Green Motion DC 22 and DC 22 Mobile Installation manual



Powering Business Worldwide

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1. Introduction

Thank you for installing the Green Motion DC 22 EV charger.

Before you start

This manual contains important instructions that must be followed during installation, operation and maintenance of the Eaton Green Motion DC 22 EV charger. All instructions must be read before installing and operating the equipment. This manual should be retained for future reference. Please note that the Eaton Green Motion DC 22 EV charger must only be installed by professional and qualified personnel, i.e. an Eaton technical support representative or a professional installer. There are no user serviceable parts inside the Green Motion DC 22 EV charger. Failure to observe the above will void the guarantee provided and Eaton cannot be held legally accountable.

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Technical disclaimer

All drawings, descriptions and illustrations contained in this document serve to provide a clear overview and/or technical explanation of the present product and its various components and accessories. In line with our goal to continuously improve the products and the customer service we provide, all specifications contained in this document are subject to change without notice.

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1.1 Field of applications

This installation manual is intended for professional installers. It describes how to securely install and commission the Eaton Green Motion DC 22 EV charger:

Table 1. Green Motion DC 22 EV charger overview

Power input	Green Motion DC 22	Green Motion DC 22 Mobile
Input voltage	3 x 400 V 50 Hz	
Maximum input current	3 x 32 A (22 kW)	
Power factor	> 0.99	
Earthing system	TN, TT	
Phase	3-phase	
AC power supply and connector	N/A	Cable length: 15 m Connector type: CEE, 5-pole Connector ingress protection rating: IP44
Power output		
Output power [1]	up to 22 kW	
Output voltage	50 V - 500 V	
Maximum output current	55 A	
Output type	CCS 2 (default) CCS 2 and CHAdeMO (optional)	
Efficiency	≤ 96 %	
Simultaneous charging	1	
User interface and control		
User interface	Visual charging status indicators, 10-inch color touchscreen display	
Access Control	RFID, Scan & Charge	
Network interface	Ethernet (RJ45) cable	
Remote management	Eaton Charging network manager	
Display languages	English, French and German - other languages on request	
Environmental		
Operating temperature	-25 °C to +45 °C	
Altitude	Up to 2000 m	
Installation	Wall-mounted; floor-mounted (optional)	Mounted on a trolley
Humidity	< 95 % relative humidity	
Mechanical		
Dimensions (H x W x D) in mm	520 x 630 x 265	947 x 984 x 453
Net weight (without the cables)	53 kg	93 kg
Housing material	Stainless steel	
Cooling	Forced air	
Charging cable length	5 meters	
Standards		
Conformity	IEC 61851-1	
Ingress protection rating	IP54	
Impact protection rating (housing)	IK10	
Impact protection rating (screen and RFID)	IK08	
Communication protocol	OCPP 1.6J or superior	
Bidirectional	Vehicle-to-grid (V2G) ready	
Protection	Overcurrent, undervoltage, overvoltage, residual current, surge protection, short circuit, over temperature, ground fault, galvanically insulated	
Options		
Cable	CHAdeMO	
Floor-mounted	Floor-mounting pedestal	N/A
Network interface	3G/4G	
Software licenses	Eaton Scan & Charge Eaton Charging network manager	
Warranty		
Warranty	2 years	

[1] The actual power output may vary due to external factors, such as the available grid power, capacity of the electrical installations and the electric vehicle model.

1.2 Symbols used in this manual



Imminent dangers causing serious injuries. Danger of death.



Hazardous behaviors that could cause serious injuries.
Hazardous behaviors that could cause death.



Behaviors that could cause minor injuries to people or minor damages to things.



An electric shock can be fatal.
Avoid touching internal or external parts normally live while the system is powered on.



Read the instructions. These instructions are intended for professional installers. A professional installer must be an expert in the field and is therefore responsible for commissioning the system in accordance with the manufacturer's instructions and local legislation.



The notes preceded by this symbol relate to technical issues and ease of operation.



The EU Directive on Waste Electrical and Electronic Equipment (WEEE).

1.3 Conventions used in this document

This manual adopts the following type conventions and acronyms to refer to Green Motion DC 22 EV charger or its parts:

ALL CAPITALS highlight critical points that require careful attention.

All abbreviations used in this document are listed in Table 2.

Table 2. Glossary

Abbreviation	Description
AC	Alternating current
CAN	Controller Area Network
CCS	Combined Charging System
CHAdeMO	CHArge de MOve
DC	Direct current
EMC	Electromagnetic compatibility
EMI	Electromagnetic interference
FW	Firmware
HW	Hardware
IEC	International Electrotechnical Commission
IP	Internet Protocol
LAN	Local area network
LCD	Liquid crystal display
N	Neutral
OV	Overvoltage
PE	Protective earth
PPE	Personal protective equipment
RCD	Residual current device
SW	Software
UI	User interface
WEEE	Waste electrical and electronic equipment
EV	Electrical vehicle
CU	Control unit
DHCP	Dynamic Host Configuration Protocol
NAT	Network address translation
TCP	Transmission Control Protocol
PAT	Port address translation
SIM card	Subscriber identity module card

2. Cautions

These instructions are intended for professional and qualified personnel.

Before carrying out any operations, ensure you have read and understood this manual. Do not make changes and do not carry out maintenance operations not described in this manual. The manufacturer does not accept responsibility for injuries to people and property damages that occur because the information within this manual has not been read and followed.



The installation must only be carried out by professional and qualified personnel.

The operations described here must be carried out only by professional and qualified personnel.

The customer is civilly liable for the qualification and mental or physical state of the professionals who operate this equipment. They must always use the personal protective equipment required by the laws of the country of destination and anything else provided by their employer.



It is strictly prohibited to open the unit except as described in this manual. The installation of the equipment must be carried out by professional and qualified personnel. They must not be under the influence of alcohol or drugs, or have prosthetic heart valves or pacemakers.



For any doubts or problems regarding the use of the system, even if not described here, please contact the professional and qualified personnel or your Eaton sales representative.



The unit must not be subjected to any type of modification. Eaton declines any responsibility if the rules for correct installation are not respected, and it is not responsible for the system upstream or downstream of the equipment it supplies.

The omission of protective devices is extremely dangerous and relieves the manufacturer of any responsibility for damage caused to people and property.

A first aid kit must be provided near the installation site so that it is readily available in case of emergency.

2.1 Operating environment and restrictions

Each system must be used exclusively for the operations it was designed for and within the operative ranges specified in the nameplate and/or in the relative technical datasheet, in accordance with the national and international safety standards.

Any use different from the intended use specified by the manufacturer is to be considered totally inappropriate and dangerous, and in this case the manufacturer declines all responsibility.

Check the regulations applied by the electricity provider.

The unit shall be connected to the distribution network in accordance with local rules.

The unit shall comply with all the technical specifications.



