

## GARO Atle

Quick Start



manual 380265

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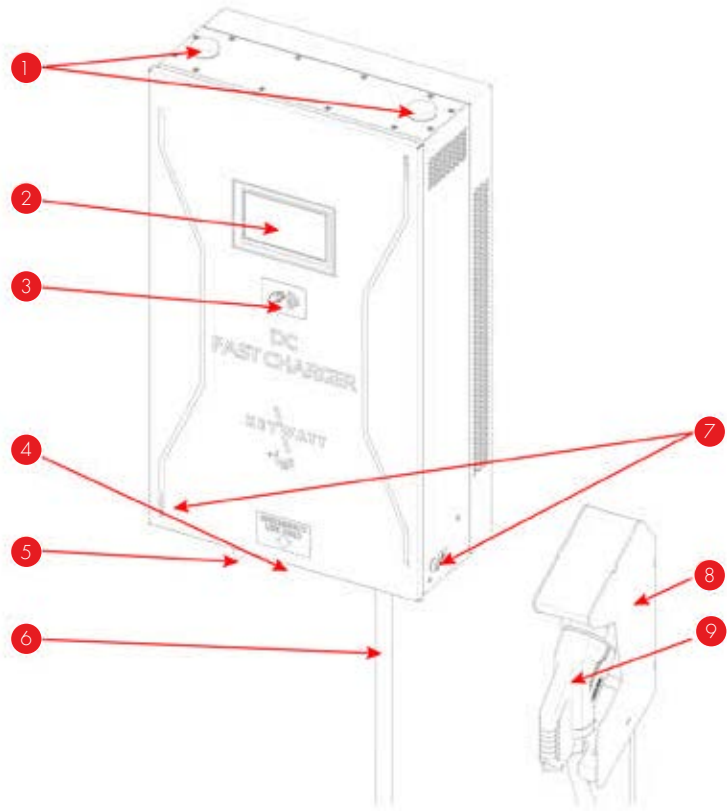
**GARO**<sup>®</sup>



1

ATLE CCS or CHAdeMO

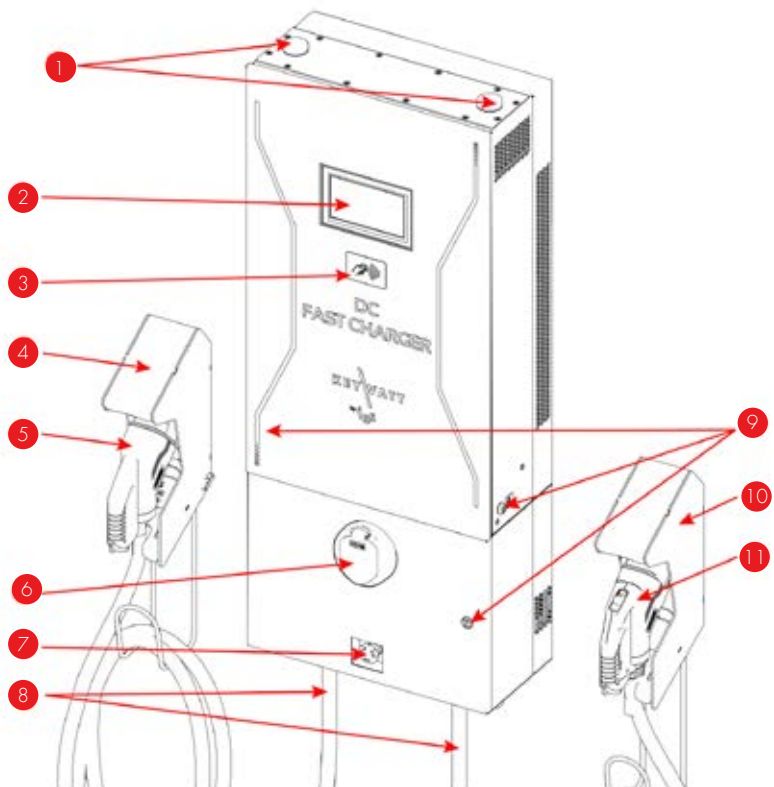
1. Antennas
2. 7" touchscreen display
3. RFID reader
4. Emergency Stop button
5. Input cable
6. Output cable
7. Key locker
8. Connector support
9. Output DC connector



2

ATLE CCS + CHAdeMO

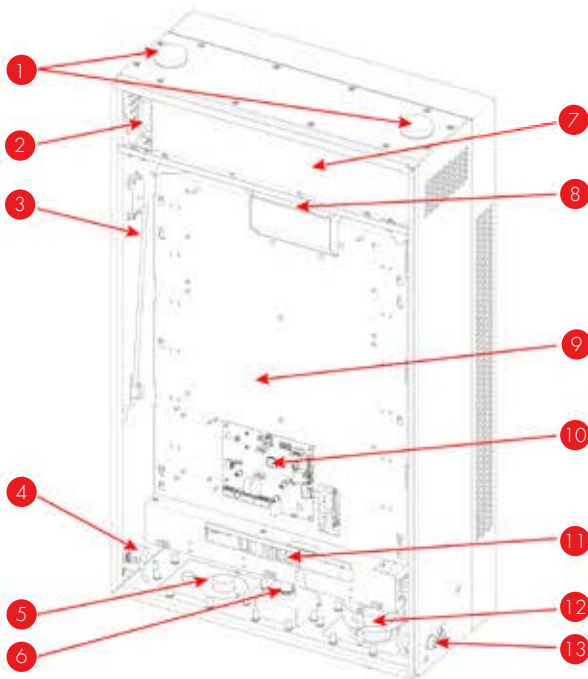
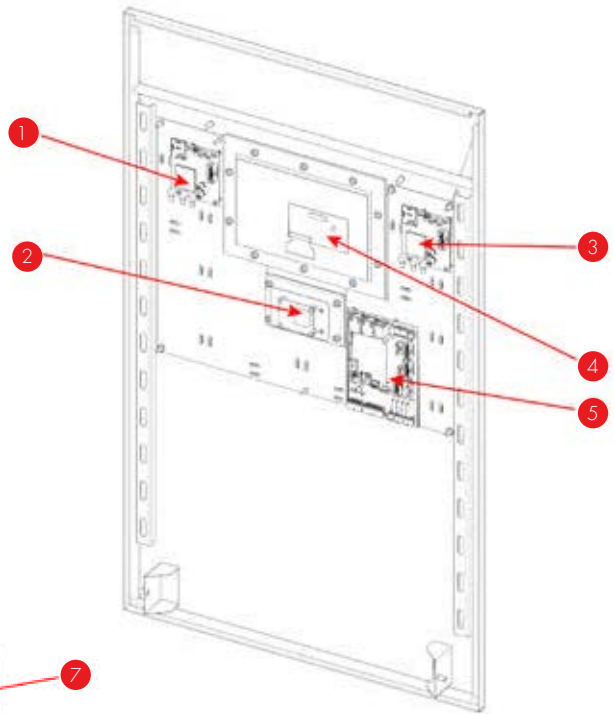
1. Antennas
2. 7" touchscreen display
3. RFID reader
4. Connector support
5. Output Combo 2 DC connector
6. AC socket outlet Type 2
7. Emergency Stop button
8. Output cable
9. Key locks
10. Connector support
11. Output CHAdeMO DC connector



3

Internal view

1. Optionnal modem board
2. RFID reader board
3. Modem board
4. Display board
5. OCPP board

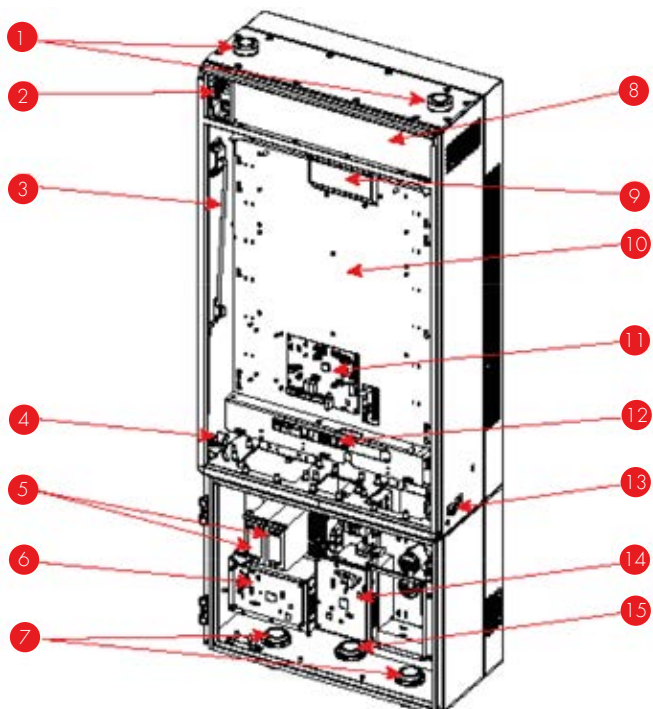


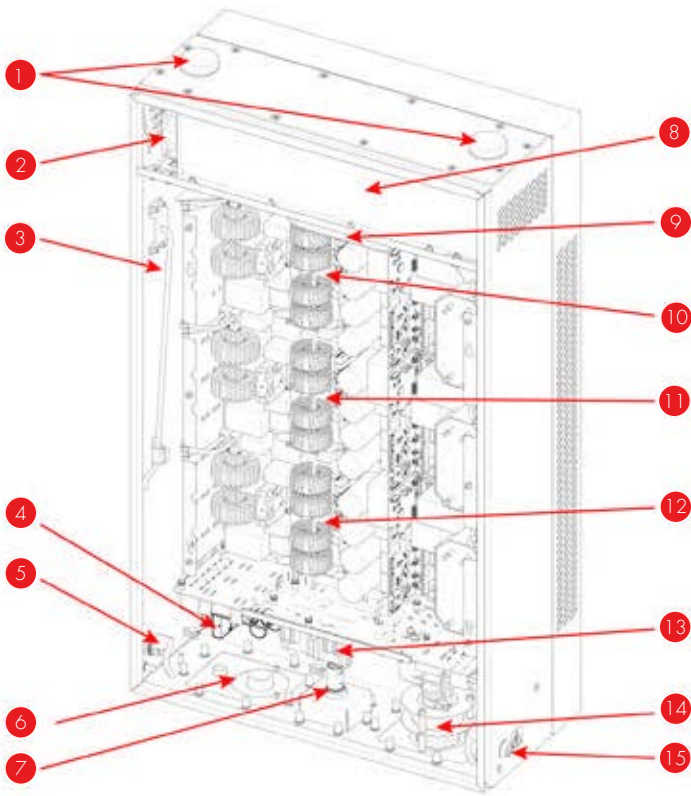
4

1. Antennas
2. External fans for heat exchanger
3. Hood stand
4. Key locker
5. Input plate + cable gland
6. Emergency stop button
7. Heat exchanger
8. Extractor fan
9. Power module lid
10. CCU board
11. Distribution board
12. Output plate + cable gland
13. Key locker

