

EN 61326-1:2013  
 ETSI EN 301 489-17 V3.2.4  
 ETSI EN 301 489-1 V2.2.3  
 EN 62311:2008

ETSI EN 300328 v2.2.2 partial testing

GARO AB  
**Company/Företag**

Gnosjö 2023-04-13  
**Place Date/Ort Datum**

  
**Sign/Underskrift**

CTO  
**Position/Befattning**

Bo Eriksson  
**Sign in printed letters/Namnförtydligande**