Improper or unauthorized use:

Although carefully constructed, like all electrical appliances the unit can catch fire.

The unit is intended for indoor or outdoor installation.

Recommended operating temperature range of the unit is -25 °C to +45 °C.

The unit must be transported and stored in indoor locations in the temperature range -25 °C to +45 °C.

The unit must be used in locations free from acids, gases or other corrosive substances.

The unit must be used and stored in locations with relative humidity below 95 %.

The unit must be transported in conditions with relative humidity below 95 %.

The unit must be used at an altitude not exceeding 2000 m above sea level.

2.2 Suggested protections during the installation

The equipment was built according to the highest safety standards and equipped with safety devices designed to protect operators and components.

For obvious reasons, the manufacturer cannot envisage all potential types of installations and locations where the equipment will be installed; the customer must therefore clearly inform the manufacturer of specific conditions of installation. Eaton declines any responsibility if the unit is incorrectly installed.

The operators must be correctly instructed. The operators must therefore read and follow the technical instructions contained in the manual and in the enclosed documentation.

The instructions provided in this manual do not replace the safety regulations of the installation and operational technical data printed on the products, nor do they replace the current safety standards enforced in the country where the equipment is installed, and the rules dictated by common sense.

The manufacturer can provide theoretical or practical training to operators, either on their site or on the customer's premises, as specified at the time of drawing up the contract.

The equipment must not be used if any operational fault is identified.

Temporary repairs should be avoided; repair work must be carried out only with genuine spare parts, which must be installed according to the intended use.

The responsibilities deriving from the commercial components are delegated to the respective manufacturers.

Avoid touching the equipment housing during the equipment operation.

The housing could overheat during its operation or be heated by direct sunlight. To avoid burns from an overheated surface caused by sunlight, please use suitable PPE or wait for the equipment to cool down before accessing it.

In the event of fire, CO_2 foam extinguishers must be used, and self-vacuum systems must be used to put out fires in enclosed spaces.

If the noise level exceeds legal limits, the working area must be restricted, and anyone who has access to the area must wear ear defenders or ear plugs.

During the installation process, special attention must be paid to fixing the equipment and its components. At this stage, restricting or preventing access to the installation area is recommended.

Professional and qualified personnel are recommended to wear clothing and personal protective equipment (PPE) provided by their employer. Operators must not wear clothes or accessories that could start fires or produce static electricity, or any item of clothing that could affect personal safety. When carrying out any operation on the equipment, clothes and instruments must be suitably insulated.

Professional and qualified personnel must NOT access the equipment with bare feet or wet hands.

The maintenance engineer must always ensure that nobody else is able to reset or operate the equipment during maintenance and must report any fault or deterioration caused by wear or by aging, in order to restore the correct safety conditions.

Professional and qualified personnel must always pay attention to the working environment to ensure it is well lit and has a suitable escape route.

A first aid kit must be provided near the installation site so that it is readily available in case of emergency.

2.3 Protection from electric shock



An electric shock can be fatal.
Avoid touching internal or external parts normally live while the system is powered on.



Cables and connections must always be secured, in good condition, insulated and suitably sized.

2.4 Electromagnetic fields and interference



Electromagnetic fields may have harmful effects (unknown to date) on the health of people who are subjected to long exposure. Avoid standing closer than 20 cm from the equipment for long periods of time.



Professional and qualified personnel must be an expert in the field, and are therefore responsible for commissioning the system in accordance with the manufacturer's instructions and local legislation. If electromagnetic interference is detected, the professional and qualified personnel should contact an Eaton technical support representative using the email address BGTechSupport@eaton.com.



Connect the unit's external frame or other conductive parts to ground to ensure system protection and the highest level of safety for the operators.



National standards related to grounding must be complied with.

2.5 Warning decals and rating plate



The labels on the equipment must NOT be removed, damaged, soiled or hidden.

The labels must always be visible and in good condition.

The technical data shown in this manual do not replace those shown on the data plates on the equipment.

2.6 Residual risks



Despite the cautions and safety systems in place, some residual risks will still be present, which cannot be removed. These risks are listed in the following table, along with recommendations to prevent or mitigate them.

Table 3. Residual risks

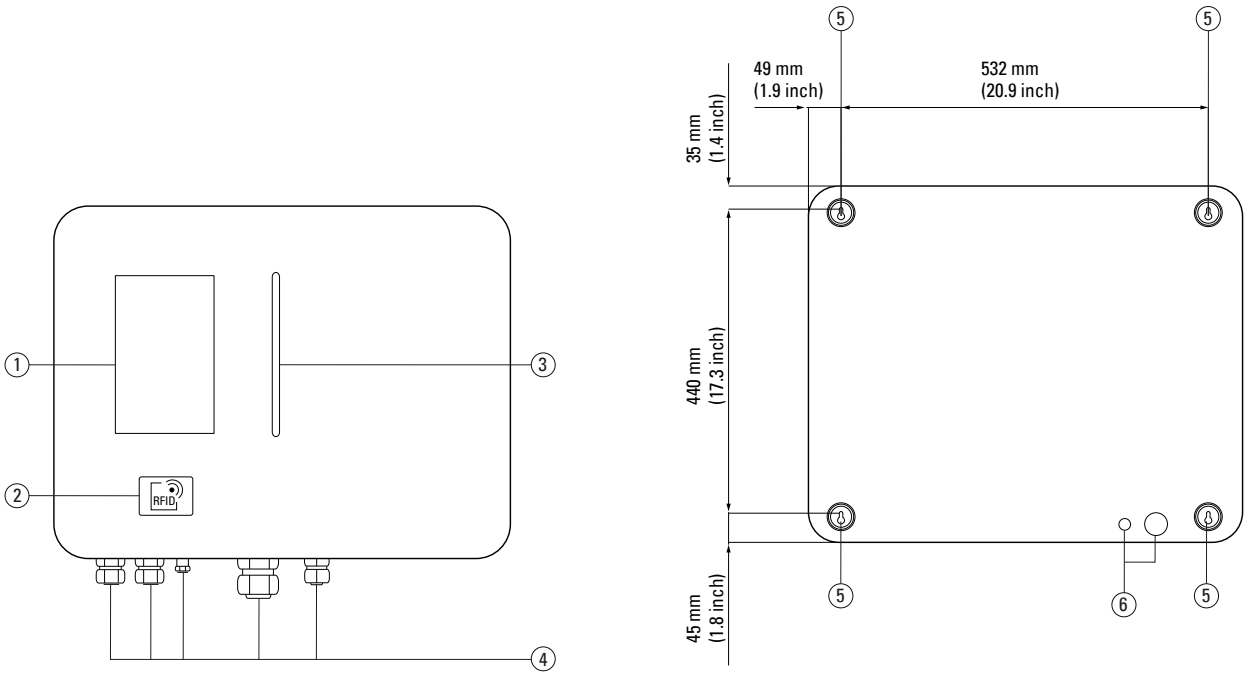
Risk assessment	Recommended solution
Noise pollution caused by installations in unsuitable environments or where professionals work on a regular basis.	Reassess the installation environment or site.
Unsuitable ventilation in the location, causing equipment to overheat, leading to discomfort for people who are on the site.	Restore adequate ambient conditions and ventilate the site.
Protection from the elements, such as water ingress, low temperatures, high humidity, etc.	Maintain adequate ambient conditions for the equipment.
Surface temperature is high.	Do not obstruct openings on the equipment. Use suitable PPE or wait for the equipment to cool down before accessing it.
Dirt affects the system and prevents the safety labels from being read.	Adequately clean the equipment, the labels and the workplace.
Poor installation.	Request a training course.
During the installation stage, provisionally fixing the equipment or its components can be hazardous.	Take care and restrict access to the installation area.
Accidentally disconnecting the quick connectors while the equipment is operational or making incorrect connections can produce electrical arcs.	Take care and restrict access to the installation area.