5

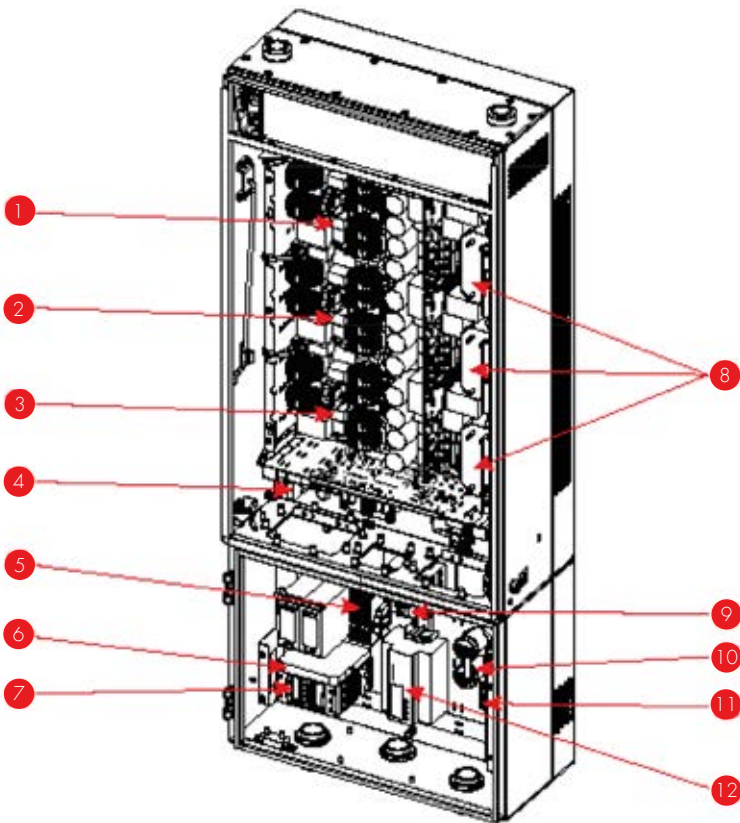
1. Antennas
2. External fans for heat exchanger
3. Hood stand
4. Key locker
5. 12V power supply
6. AC powershare board
7. DC output cable glands
8. Heat exchanger
9. Extractor fan
10. Power module lid
11. CCU board
12. Distribution module
13. Key locker
14. Output Switch Board (OSB)
15. Input cable gland





**6** Internal view - lower level  
ATLE CCS or CHAdEMO

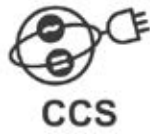
1. Antennas
2. External fans for heat exchanger
3. Hood stand
4. AC input configuration board
5. Key locker
6. Input plate + cable gland
7. Emergency stop button
8. Heat exchanger
9. Extractor fan
10. 8kW Module - slave 1
11. 8kW Module - slave 0
12. 8kW Module - master
13. Distribution board
14. Output plate + cable gland
15. Key locker



**7** Internal view - lower level  
ATLE CCS + CHAdEMO

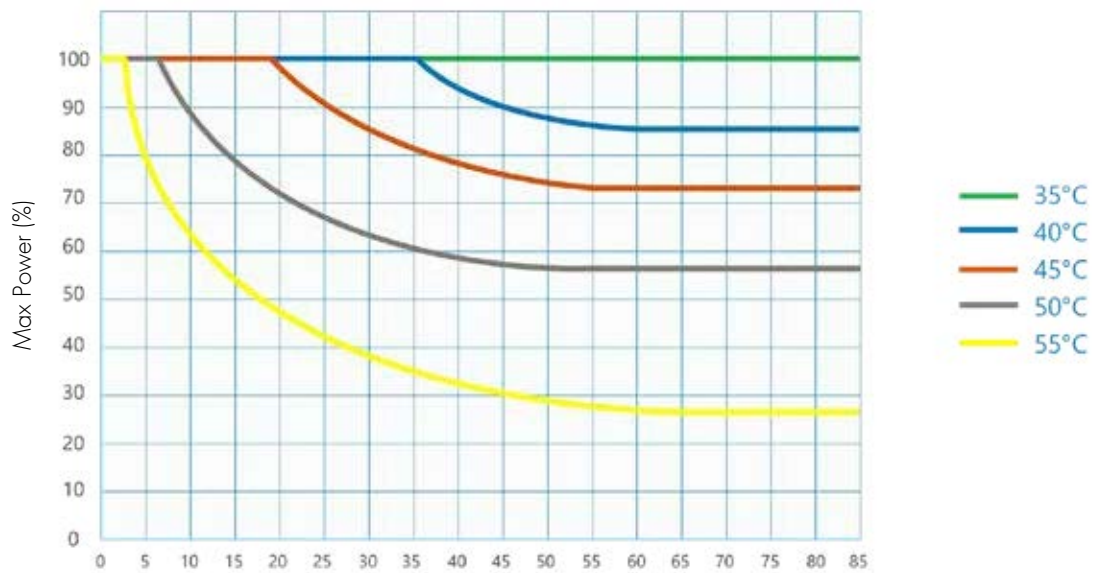
1. 8kW Module - slave 1
2. 8kW Module - slave 0
3. 8kW Module - master
4. AC input configuration board
5. Connection terminal block
6. Auxiliary contact relay
7. AC contactor
8. Transformer
9. Mechanical Circuit Breaker (MCB)
10. Output relays
11. CHAdEMO protection diode
12. Powermeter

## Compliance



## Derating

As a direct correlation exists between the current and ambient temperature a derating curve is provided for all charging station.

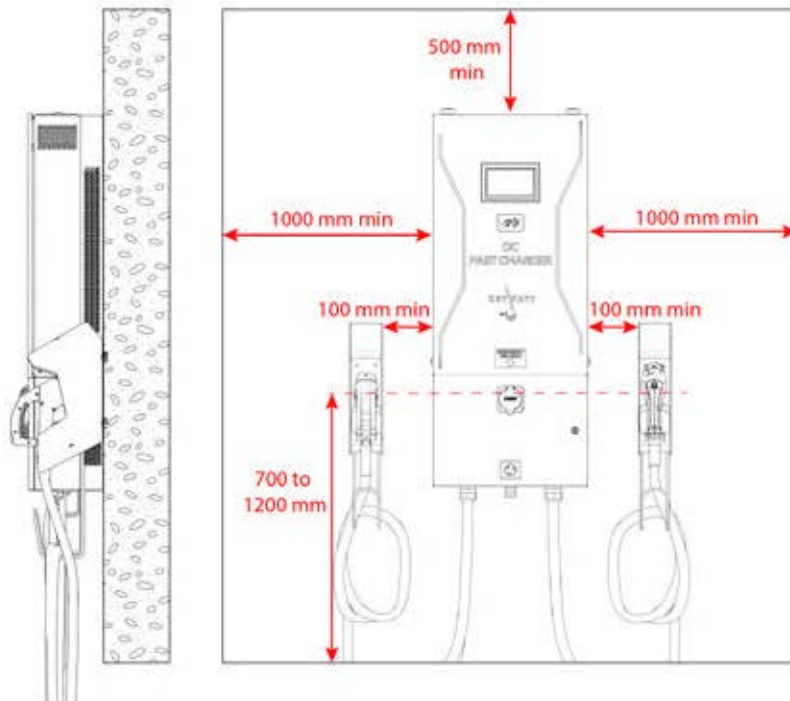
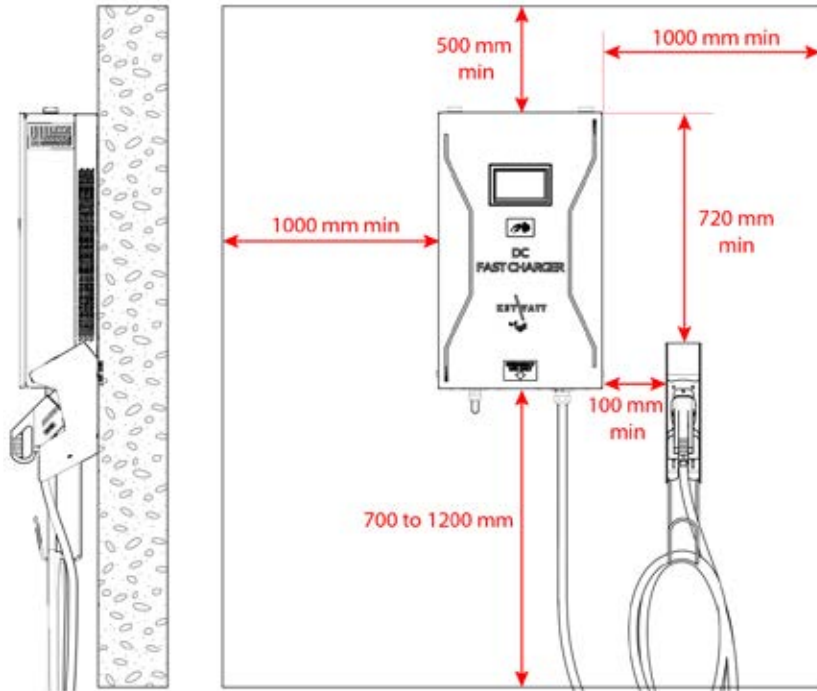


Minutes before derating @ VOUT=370VDC & IOU=65A

## INSTALLATIONS

It is advisable to leave 1000mm free space on each side and 500mm on the top and the bottom of the charging station if it is surrounded by a wall. This free space is mandatory for charging station's ventilation.

Never block the air flow.



## WARRANTY CONDITIONS

### EU COUNTRIES (EXCEPT SWEDEN)

1. The product benefits from manufacturer's warranty. The applicable warranty period must be stated in purchase documents from your supplier.
2. The product must be installed by a certified installer / contractor.
3. Proper installation, storage and operation conditions must be obtained.
4. Warranties apply only to products installed in their original installation location.
5. Installation, use, care, and maintenance must be normal and in accordance with instructions.
6. Warranty requires a dated, fully filled in Warranty form by an certified installer/contractor. If the original installation date cannot be verified, then the warranty period begins ninety (90) days from the date of product manufacture (as indicated by the model and serial number).
7. Warranty does not cover damage occurred by incorrect use of equipment, use of any non-original spare parts, lack of maintenance or faults caused by disassembly of the product or unauthorized persons intervention,
8. Warranty does not cover software or update thereof.
9. Warranty does not cover aesthetic deficiencies caused by negligent manipulation or accidents (breaks or damage to the carcass).
10. Warranty does not cover damage caused by external overvoltage from either grid or car/charging object.
11. Warranty does not cover damage caused by force major like for example but not limited to: floods, winds, fires, lightning, accidents, sabotage, military conflicts, terrorism, volcanos, earthquakes or corrosive environments.

### SVERIGE/SWEDEN

Garantivillkor enl ALEM 09.

Garantin gäller ej om produkten varit utsatt för ett isolationstest, sk meggning.



## TABLE OF CONTENT

INFORMATION	3
ABOUT THE MANUAL	3
SAFETY NOTES	4
SPECIFICATION	5
TECHNICAL SPECIFICATION	6
HANDLING AND STORAGE INSTRUCTIONS	10
UNPACKING	11
GARO ATLE CCS OR CHADEMO	12
GARO ATLE CCS + CHADEMO	12
WALLBOX INSTALLATION	13
GUN HOLDER INSTALLATION	14
GARO ATLE CCS OR CHADEMO	15
GARO ATLE CCS + CHADEMO	15
ELECTRICAL CONNECTION	16
AC INPUT CONFIGURATION	16
ELECTRICAL CONNECTION GARO ATLE CCS OR CHADEMO	16
ELECTRICAL CONNECTION GARO ATLE CCS + CHADEMO	18
COMMISSIONING	22
OPERATING INSTRUCTIONS	24
UTILIZATION	24
ERRORS	30
PROTECTING THE ENVIRONMENT	32



## INFORMATION

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither GARO nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

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All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use GARO software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

## ABOUT THE MANUAL

Technical documentation is an integral part of a product. Until it is disposed of, always keep the technical documentation close to the unit at hand, as it contains important information. Provide technical documentation to the person concerned if you sell, assign or lend the product.