3. General description

The following images show different views of the Green Motion DC 22 EV charger.

3.1 Front and back views

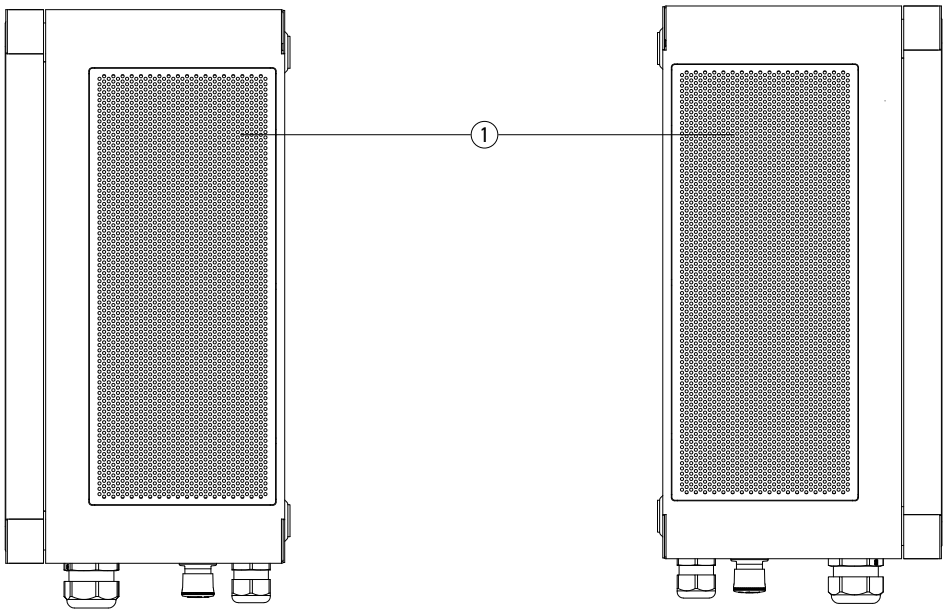
Figure 1. Front and back views of Green Motion DC 22 EV charger



Tag	Description
1	Color touchscreen display
2	RFID reader
3	LED indicator
4	Cable glands
5	Mounting holes
6	Optional cable entries (knockout holes)

3.2 Left and right views

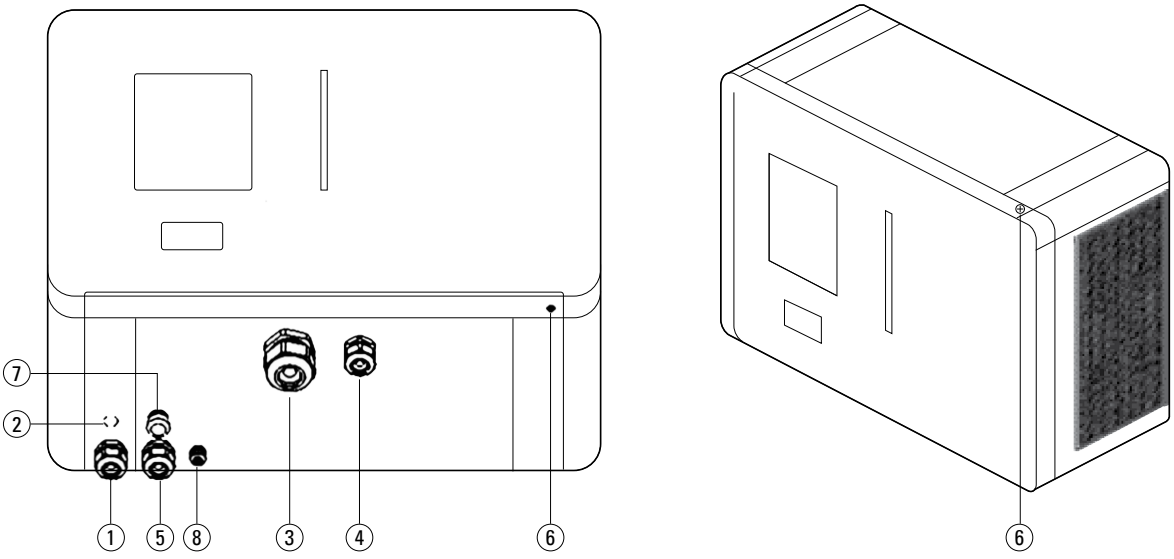
Figure 2. Left and right views of Green Motion DC 22 EV charger



Tag	Description
1	Air flow grid

3.3 Top and bottom views

Figure 3. Top and bottom views of Green Motion DC 22 EV charger



Tag	Description
1	Cable entry for input power cable when mounted on pedestal
2	Cable entry for the Ethernet cable when mounted on pedestal
3	CHAdeMO cable gland (optional)
4	CCS cable gland
5	Alternative cable entry for input power cable
6	Screws for securing the front door
7	Emergency stop button
8	Alternative cable entry for the Ethernet cable

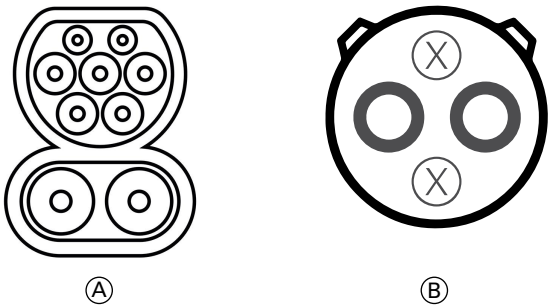
3.4 Types of cables

The Green Motion DC 22 EV charger provides two types of cables and connectors:

1. Combined Charging System (CCS) for EU market. This is the default cable.
2. CHAdeMO. This cable is optional.

The maximum power of the Green Motion DC 22 EV charger is 22 kW. However, the actual charging power may vary due to external factors such as the available grid power, capacity of the electrical installations, thermal conditions and EV model. For this reason, Eaton disclaims any liability concerning the actual power output.