This guide aims to provide informations needed for the use of the GARO ATLE CCS /+ CHAdeMO. This guide must be read in integrality with others related documents. This guide is intended for users of the charging stations.

### Document scope

This guide concerns the following charging stations:








- GARO ATLE CCS
- GARO ATLE CHAdeMO
- GARO ATLE CCS + CHAdeMO
- GARO ATLE CCS + CHAdeMO + AC
- GARO ATLE CCS IT
- GARO ATLE CHAdeMO IT
- GARO ATLE CCS + CHAdeMO IT
- GARO ATLE CCS + CHAdeMO + AC IT

We invite you to write us to communicate any inaccuracies or omissions, or to make general comments or suggestions regarding the quality of this manual.



## SAFETY NOTES





Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

### Warnings









-  RISK OF ELECTRIC SHOCK, INJURY, AND/OR BURNING
-  Only qualified, trained and authorized people will repair, replace or adjust this equipment.
-  Make sure the AC input breaker is OFF and measures 0V before the breaker.
-  Do not use this product if the cables (input or output) are frayed, have damaged insulation or any other signs of damage.
-  Do not use this product if the enclosure or the EV connectors are broken, cracked, opened or show any other indication of damage.
-  This equipment employs parts, such as switches and relays, that tend to produce arcs or sparks and therefore, when used in a garage, locate in a room or enclosure provided for the purpose or not less than 500 mm (18 inches) above the floor.
-  Failure to follow these instructions can result in death or serious injury

### Cautions

-  RISK OF DAMAGE TO THE TERMINAL
-  Do not use this product if the cables (input or output) are frayed, have damaged insulation or any other signs of damage.

-  Do not use this product if the enclosure or the Electrical Vehicle Supply Equipment (EVSE) connectors are broken, cracked, opened or shows any other indication of damage.
-  Do not use a cord extension set or second cable assembly in addition to the cable assembly for the connection of the EV to the EVSE.
-  This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.
-  Failure to follow these instructions may result in serious injury or equipment damage.

### Notes

-  SAVE THIS MANUAL
-  To ensure proper and safe operation, please read these user instructions carefully and keep them for future reference.
-  This manual contains important instructions for the DC quick charger that shall be followed during installation, operation and maintenance of the unit.
-  This equipment shall be installed, adjusted, and serviced by qualified electrical personnel familiar with the construction and operation of this type of equipment and associated hazards.
-  The locking key, supplied with unit, should be kept in a secure and known location by an individual that has read and understands the content of this manual.
-  Do not open the front cover at any time while input power is present.
-  Do not operate the unit while the cabinet door is opened or unlocked.
-  Failure to follow these instructions may result in death, serious injury or equipment damage.


## SPECIFICATION

### Main supply

#### Mains supplies 3-phase P1/P2/P3 + N + GND 3x400V<sub>AC</sub>

Mains 3-phase voltage range	V <sub>AC</sub>	400 V <sub>AC</sub>	± 10%
Earthed electrical system	TT or TN		
Frequency range	f	50 Hz	± 10%
Nominal input current	I <sub>AC</sub>	40-37 A	Nom
Maximum input current	I <sub>AC</sub>	45 A	Max
Power Factor	PF	0,99	Nom
Efficiency	η	95%	Nom
Harmonic current @ nominal network voltage	THDi	< 13%	Max

#### Mains supplies 3- phase P1/P2/P3+GND 3x208-240V<sub>AC</sub>

Mains 3-phase voltage range	V <sub>AC</sub>	208-240 V <sub>AC</sub>	± 10%
Earthed electrical system	TT, TN or IT		
 IT earthed electrical system prohibited for AC charging			
Frequency range	f	50 Hz	± 10%
Nominal input current	I <sub>AC</sub>	72-63 A	Nom
Maximum input current	I <sub>AC</sub>	80 A	Max
Power Factor	PF	0,99	Nom
Efficiency	η	95%	Nom
Harmonic current @ nominal network voltage	THDi	< 13%	Max

## TECHNICAL SPECIFICATION

### Internal AC input protection

Inrush current limitation per phase	$I_{\text{INRUSH LIMIT}}$	$< 3 \times I_{\text{AC}}$	Max
Rated Current Fuse (per module)	$I_{\text{BREAK Rating}}$	80 A	typ
Breaking capacity of fuses	$I_{\text{BREAK Capacity}}$	80 000 A	Max
Max earth leakage current	$I_{\text{LEAKAGE}}$	$< 3,5 \text{ mA}$	Max
Emergency button connection	Yes		
Overvoltage (IEC60664-1)	OVC III		
Insulation protection Class (IEC60664-1)	Class I		

### Internal DC Output

Output voltage	$V_{\text{DC-max}}$	530 V <sub>DC</sub>	Max
	$V_{\text{DC-min}}$	150 V	Min
Output current	$I_{\text{DC-max}}$	65A <sup>(1)I(2)</sup>	Max
	$I_{\text{DC-min}}$	1,5 A	Min
Max Output Power	$P_{\text{OUT}}$	24 kW	Max
Output connector (charging station side)	Permanent mounting		
Car Plug connector	Plug #1	CCS	
	Plug #2	CHAdeMO	
Output cable length	-	3,50	Meters

### AC output for GARO ATLE CCS + CHAdeMO + AC only

AC output			
AC Output voltage	$V_{\text{AC-nom}}$	400 V	$\pm 10\%$
AC Output current	$I_{\text{AC-max}}$	32 A	Max
Max Output Power	$P_{\text{OUT}}$	22 kVA	Max
Car Plug socket	Plug #3	AC type 2 socket	
Type of connection	Case "B" connection (mode3) Detachable cable		

### General & dimensions

External dimensions (mm)	H x W x D	860 x 507 x 250 mm (CCS or CHAdeMO)	
		1225 x 507 x 250 mm (CCS + CHAdeMO)	
Weight (without cable, or bracket)	kg	66 kg (CCS or CHAdeMO)	Max
		93 kg (CCS + CHAdeMO)	Max
Type of installation	Mounting on a wall or on a pedestal with proper fixation point		
Fixation points	8 screws		
Protection type (EN60529)	IP	IP55	
Cooling systems	Heatsink with forced air flow by fans IP55 without air filter		
Noise (1m, all direction)	Db(A)	65dbA (1m)	

**Climatic & Environment constraints**

Operating temperature (with derating)	-25°C to +55°C <sup>(3)</sup>		
Storage temperature	-25°C to +60°C		
Relative humidity	RH	10% to 95%	
Installation altitude	Alt	2 000 m	Max

**Internal DC output protection**


Hardware and software short circuit protection	Yes		
Software and Hardware over voltage protection	adjustable	+10% max	
Over temperature protection	-	70	°C
Reverse polarity protection	Yes		
DC output Contactor	Yes (2 poles)		
Rated Current Fuse (output)	$I_{FUSE}$	125	A
Galvanic isolation	$V_{input / output}$	5200	$V_{DC}$
Max time for DC line discharge < 60V	$T_{<60V}$	1	s

**Internal AC output protection**

Inrush current	230A during 100 $\mu$ s 30A during following second		
Short circuit Socket $I^2t$	$A^2s$	75 000	
Circuit breaker for AC circuit	50A curve C		
Max time for DC line discharge < 60V	$T_{<60V}$	1	s

**Embedded Insulation device of charger module**

Response time (tan)	< 3sec. for asymmetrical fault < 62sec. for symmetrical fault		
Self test time	At power on and every 60s during charge		
Internal resistance $R_i$ of the measuring circuit	1.5Mohms permanent 750Kohms continuous measurement 300Kohms during simultaneous switching measurement		
Measurement method	Continuous and switching measurement resistor method		
Measuring current $I_m$	< 1,4mA at $R_F=0$		
Measurement range ( $R_{an}$ )	20Kohms...300Kohms		
Relative uncertainty	$\pm 15\%$		
Line L+/L- Voltage ( $U_n$ )	DC 150V...530V		
System leakage capacity $C_e$	$\leq 1\mu F$ : response value ( $R_{an}$ ) and time (tan) are not guaranteed for capacity above 1 $\mu F$		
Parallelization	Response value ( $R_{an}$ ) and time (tan) are not guaranteed.		

 Do not connect the insulation monitor device (IMD) in parallel!

### Radio Frequency characteristics

The equipment module is designed to provide customers with global network coverage on the connectivity of UMTS/HSPA+, and it is also fully backward compatible with the existing EDGE and GSM/GPRS networks.

Connectivity	GSM/GPRS	UMTS/HSPA+
Frequency Bands	GSM900: Tx=880 MHz to 915MHz, Rx=925 MHz to 960 MHz / DCS1800: Tx=1710 MHz to 1785 MHz, Rx=1805 MHz to 1880 MHz	3G band 8: Tx=880 MHz to 915MHz, Rx=925 MHz to 960 MHz / 3G Band 1: Tx=1920 MHz to 1980 MHz, Rx=2110 MHz to 2170 MHz
Power Output	GSM900: 33.0dBm DCS1800: 29.3dBm	23.06dBm for 880-915MHz 21.92dBm for 1920-1980MHz

### RFID reader characteristics

To start a charge, users must swipe a contactless RFID card across the card reader.

Frequency Bands	13.553–13.567 Mhz
Power Output	-6.67dBuA/m@10m

### Norms & standards

EC low voltage EC directive (LVD)	2014/35/EU
EC Electromagnetic Directive (EMC)	2014/30/EU
Radio Equipment Directive (RED)	2014/53/EU
Efficient use of Radio Spectrum (RED)	ETSI EN 301 511 V12.5.1 ETSI EN 301 908-1 & -2 V11.1.1 ETSI EN 300 330 v2.1.1
Electric vehicle conductive charging system part 1 General requirement	IEC 61851-1

**Norms & standards**

Electric vehicle conductive charging system part 22 AC Electric vehicle charging station	IEC 61851-22
Electric vehicle conductive charging system part 23 DC Electric vehicle charging station	IEC 61851-23
Electromagnetic compatibility (EMC)	EN 61000-6-2 EN 61000-6-4/A1 EN 301489 v2.2.0 EN 301489-17 V3.2.0 of 2017 EN 61000-3-11 EN 61000-3-12
Insulation Monitor Device (IMD)	IEC 61557-1 & IEC 61557-8
RoHS	2011/65/EU
Declaration of conformity CE(4)	Yes
EV Ready	Pending

(1) Max output current will be adapted versus maximum carrying current of the vehicle plug.

(2) Output current can be even reduced with the power derating versus temperature.

(3) Potential derating above 35°C.

(4) CE marking affixed on the product attest the conformity of the product with applicable requirements of relevant Community harmonization legislation.