Figure 4. Illustration of connector types available with Green Motion DC 22 EV charger



Tag	Description
①	CCS Type 2
②	CHAdeMO

The unit can be equipped with either CCS or both as reported in the table below.

Table 4. Possible cable configurations available with the charger

Green Motion DC 22 Cable Options	CCS	CHAdeMO
CCS only (default)	X	
CCS and CHAdeMO	X	X

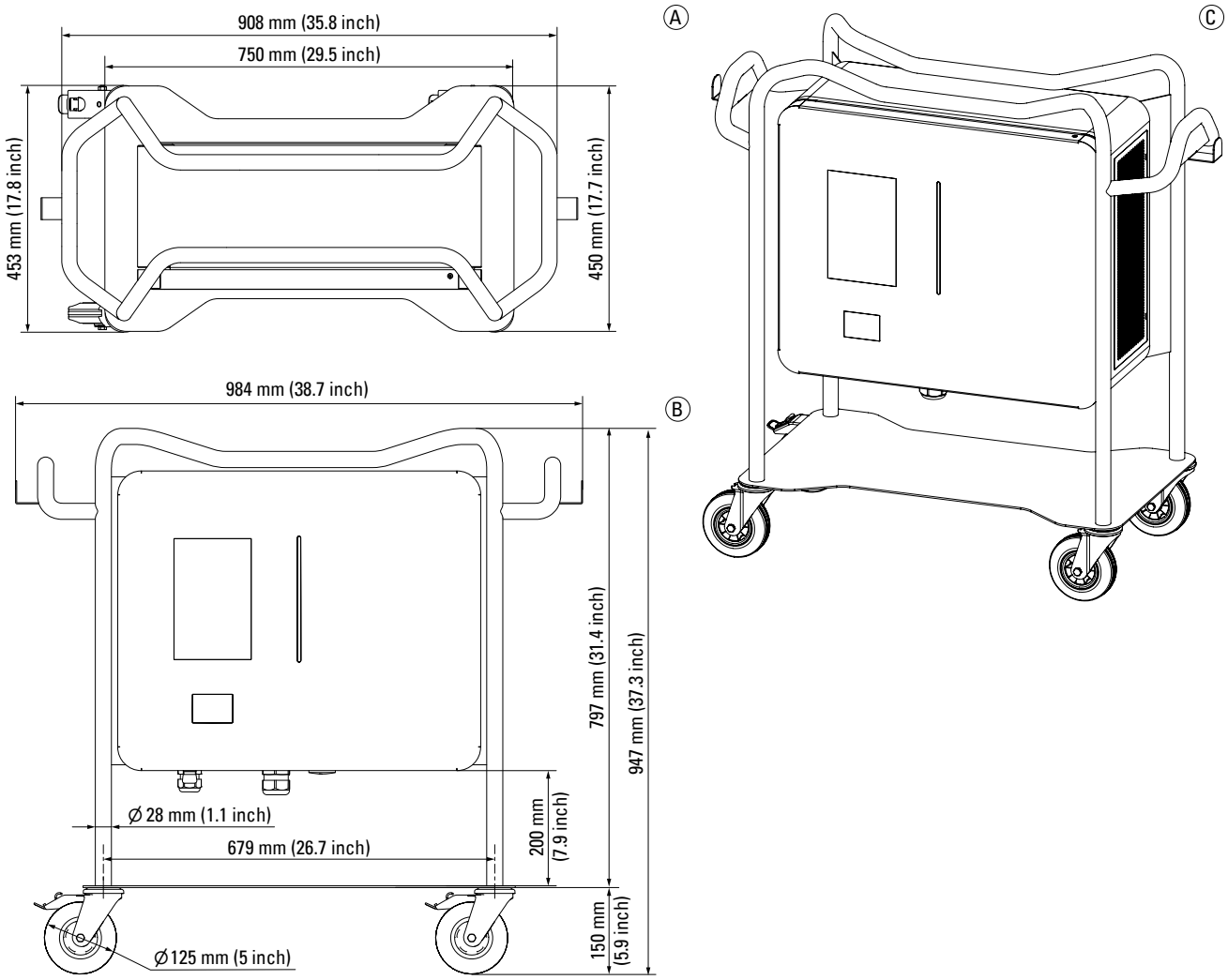
3.5 Green Motion DC22 Mobile

The Green Motion DC22 Mobile EV charger is shipped with a factory-preassembled kit consisting of a single Green Motion DC22 Mobile unit mounted on a mobile platform (trolley) and equipped with an AC power supply cable (15m).

The AC power supply cable is equipped with a 5-pole IEC 60309-compliant connector (CEE), which allows the unit to be used out of the box without additional installation steps.

The connector has an IP44 ingress protection rating, enabling the unit to be used in all weather conditions (subject to the limitations specified in the technical datasheet).

Figure 5. Front, top, and angle views of the Green Motion DC22 Mobile EV charger



Tag	Description
A	Top view
B	Front view
C	Angle view

4. Relevant information prior to the installation



The installation must be carried out only by professional and qualified personnel.



Installation, commissioning, maintenance or retrofitting of the charging station must be performed by professional and qualified personnel who are responsible for complying with existing standards and local installation regulations.



During the installation, ensure the equipment is powered off.

4.1 Tools required for installation

To perform installation, professional and qualified personnel should have the following tools:

- Screwdriver (T20, TX30, PZ2),
- Open-ended wrenches,
- Drilling machine (depending on the mounting surface),
- Laptop,
- SIM card, in case of online chargers with 4G modem.

4.2 Package contents

The Green Motion DC 22 box should contain the following parts:

- Green Motion DC 22 EV charger,
- Quick start guide,
- Safety guidelines,
- EV cables(s), depending on customer configuration:
  - CCS plug, cable, plug holder,
  - CCS and CHAdeMO plugs, cables, plug holders,
- Screws, cable glands and cable gland cap,
- Wall-mount gaskets (four pieces).