## HANDLING AND STORAGE INSTRUCTIONS

### Storage

The charging stations are supplied in individual wood crate. When commissioning the product, all the protection for transport must be removed before energization.

Keep the charging station in its original packaging in an appropriate place:

placed on dry ground or on a sheet to protect it from damp, sheltered from dust, inclement weather and sunlight.

Storage temperature: -25°C to +60°C

Humidity: 10% to 95%

During prolonged storage, check the state of the charging station packaging regularly.

Do not store the charging station for more than a year without powering it up, to avoid the deterioration of non-energized electronic components.





### Transport

Throughout the transport phase, take all necessary measures to keep the pallet stable.





### Equipment Handling

GARO ATLE CCS or CHAdeMO charging station is a 66kg equipment,  
GARO ATLE CCS + CHAdeMO 93 kg. It must be handled by two people minimum.

### Warnings

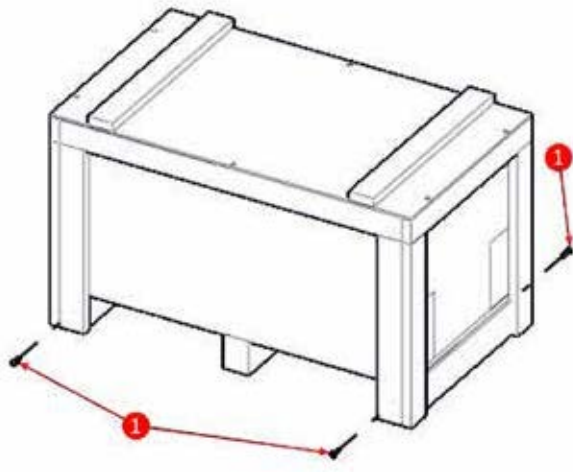
-  RISK OF INJURY DUE TO DROPPING OR FALLING
-  Follow specified procedures for hoisting operations.
-  Take measures to prevent falling when you carry or transfer the unit.
-  Failure to follow these instructions will result in minor or moderate injury.

### Notes

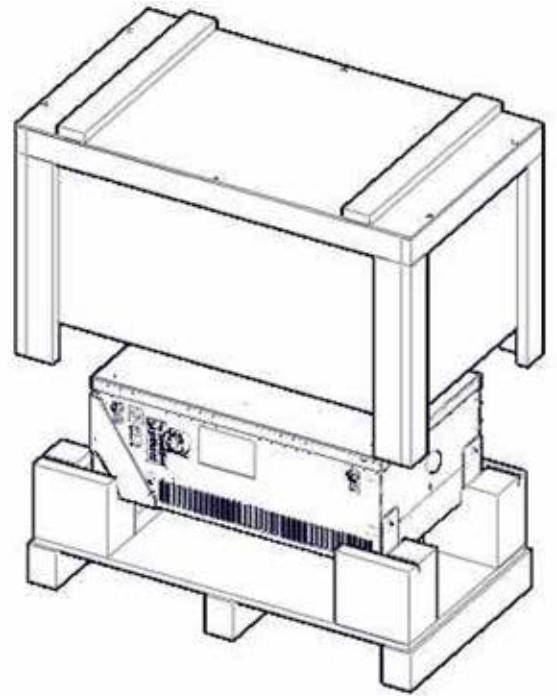
-  RISK OF DAMAGE TO THE CHARGING STATION
-  Do not lift charger by the door. Damage will occur.
-  Improper storage or handling may cause damage to the unit.
-  Failure to follow these instructions can result in equipment damage.



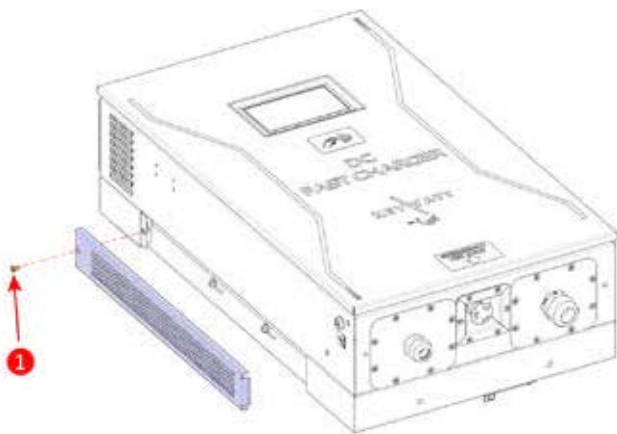
## UNPACKING



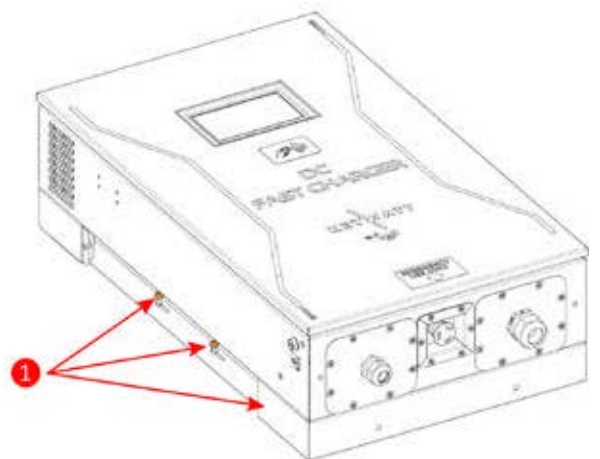
1. Remove the brackets holding the lid in place and lift the lid and sidewalls upwards.



2. Remove the lid of crate. You will use it to put the charging station.

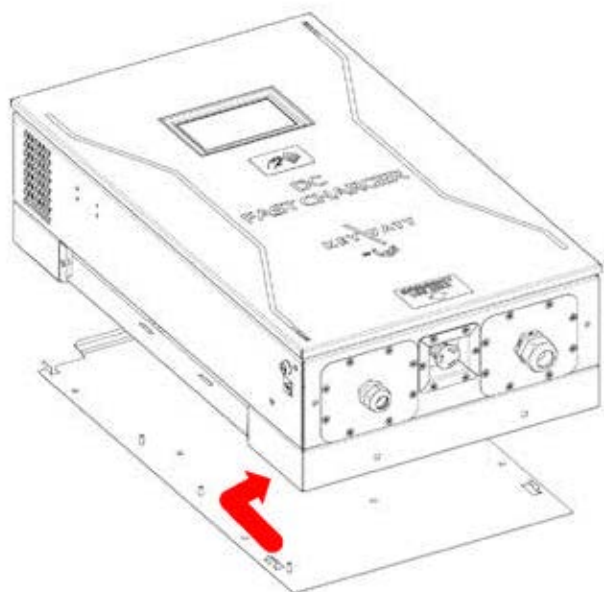


3. Remove the T30 screw (x1) to remove the side panel.



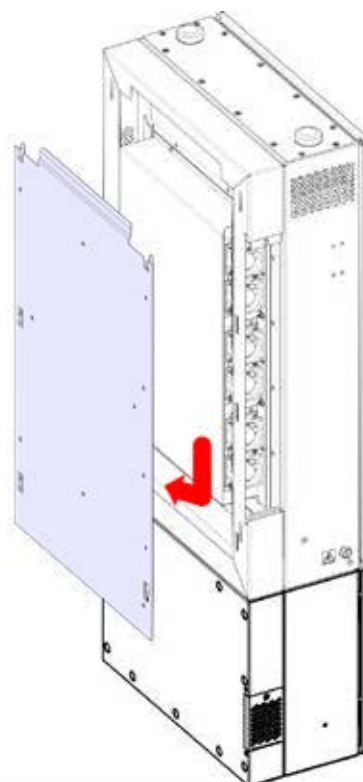
4. Remove the M6 nuts (x3) on bracket's studs with a 10mm socket.

### GARO ATLE CCS or CHAdeMO



7a. Remove the charging station from its bracket.  
Note: Charging station must be handled by two people minimum.

### GARO ATLE CCS + CHAdeMO



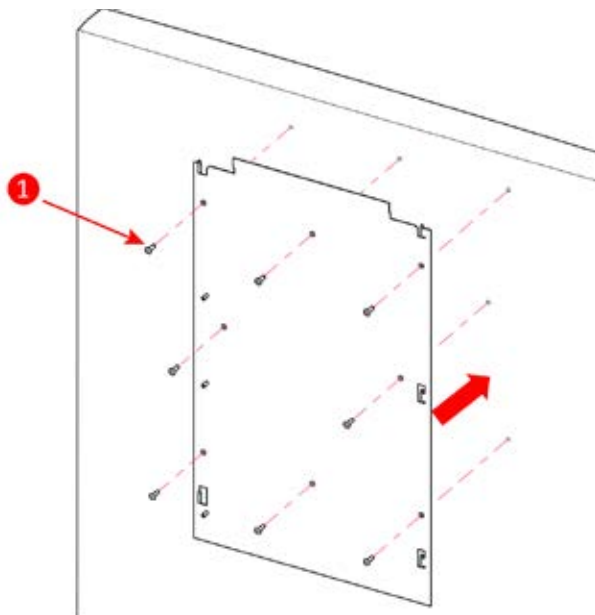
7b. Remove the charging station from its bracket  
Note: Charging station must be handled with lifting equipment.

## WALLBOX INSTALLATION

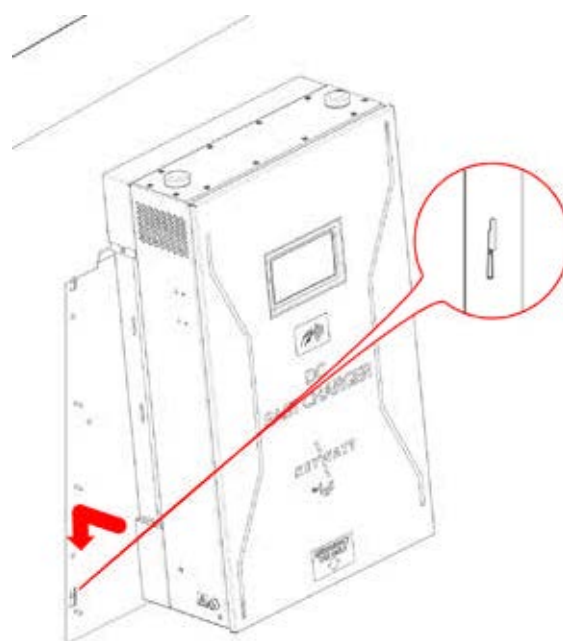
For mounting the wallbox on a pedestal see separate installation manuals DIM016055 (GARO ATLE CCS or CHAdeMO) or DIM016197 (GARO ATLE CCS + CHAdeMO). For wall mounting follow the instructions below.