4.3 Dimensions and weight

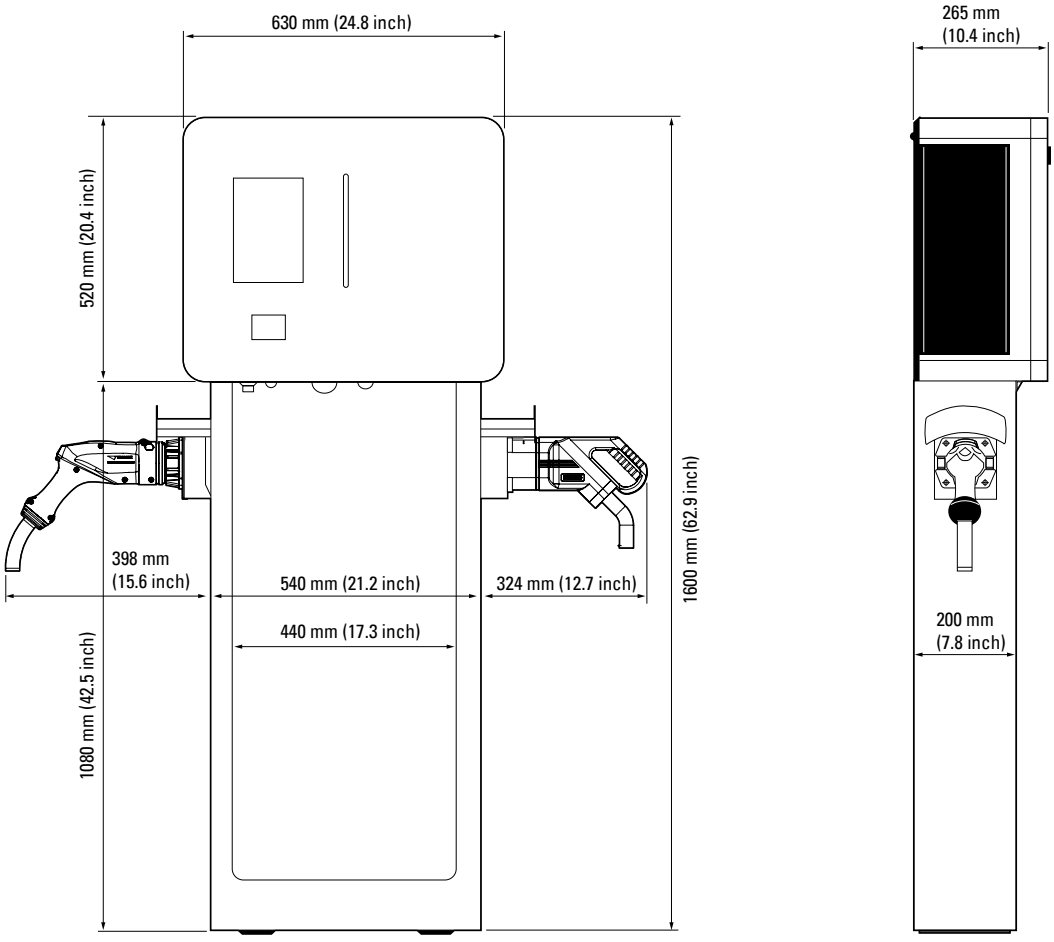
The table below shows the dimensions and weight of the Green Motion DC 22 EV charger.

Table 5. Dimensions and weight of Green Motion DC 22 EV charger

EV charger	
EV charger dimensions (H x W x D) in mm	520 x 630 x 265
EV charger weight without cables in kg	53
Pedestal	
Pedestal dimensions (H x W x D) in mm	1080 x 540 x 200
Pedestal weight in kg	32
Trolley	
Trolley dimensions (H x W x D) in mm	947 x 984 x 453
Trolley weight in kg	21
Cables	
CCS weight in kg	4
CHAdeMO weight in kg	6
Total	
Total height in mm	1600
Total weight in kg (max.)	96

Figure 6 shows the front and side views of the EV charger with dimensions, together with the optional floor-mount pedestal.

Figure 6. Green Motion DC 22 EV charger front and side views with dimensions



4.4 Lifting, transportation and unloading instructions

Transportation and handling

Transportation of the equipment, especially on the road, must be carried out in such a way as to protect the system components (especially electronic components) from major impacts, humidity, vibrations, etc.

During handling, sudden or fast movements which could cause the system to sway dangerously must be avoided.

Please refer to local regulations and laws for transportation and handling of the equipment.

Lifting

Eaton packs and protects each component by using devices that ease its transportation and handling. These operations must be carried out by professional and qualified personnel specialized in loading and unloading components.

The ropes and vehicles used for lifting must be able to withstand the weight of the equipment.

Do not lift multiple units or parts of the equipment at the same time, unless otherwise stated.

The unit is not equipped with specific lifting tools.



Do not underestimate the weight of the unit. Check the technical specifications.

Number of manpower for transportation, handling and lifting must be considered due to the weight of the unit and the floor-mounted pedestal in accordance with the requirements of local regulations.

Do not move or stop the hanging load above people or things.

Do not let it drop with too much force.

Please refer to local regulations and laws for lifting the equipment.

4.5 Unpacking



Remember that the packaging elements (cardboard, cellophane, staples, adhesive tape, straps, etc.) can cut and/or injure, if not handled with care. They must be removed with appropriate tools and must not be handled by non-responsible people (i.e. children).

The packaging components must be removed and disposed of in accordance with the local regulations and laws of the country of installation.

Check the integrity of the packaging before opening.

Open the packaging and remove the unit carefully to avoid damaging the external casing or the internal electronic parts.

Before commissioning, ensure that the external casing of the unit is in good condition and free from damage sustained during transportation.

5. Mounting and installation

5.1 Positioning the Green Motion DC 22 EV charger

The installation position of the unit must meet the following conditions:

- Manpower to install the product must be considered due to its weight and the weight of the floor-mount pedestal, in accordance with local regulations.
- The product must be installed in a place with relative humidity below 95 %.
- Recommended operating temperature range of the unit is -25 °C to +45 °C.
- Install the product to ensure easy access to the controls and connections.
- When mounting on the wall, the surface on which the unit will be installed must be able to support its weight (55 kg).
- The unit must be used at an altitude not exceeding 2000 m above sea level.
- The product should be fixed at a height of 1000 mm above ground level, for optimal accessibility.
- Keep at least 300 mm of free space from the left and right sides of the unit to allow for adequate air circulation.
- The cable entries for power cables and the internet connection cable are through the bottom or rear of the EV charger.



Do not mount the product above or below flammable building materials.

Do not install the product in areas where highly flammable substances are present.

Do not install the product in areas subject to explosion hazard.



To prevent the risk of electric shock or other injury, check that there are no electrical or hydraulic lines in the walls before drilling the mounting holes of the product.



Make sure there is enough free space for air circulation around the product. Local regulations may require larger clearances.