### Wall mounting

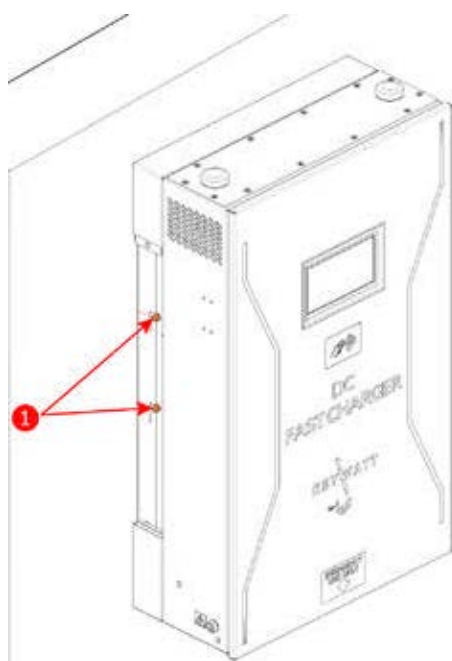
Drill bit for M6 screws / anchors for M6 screws (x8) / drill / spirit level / chalk



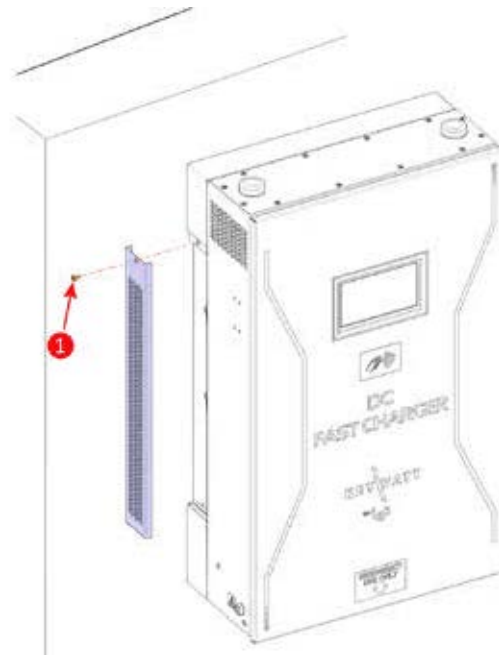
1. Using bracket as a template, level and mark drill holes.
2. Place the anchors and attach the bracket to the wall with screws (x8).



3. Lift the charging station onto its mounting bracket.  
Warning: Due to the charger weight, two people or lifting equipments are required to lift and handle the charging station.



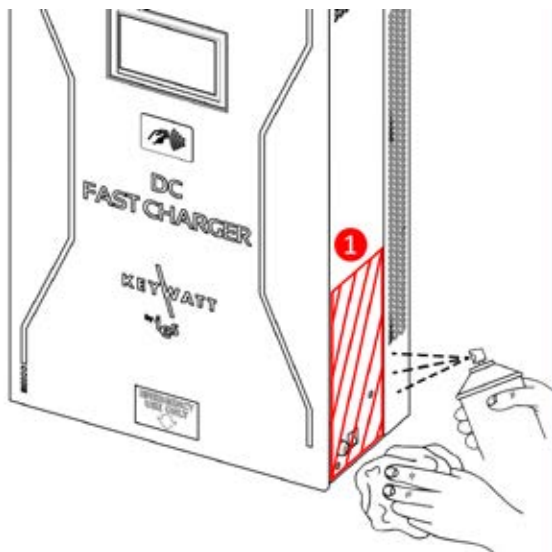
4. Tighten the M6 nuts (x2) on bracket's studs.  
Recommended torque: 4 Nm



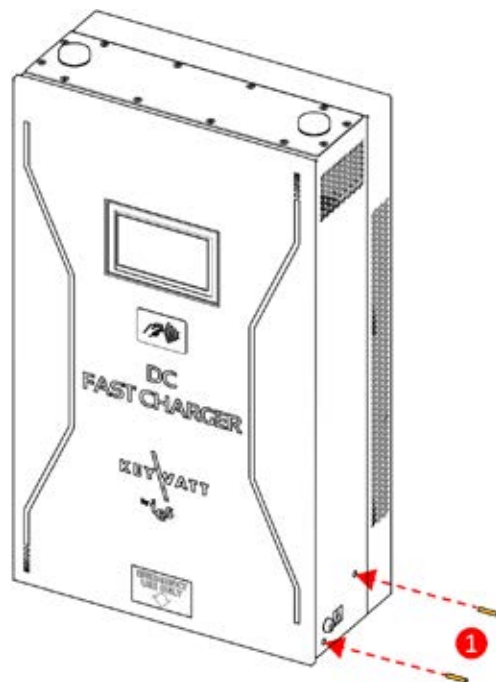
5. Place the side panel and fix it with its T30 screw  
Recommended torque: 3 Nm

## GUN HOLDER INSTALLATION

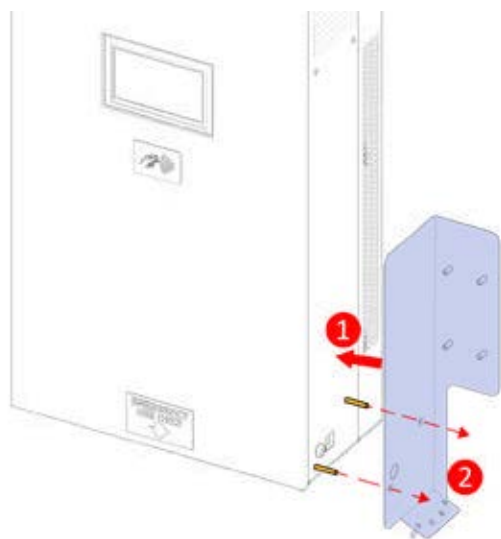
### Wallbox mounting



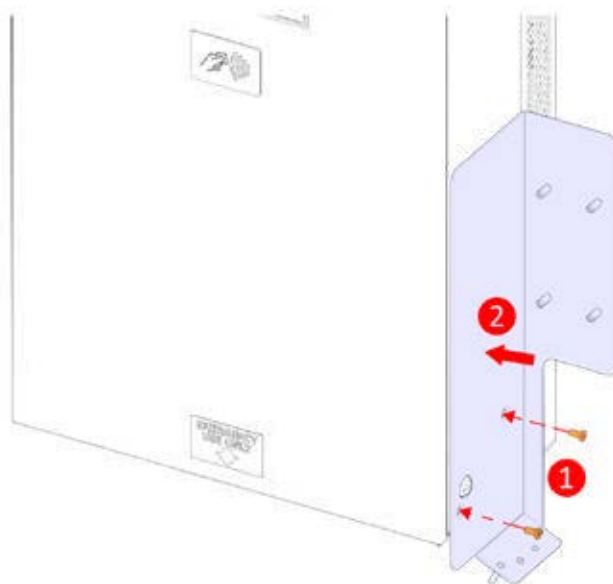
1. Clean the surface with isopropyl alcohol.
2. Wipe the surface with a clean cloth.
3. Leave to dry 1 min.



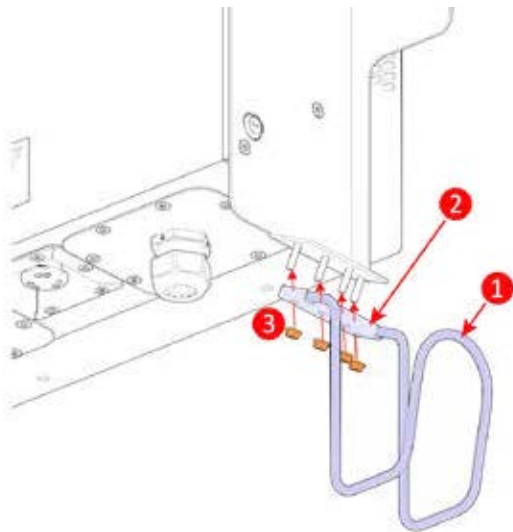
4. Screw by hand the positioning pins FXVIS018322 (x2)



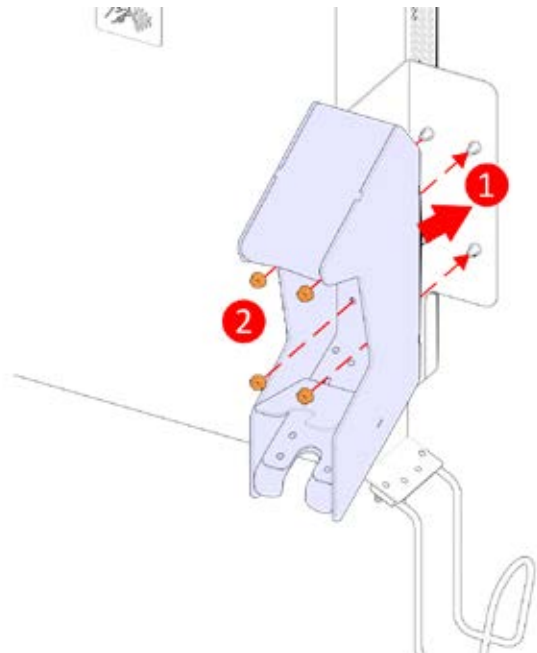
5. Peel the adhesive protection on the gun holder bracket.
6. Place the gun holder bracket on the side of the Wallbox, aligned with its positioning pins.
7. Remove the positioning pins (x2).



8. Fix the bracket with its T30 screws (x2).
9. Press the bracket during 2min.
10. Let stand 1h minimum



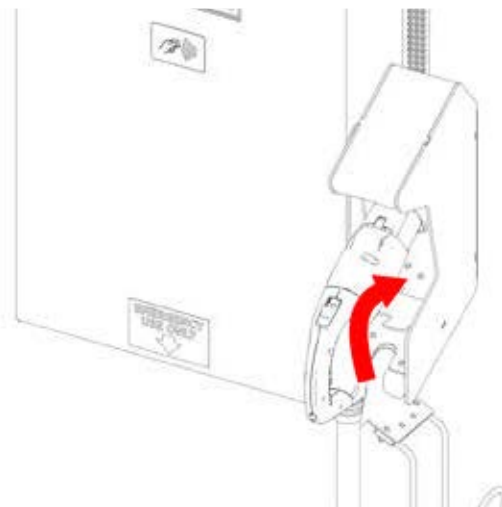
11. Fix the cable support to the gun holder bracket with its fastener and its M6 nuts (x4)



12. Place the gun holder on its bracket, aligned with its studs.

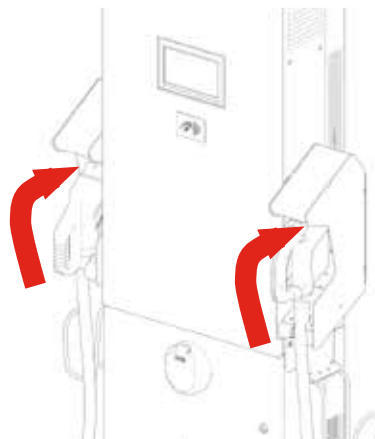
13. Fix the gun holder with its M8 nuts (x4)

### GARO ATLE CCS or CHAdeMO



14a. Place the DC output connector on the gun holder.

### GARO ATLE CCS + CHAdeMO



14b. Place the DC output connector onto the gun holder.

15. Repeat the operations for the other side of the Wallbox. Note: The final result is illustrated above.

## ELECTRICAL CONNECTION

### Checking the Electrical Requirements

The DC Fast Charger electric requirements and wiring installation procedure should be performed by a qualified electrician. Check with the local authority having jurisdiction for any electrical requirements.

### Grounding Instructions

This unit is to be connected to a grounded, metal, permanent wiring system, or an equipment-grounding conductor is to be run with circuit conductors and connected to equipment-grounding terminal.

Connections shall comply with all local codes and ordinances. The insulated grounding conductor and the supply conductors must have the same characteristics as in:

- size
- dimensions
- insulation
- material
- thickness

This insulated grounding conductor is green with or without one or more yellow stripes.