5.2 Mounting

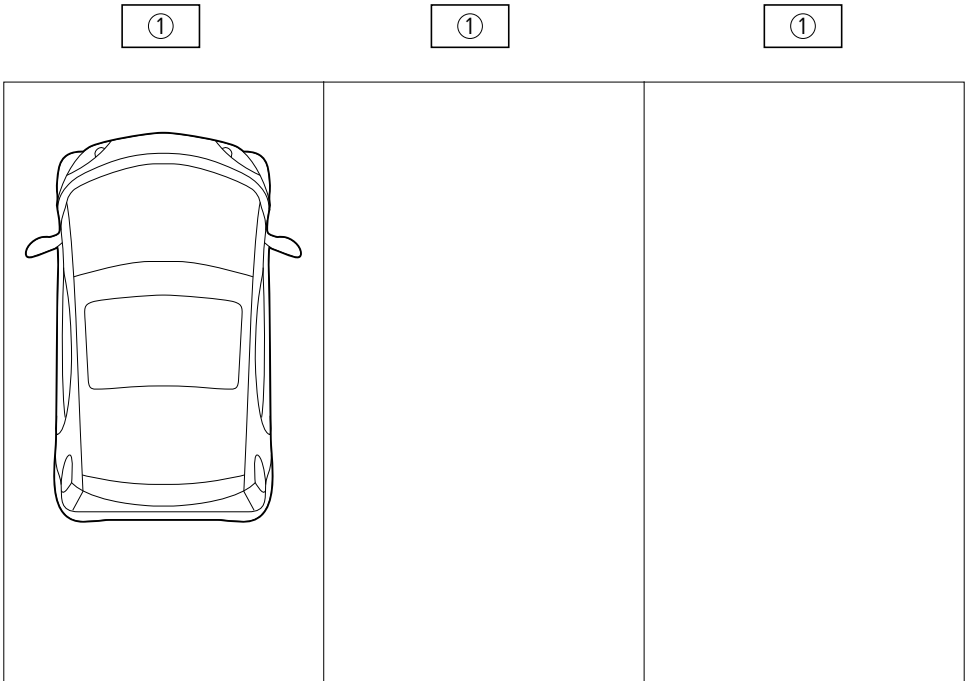
The product can be wall-mounted, floor-mounted with a pedestal (optional), or mounted on a trolley (see Chapter 3.5).

5.2.1 Site design

A site for electric vehicles (EVs) equipped with charging stations can be designed in different setups. This section is intended to provide some valuable information on the placement of the EV chargers with respect to parking spaces.

As shown in the following Figure, Eaton recommends installing the EV charger at the front and center of the parking space, and each EV charger should serve one parking space.

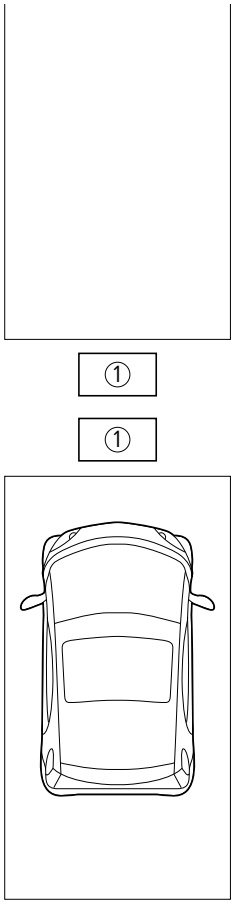
Figure 7. Optimal positioning of EV chargers



Tag	Description
①	EV charger

Alternative positions for the EV chargers are shown in Figure 8. If a wall is not available for mounting it is possible to use a floor-mounted pedestal.

Figure 8. Alternative positioning of EV chargers



Tag	Description
①	EV charger

The minimal distance recommended between the EV chargers positioned back-to-back is 600 mm.

5.2.2 Mounting on the wall

The unit should be fixed 1000 mm above ground level, for optimal accessibility. See Figure 9.

Keep at least 300 mm of free space from the left and right sides of the unit to allow for adequate air circulation.

The power input electrical cable and the internet connection cable are inserted from the bottom side of the EV charger. See Section 6.2 for details.

Please note that the appropriate types of plastic plugs and screws must be selected by professional and qualified personnel, based on the following considerations:

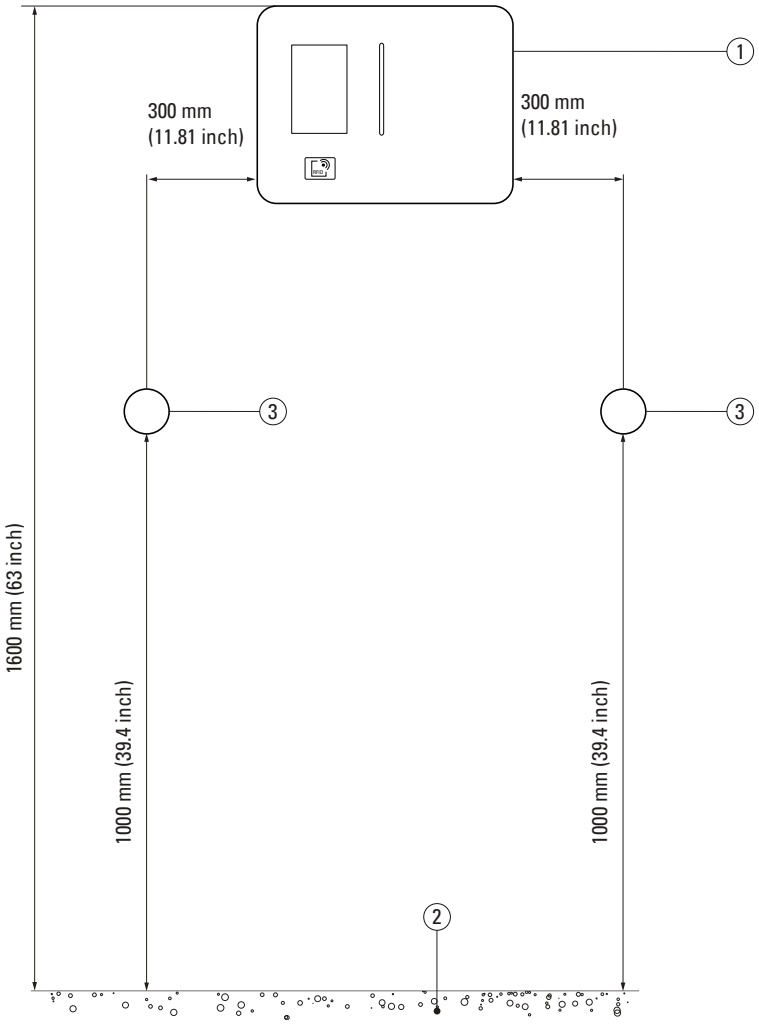
- the location of installation, and
- the type of the wall on which the system is to be mounted.

Recommended screws:

- Stainless steel Ø6 x 50 mm with Ø12 mm head min. (for example: HXE0106060)

In case of obstacles such as snow or similar, take precautions to keep at least 300 mm of free space from the left and right sides of the unit to allow for adequate air circulation.