The earth of the power supply circuit and the earth of the service equipment must be connected.

## AC INPUT CONFIGURATION

Each connecting point should be individually considered and protected by a residual current device (RCD) (the charging station ensure only supplementary protection by fuses on each line). The protections to be installed on the line are detailed in the following paragraphs.

Cable external diameter must be between 18mm and 25mm. The conductor must be made of copper and withstand a minimum temperature of 70°C.





Make sure the ground conductor is longer than the phases conductors.

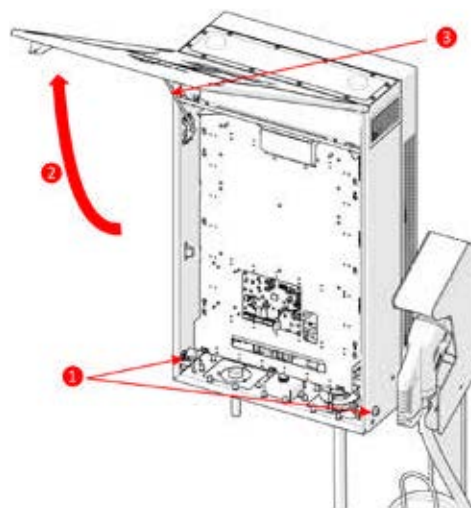
Electrical input should be:

1. 3-phase in wye configuration with neutral 3x380-480VAC. For AC input connection, see step 8a, page 16.
2. 3-phase in wye or delta configuration without neutral 3x208-240VAC. For AC input connection, see step 8b, page 16.





## ELECTRICAL CONNECTION GARO ATLE CCS or CHAdeMO

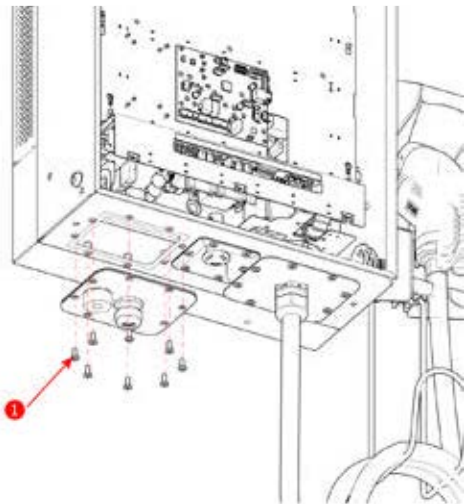
1. Access to external circuit breaker.
2. Switch off the power at the main breaker panel. Use padlock, labeling, tagging so that no one switches the power back on while you're working.

-  HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
-  Be sure the supply power is off before starting installation.
-  Make sure nobody can switch on power during installation.
-  Failure to follow these instructions can result in death or serious injury.







3. Unlock the door (2 keylocks).
4. Open the door.
5. Stand the door in up position.

-  HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
-  Be sure the supply power is off before starting installation.
-  Make sure nobody can switch on power during installation.
-  Failure to follow these instructions can result in death or serious injury.



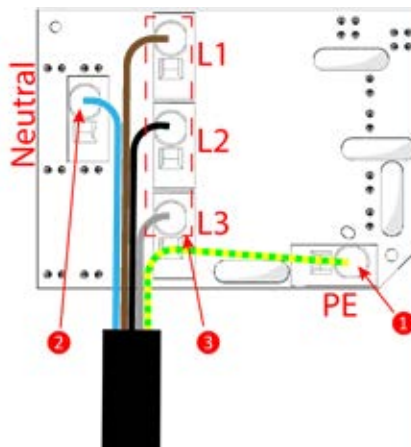
6. Remove the screws (x8) holding input plate with the cable gland.

-  HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
-  Be sure the supply power is off before starting installation.
-  Make sure nobody can switch on power during installation.
-  Failure to follow these instructions can result in death or serious injury.



7. Pass the power cable through the input cable gland into the housing (power is left cable gland).

8a 3-phase P1/P2/P3 + N + GND (3x380-480V<sub>AC</sub>)



The connecting point of the unit shall be protected by:

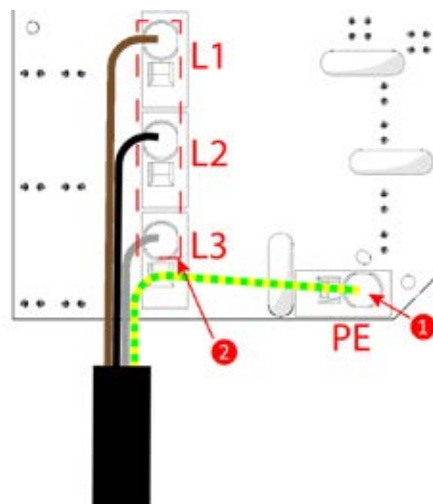
- a 50A tetrapolar MCB (C-curve or equivalent),
- a 30mA Type A or B RCD.

Wiring must be at:

- 5x16mm<sup>2</sup> minimum (flexible conductor),
- 5x25mm<sup>2</sup> maximum (rigid conductor).

1. Remove 15mm of insulation from the end of the power cable to be connected to the internal circuit breaker.
2. Connect the ground wire, neutral and each phase to the AC input configuration board.

8b 3- phase P1/P2/P3 + GND (3x208-240V<sub>AC</sub>)



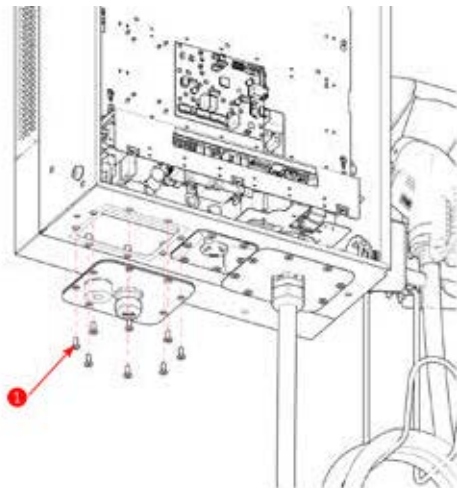
The connecting point of the unit shall be protected by:

- a 80A tripolar MCB (C-curve or equivalent),
- a 30mA Type B RCD.

Wiring must be at:

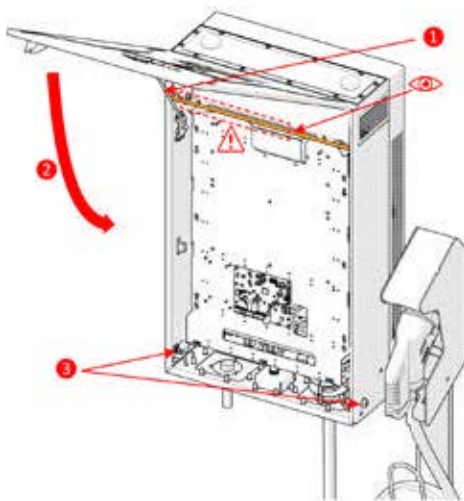
- 4x16mm<sup>2</sup> minimum (flexible conductor),
- 4x25mm<sup>2</sup> maximum (rigid conductor).

1. Remove 15mm of insulation from the end of the power cable to be connected to the internal circuit breaker.
2. Connect the ground wire and each phase to the AC input configuration board.



9. Instal the screws (x8) holding input plate with the cable gland.

- ⚠** HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
- ⚠** Be sure the supply power is off before starting installation.
- ⚠** Make sure nobody can switch on power during installation.
- ⚠** Failure to follow these instructions can result in death or serious injury.



Remove the door stand.

10. In order to keep the sealing properties, beware not to jam the cables and the earth braid in the area shown below during the closing of the door.

11. Close the door.

12. Lock the door (2 keylocks).

13. Access the external mains circuit breaker.

14. Turn the mains circuit breaker power on.

Note: Charging station is now powered. It will startup, perform a self-test and will display on its screen when ready to use.

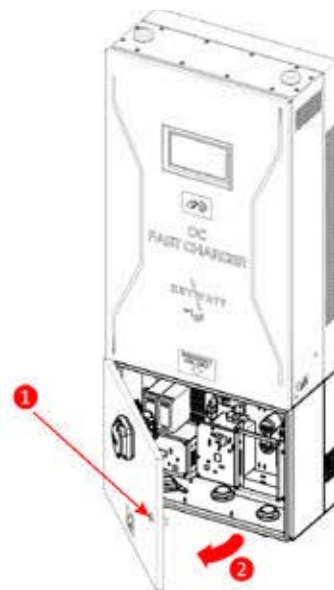
## ELECTRICAL CONNECTION GARO ATLE CCS + CHAdeMO

1. Access to external circuit breaker.

2. Turn off the power at the main breaker panel.

Use padlock, labeling, tagging so that no one switches the power back on while you're working.

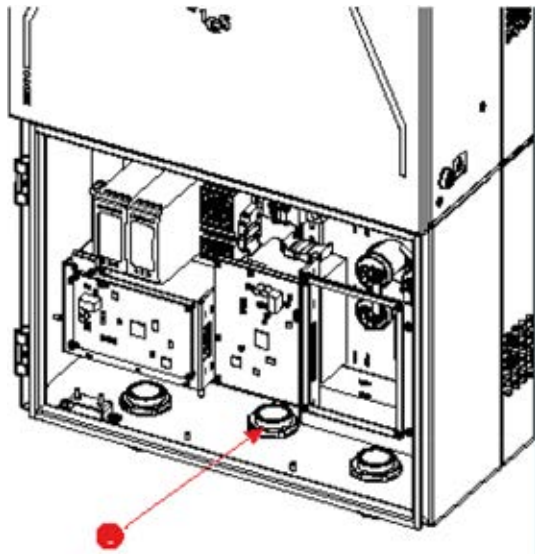
- ⚠** HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
- ⚠** Be sure the supply power is off before starting installation.
- ⚠** Make sure nobody can switch on power during installation.
- ⚠** Failure to follow these instructions can result in death or serious injury.



3. Unlock the door.

4. Open the door.





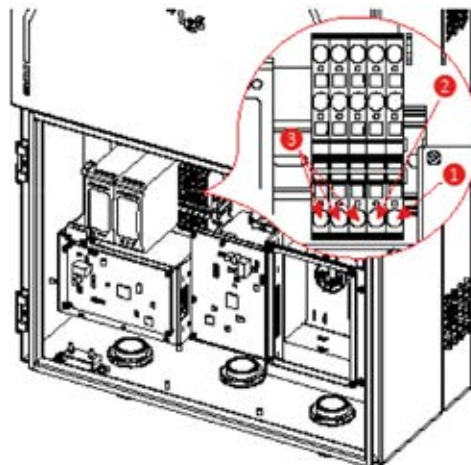
5. Pass the power cable through the input cable gland into the housing.