Figure 9. Green Motion DC 22 EV charger with installation distances



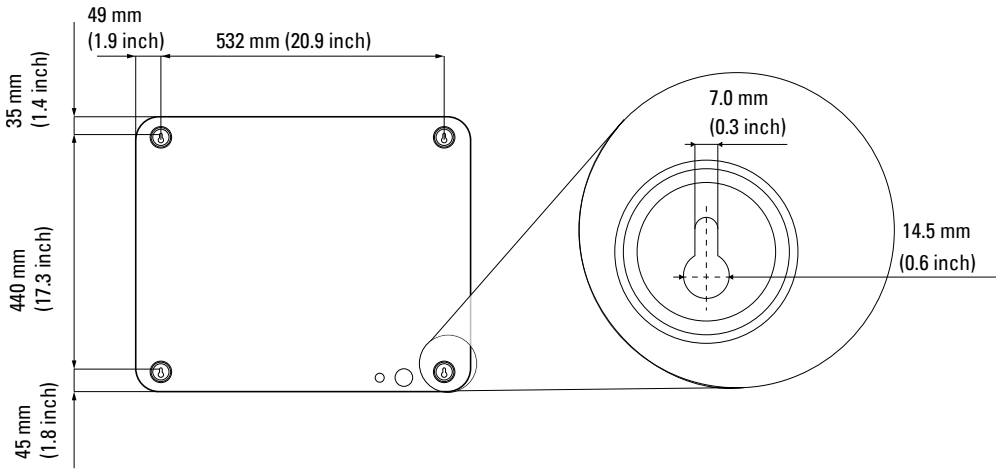
Tag	Description
1	Green Motion DC 22 EV charger
2	Floor
3	Plug holder

Drilling holes in the metal housing or making any modifications not described or approved in this document will void the product warranty.

Follow these steps to install the unit onto the wall:

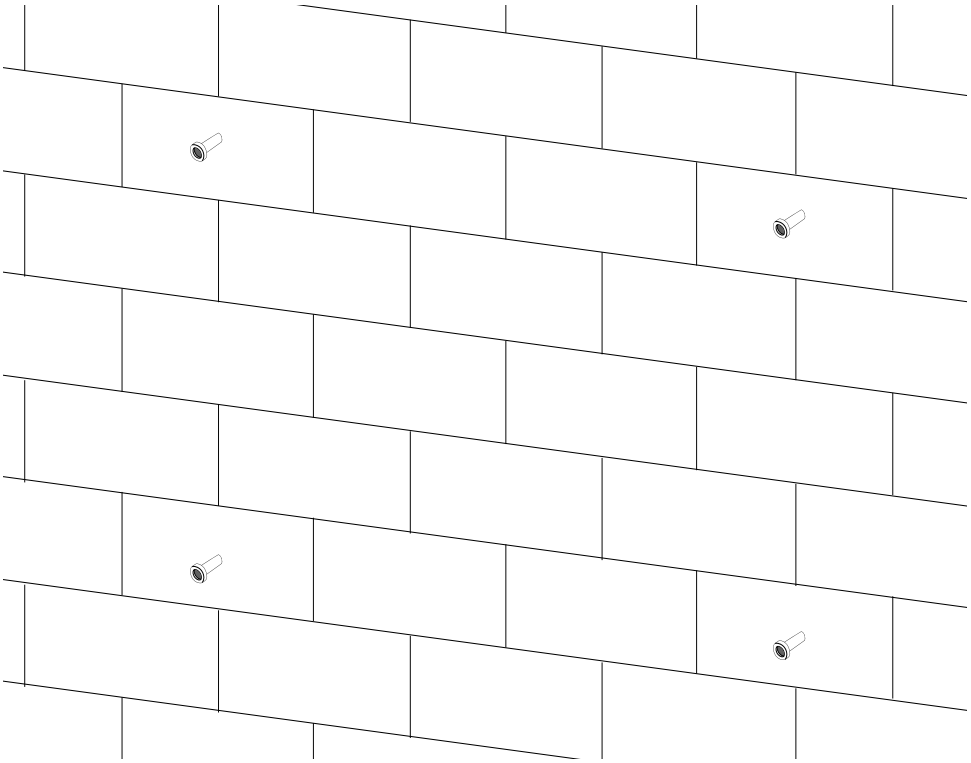
Step 1. Place the four gaskets on the back of the unit.

Figure 10. Details of gaskets on the back of the EV charger with dimensions



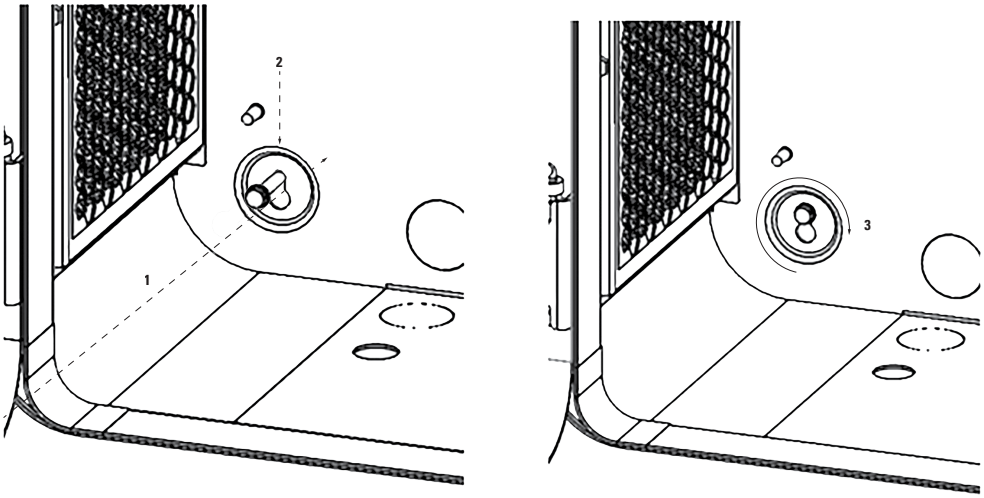
Step 2. Install the four selected screws into the wall, leaving them to protrude 10 mm from the surface (see Figure 11).

Figure 11. Installation site with the protruding screws



Step 3. Mount the unit onto the screws, temporarily using them as holders.

Figure 12. How to fix the unit to the wall



Step 4. Fasten the screws securely, thus fixing the unit against the wall.

Once the EV charger is fixed onto the wall, mount the plug holder(s) to the right or to the left side of the EV charger depending on site configuration and user preferences. Consider a 300-mm free space requirement to the left and right side of the EV charger for air circulation.

Position the plug holder(s) very carefully, ensure that the polarizing keys are on the top side of the plug holder before fixing the plug holders to the wall with screws. See Figure 12.