**!** HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

**!** Be sure the supply power is off before starting installation.

**!** Make sure nobody can switch on power during installation.

**!** Failure to follow these instructions can result in death or serious injury.



6. Remove 1.5mm of insulation from the end of the power cable to be connected to the internal circuit breaker.

7. Connect ground wire to connection terminal block.

8. Connect neutral to connection terminal block if necessary.

9. Connect each phase to connection terminal block.

**!** HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

**!** These steps must be done with external circuit breaker switched off.

**!** Failure to follow these instructions can result in death or serious injury.

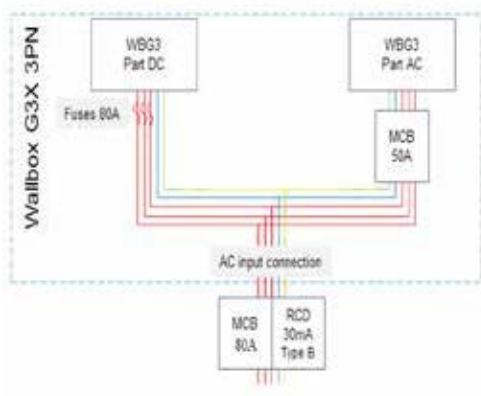
**GARO ATLE CCS + CHAdEMO + AC (3-phase P1/P2/P3 + N + GND 3x400V<sub>AC</sub>)**

The connecting point of the unit shall be protected by:

- a 80A tetrapolar MCB (C-curve or equivalent),
- a 30mA Type B RCD.

Wiring must be at:

- 5x16mm<sup>2</sup> minimum (flexible or rigid conductor),
- 5x25mm<sup>2</sup> maximum (rigid conductor).



**GARO ATLE CCS + CHAdEMO (3-phase P1/P2/P3 + N + GND 3x400V<sub>AC</sub>)**

The connecting point of the unit shall be protected by:

- a 50A tetrapolar MCB (C-curve or equivalent),
- a 30mA Type A or B RCD.

Wiring must be at:

- 5x16mm<sup>2</sup> minimum (flexible conductor),
- 5x25mm<sup>2</sup> maximum (rigid conductor).

**GARO ATLE CCS + CHAdEMO IT (3-phase P1/P2/P3+GND 3x208-240V<sub>AC</sub>)**

The connecting point of the unit shall be protected by:

- a 80A tripolar MCB (C-curve or equivalent),
- a 30mA Type B RCD.

Wiring must be at:

- 4x16mm<sup>2</sup> minimum (flexible conductor),
- 4x25mm<sup>2</sup> maximum (rigid conductor).

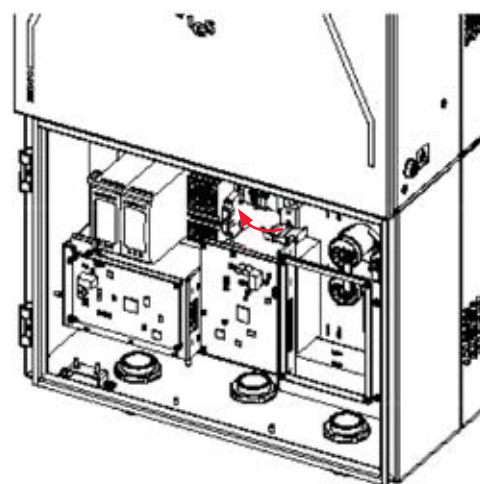
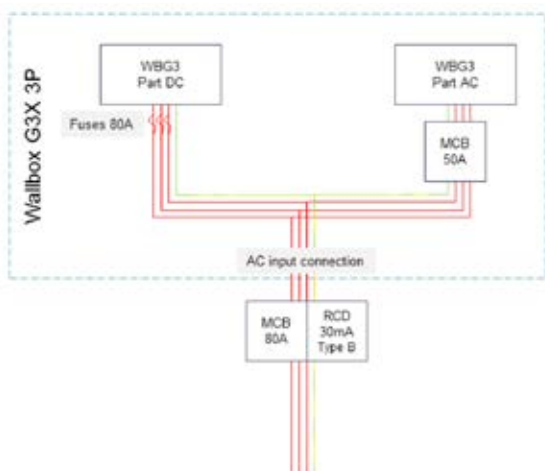
**GARO ATLE CCS + CHAdEMO + AC IT (3-phase P1/P2/P3+GND 3x208-240V<sub>AC</sub>)**

The connecting point of the unit shall be protected by:

- a 80A tripolar MCB (C-curve or equivalent),
- a 30mA Type B RCD.

Wiring must be at:

- 4x16mm<sup>2</sup> minimum (flexible conductor),
- 4x25mm<sup>2</sup> maximum (rigid conductor).

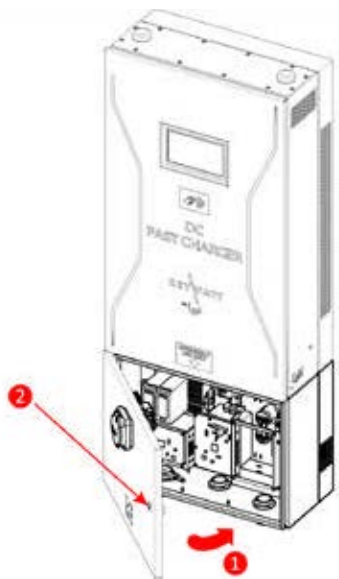


10. Close the MCB

**!** HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

**!** These steps must be done with external circuit breaker switched off.





**!** Failure to follow these instructions can result in death or serious injury.



- 11. Close the door.
- 12. Lock the door (1 keylock).

**Switch on external power supply**

- 13. Access the external mains circuit breaker.
  - 14. Turn the mains circuit breaker power on.
- Note: Charging station is now powered. It will startup, perform a self-test and will display on its screen when ready to use.

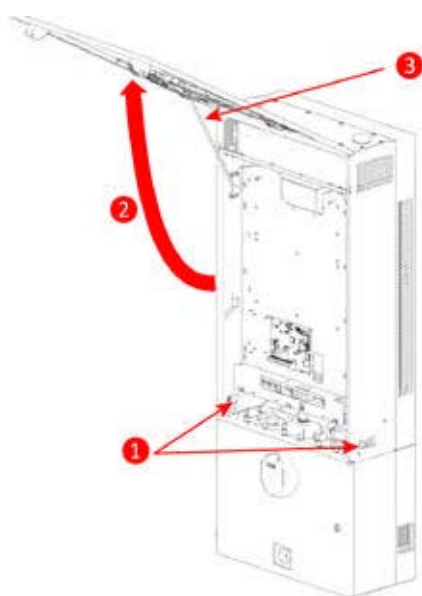
-  HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
-  Be sure the supply power is off before starting installation.
-  Make sure nobody can switch on power during installation.
-  Failure to follow these instructions can result in death or serious injury.

## COMMISSIONING

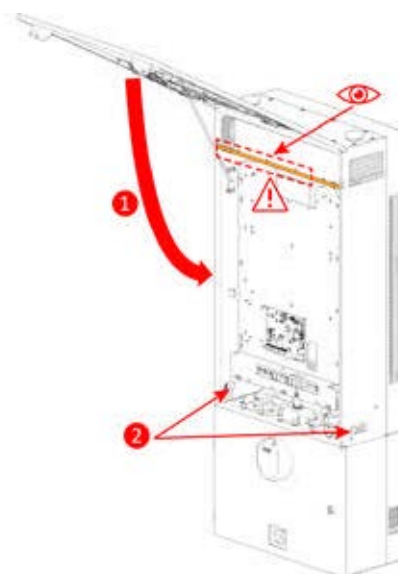
### SIM Card

GARO Atle is either sold as a stand-alone wallbox or is connected to a backend operator via OCPP. The connection is carried out via mobile network (3G/4G) via one of the two modems included in the wallbox. The configuration of the wallbox is performed before delivery if the wallbox is ordered with a backend connection. Then the SIM card is already in place in its slot on the modem.

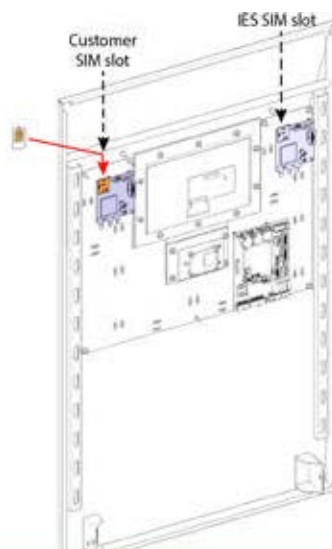
For questions on configuration or connection please contact your backend operator



- 1. Unlock the door (2 keylocks).
- 2. Open the door.
- 3. Stand the door in up position.



- 5. Close the door.  
In order to keep the sealing properties, beware not to jam the cables and the earth braid in the area shown below during the closing of the door.
- 6. Lock the door (2 keylocks).



- 4. On the internal door panel, you can place your SIM card in the empty slot on modem board (Customer slot).  
Note: Use the modem board connected to on OCPP board.

## First booting

During the first power up of the charging station, the following messages will appear on-screen:



If the display does not turn on during power up, please see the maintenance manual.

After booting, check that the charging station is connected on the backend server. If not, please see the maintenance manual.

## Booting errors

Message	Description
Error connecting server.	Message displayed during the startup of the charging station if the backend server rejects the connection.
Error connecting to RFID reader.	Message displayed during the startup of the charging station if the RFID does not work. Please see the maintenance manual.
Error connecting to control unit.	Message displayed during the startup of the charging station if the CCU does not work. Please see the maintenance manual.

## Power limitation

If necessary, you can limit the power delivered by the charging station on the backend server.

For the charging station, use the OCPP frame "Change Configuration" to adjust the following configuration parameters:

Configuration parameters details	Expected value type	Default value	Description
PowerLimit	Watts	24000	Maximum power to be delivered by the charger. Allow to limit the output power below 24kW.
VoltageSupplyLimit V	Volt	230	The nominal value of the single-phase voltage provided in the country. Usually 230V in Europe.
CurrentInputLimit	Amp	40	The maximum current allowed by the power supply installation (value of the circuit-breaker installed outside the charger).

Refer to your backend server instructions to know how to change these configuration parameters.

## OPERATING INSTRUCTIONS

### Start a Vehicle Charge Session

Before starting a charge session:

Ensure the unit is properly assembled in accordance with the assembly instructions before it is used.

You must have a RFID Card activated on backend server or being connected to backend App.

Note: The RFID card MIFARE 1k is recommended.

1. A) Swipe an activated RFID card once across the card reader or  
B) Remotely start the charge through an application linked to the backend
2. A) The unit will beep once indicating the card swipe was successful  
B) Wait for display indication
3. The display will show if the charge has been authorized
4. The display will instruct the user when to plug into the vehicle
5. Plug the connector firmly into the vehicle. The latch should click
6. Observe the display and charging will begin once the car acknowledges the charger

### Stop a Vehicle Charge Session

The charger will automatically stop once charging is completed.

Fast charging will occur up to 80% of the vehicles battery state of charge. The charger will adjust its output according to the demands of the vehicle, ambient temperatures and other factors.

To stop charging before the end of the charging cycle follow these steps:

1. A) With the same card that the session was initiated with, swipe over the card reader  
or  
B) Remotely stop the charge through an application linked to the backend
2. The display will indicate that the session is ending
3. Once the session has ended the vehicle will unlock the connector. A click may be heard at the vehicle/connector
4. Once unlocked, remove it from the vehicle charging inlet
5. Return the connector to the dock on the charging station

### Emergency Stop

In the event of an emergency the Emergency Stop button may be depressed to instantly stop charging.

To emergency stop follow these steps:

1. Depress the emergency stop button bellow the charger
2. The display will show the text "Error occurred: 0x02 Emergency stop was launched. Please unplug your vehicle and check the emergency button is released."
3. Unplug the connector from the vehicle

To reset after emergency stop rotate the button clockwise until it pops outward. After a self-test the display will remove the emergency stop message and will be ready for a new session.

## UTILIZATION

### Human/Machine interface (HMI)

Color code



Note: Also applicable in CHAdeMO and AC type 2.

Charger states

- Available: Connector available
- Preparing: Charge preparation
- Finishing: Charge ending or ended but connector still connected to the vehicle
- Unavailable: Connector unavailable
- Error: An error has occurred

### Charge Selection

Depending on your configuration, the Wallbox offers up to 3 means of connection to the vehicle.



Note: Applicable in CCS and CHAdeMO

The choice of the type of charge is made by selecting the right logo directly on the touch screen.



### User identification

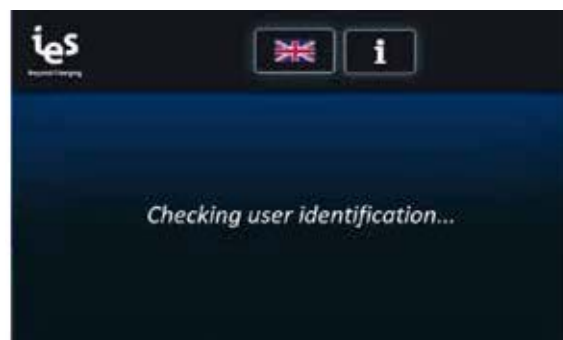
Once the type of charge selected, an identification screen is displayed.

When an user wants to recharge the electrical vehicle, there are 2 ways to identify on the charging station:

- to swipe an activated RFID card once across the card reader, or
- to remotely start the charge through an application linked to the supervision tool.



Note: Applicable in CCS, CHAdeMO and AC type 2



Note: Applicable in CCS, CHAdeMO and AC type 2

### EV connection

The charging station invites the user to connect the EV with the following screen:



Note: Applicable in CCS, CHAdeMO and AC type 2

### EV communication

Before starting a charge, the charging station communicates with the electrical vehicle to collect information.

All these steps are necessary to adapt the charging station parameters to the electrical vehicle.



Note: Applicable in CCS, CHAdeMO and AC type 2



Note: Applicable in CCS and CHAdeMO

### EV charge

CCS or CHAdeMO

During the charge of the electrical vehicle, the charging station shows the charge informations (time since the start of charging, charged energy and percentage of charge).



Note: Applicable in COMBO and CHAdeMO



## End of charge

After completing the charge of the electric vehicle, the charging station performs multiple control steps before disconnecting the vehicle.

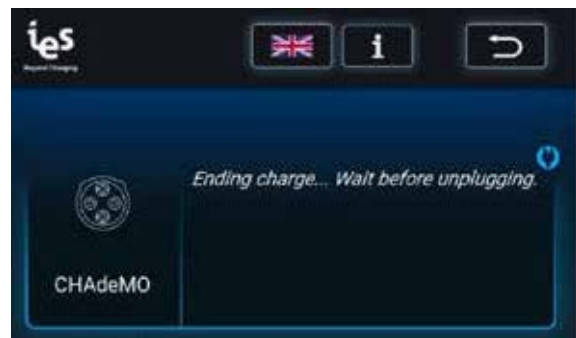
### CCS

When the CCS protocol is used, the user can unplug the vehicle once the charge is done.



### CHAdeMO

When the CHAdeMO protocol is used, the user must press the red cross after unplugging his vehicle.



## Other messages

Message	Description
Error connecting server. Bootling interrupted ! Please call support.	Message displayed during the startup of the charging station if the backend server reject the connection.
Error connecting to RFID reader. Bootling interrupted ! Please call support.	Message displayed during the startup of the charging station if the RFID module does not work. Please contact support.
Error connecting to Communication Control Unit. Bootling interrupted ! Please call support.	Message displayed during the startup of the charging station if the CCU board does not work. Please contact support.
Error connecting to AC Unit. Bootling interrupted ! Please call support.	GARO ATLE CCS + CHAdeMO + AC only: Message displayed during the startup of the charging station if the AC powershare board does not work. Please contact support.
AC contactor failed. Please unplug any connected vehicle and call support.	GARO ATLE CCS + CHAdeMO + AC only: Message displayed during the startup of the charging station if the AC powershare board does not work. Please contact support.
Charger inoperative. Cannot charge here.	Charger inoperative. Backend server request charger does not accept charge
Charger inoperative. Please unplug your vehicle.	Charger inoperative. Backend server request charger does not accept charge. Unplug the vehicle.
Authorization failed! Please retry identifying.	User rejected by the backend server.
Charger offline. Set up to refuse offline charging.	Charger offline.
Error timeout. Please unplug your vehicle then identify.	Time out, user identified, unplug the vehicle before retrying to identify.
Link established. Waiting for car's start command...	GARO ATLE CCS + CHAdeMO + AC only: This screen can be displayed when the user is using AC charging. The vehicle decides when to start charging.
Plug your vehicle to start charging. Vehicle not detected. Retrying... X	CHAdeMO only: User identified, waiting for electrical vehicle connection.
Error: Authorization failed. You cannot stop the charge session. To stop charging, use your RFID card or your application.	The charge cannot be interrupted by this user who is not recognized by the backend server. User wants to stop the charge. He should identify himself to be able to switch off the charge and disconnect his vehicle.
Charge done. Wrong RFID pass. Unplug your vehicle.	Not in CHAdeMO: User not recognized by the backend server... Charging terminated. Unplug the vehicle.
Charge done. Wrong RFID pass. Please press X once your vehicle is unplugged.	CHAdeMO only: User not recognized by the backend server... Charging terminated. Unplug the vehicle.
Station shut down. Please reboot.	Charging station shut down. Please contact support to restart the charging station.
Updating station... Charging not available.	Charging station is being updated. Please wait.
Error updating. DO NOT CHARGE HERE. Wait for correct update.	Error updating. Please contact support for updating the charging station.

Message	Description
Remote reset started... Station will reboot now.	Station is being rebooted.
Station rebooted. Please unplug your vehicle.	CCS only: Station rebooted during a charge. Please unplug and retry to launch the charge.
Warning: insulation failure.	Cable insulation failed. Please contact support.

## ERRORS

The error messages are displayed with a characteristic screen. They are thus easily identifiable by the user. A warning pictogram is displayed along with the error message as shown below.



The table below list errors messages who appears on the screen.

Error	Error resolution
Error occurred: 0x02 - 0X03 - 0X81 Emergency stop. Please unplug your vehicle and release the emergency button.	Not in CHAdeMO: Emergency stop was initiated. Please unplug your vehicle and release the emergency button.
Error occurred: 0x02 - 0X03 - 0X81 Emergency stop. Please unplug your vehicle and release the emergency button.	CHAdeMO only: Emergency stop was initiated. Please unplug your vehicle, press X and release the emergency button.
Error occurred: 0x0A - 0x86 The charging station is overheating. Please unplug your vehicle and check that no air vent is clogged.	Not in CHAdeMO: The charging station is overheating. Please unplug your vehicle and check that no air vent is clogged.
Error occurred: 0x0A - 0x86 The charging station is overheating. Check that no air vent is clogged. Please press X once your vehicle is unplugged.	CHAdeMO only: The charging station is overheating. Please unplug your vehicle, press X and check that no air vent is clogged.
Error occurred: 0x51 The connection with the vehicle was lost. Please unplug your vehicle.	Not in CHAdeMO: The connection with the vehicle was lost. Please unplug your vehicle.
Error occurred: 0x07 - 0x29 - 0x51 The connection with the vehicle was lost. Please press X once your vehicle is unplugged.	CHAdeMO only: The connection with the vehicle was lost. Please unplug then press X.
Error occurred: 0x22 - 0x33 Connector error. Please keep the connector closely leant against your vehicle when plugging, until the charge has started.	Not in CHAdeMO: Connector error. Please keep the connector closely leant against your vehicle when plugging, until the charge has started.

Error	Error resolution
<p>Error occurred: 0x22</p> <p>The connector cannot lock. Please keep the connector closely leant against your vehicle when plugging, until the charge has started. Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: The connector cannot lock. Please keep the connector closely leant against your vehicle when plugging, until the charge has started. Please press X once your vehicle is unplugged.</p>
<p>Error occurred: 0x3A</p> <p>Your battery model is incompatible with this charger. Please unplug your vehicle.</p>	<p>Not in CHAdeMO: Your battery model is incompatible with this charger. Please unplug your vehicle.</p>
<p>Error occurred: 0x11</p> <p>Your battery model is incompatible with this charger. Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: Your battery model is incompatible with this charger. Please unplug then press X.</p>
<p>Error occurred: 0x32</p> <p>Your gear is not in parking position. Please unplug your vehicle and engage gear in parking position.</p>	<p>Not in CHAdeMO: Your gear is not in parking position. Please unplug your vehicle and engage gear in parking position.</p>
<p>Error occurred: 0x14</p> <p>Your gear is not in parking position. Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: Your gear is not in parking position. Please unplug your vehicle, press X and engage gear in parking position.</p>
<p>Error occurred: 0x15</p> <p>Your vehicle raised an error. Please check error message in the vehicle and unplug your vehicle.</p>	<p>Not in CHAdeMO: Your vehicle raised an error. Please check error message in the vehicle and unplug it.</p>
<p>Error occurred: 0x15</p> <p>Your vehicle raised an error. Please check error message in the vehicle. Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: Your vehicle raised an error. Please check error message in the vehicle, unplug it then press X.</p>
<p>Error occurred: 0x31</p> <p>Your battery's temperature is too high. Please unplug your vehicle.</p>	<p>Not in CHAdeMO: Your battery's temperature is too high. Please unplug your vehicle.</p>
<p>Error occurred: 0x19</p> <p>Your battery's temperature is too high. Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: Your battery's temperature is too high. Please press X once your vehicle is unplugged.</p>
<p>Error occurred: 0x46</p> <p>Connection between screen and charger has been lost. Please unplug your vehicle.</p>	<p>Not in CHAdeMO: Connection between HMI screen and charger has been lost. Please unplug your vehicle.</p>
<p>Error occurred: 0x46</p> <p>Connection between screen and charger has been lost. Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: Connection between HMI screen charger has been lost. Please press X once your vehicle is unplugged.</p>
<p>Error occurred: 0x-</p> <p>Please unplug your vehicle.</p>	<p>Not in CHAdeMO: For all other error codes, please refer to maintenance manual.</p>
<p>Error occurred: 0x-</p> <p>Please press X once your vehicle is unplugged.</p>	<p>CHAdeMO only: For all other error codes, please refer to maintenance manual.</p>

## PROTECTING THE ENVIRONMENT

### Recycling Packaging

The packaging materials from this equipment can be recycled. Please help protect the environment by recycling them in appropriate containers.

Thank you for playing your part in protecting the environment.



### End-of-Life Recycling

This product has been optimized to reduce the amount of waste produced at the end of their useful life and for better recovery of component parts and materials when following customary processing procedures.

Products have been designed so that their components can be processed by conventional procedures: decontamination where this is recommended, reuse and/or dismantling in order to improve recycling performance, and crushing to separate out the rest of the materials.