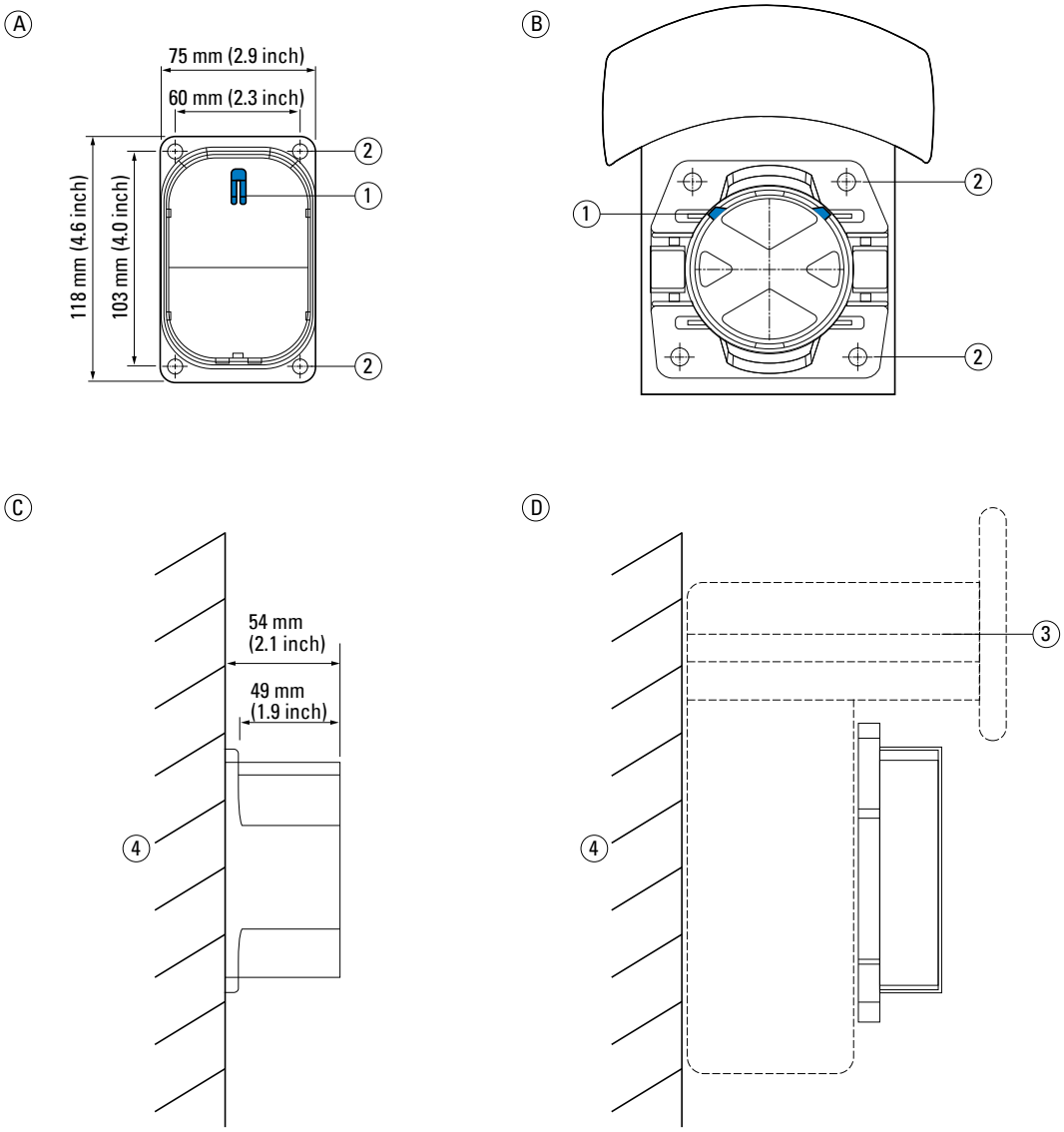
Mount the plug holder(s) at a height between 1000 mm and 1100 mm from the ground level, for optimal accessibility.

For CCS plug holder: Screw the plug holder directly onto the wall.

For CHAdeMO plug holder: First, install the sheet metal cable support onto the wall.

Secondly, screw the plug holder onto the metal cable support (see Figure 13).

Figure 13. View of the CCS and CHAdeMO plug holders respectively



Tag	Description
1	Polarizing keys
2	Fixing screws
3	Metal sheet cable support
4	Wall
A	CCS plug holder - Front view
B	CHAdeMO plug holder - Front view
C	CCS plug holder - Side view
D	CHAdeMO plug holder - Side view

5.2.3 Mounting on the floor-mount pedestal (optional)

When choosing the location of the floor-mount pedestal, consider a 300-mm free space requirement to the left and right sides of the EV charger for air circulation.

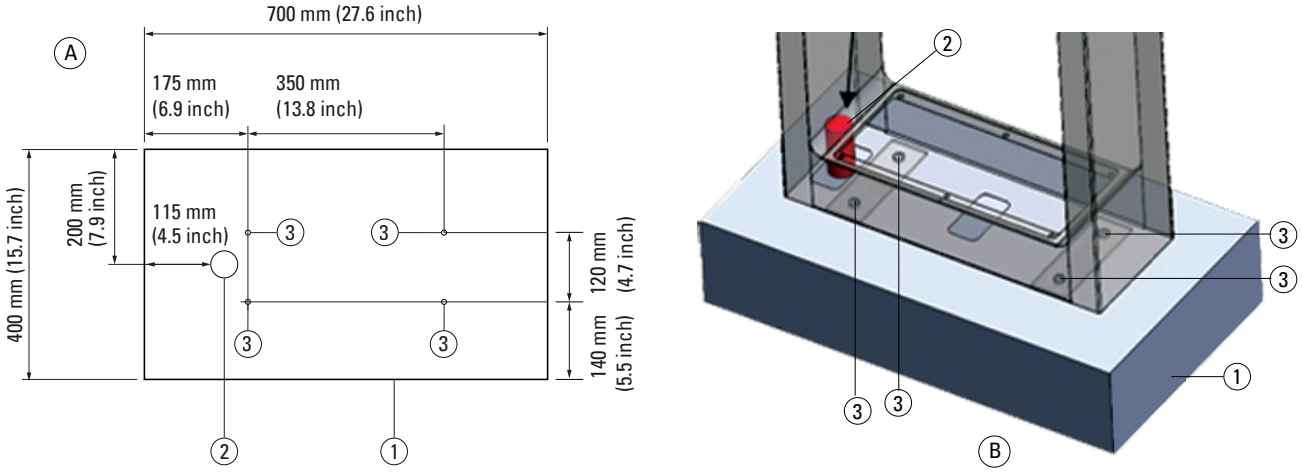
Mounting the pedestal to the concrete floor

Fix the pedestal with four M10 x 100 mm (min.) stainless steel threaded rods on a 400 mm x 700 mm x 150 mm concrete base.

The AC power supply cable is fed through the left opening of the floor-mounted pedestal. Make sure the concrete base provides an unobstructed path for the power cable.

Below is a schematic representation of the base of the EV charger pedestal to be mounted on the concrete base.

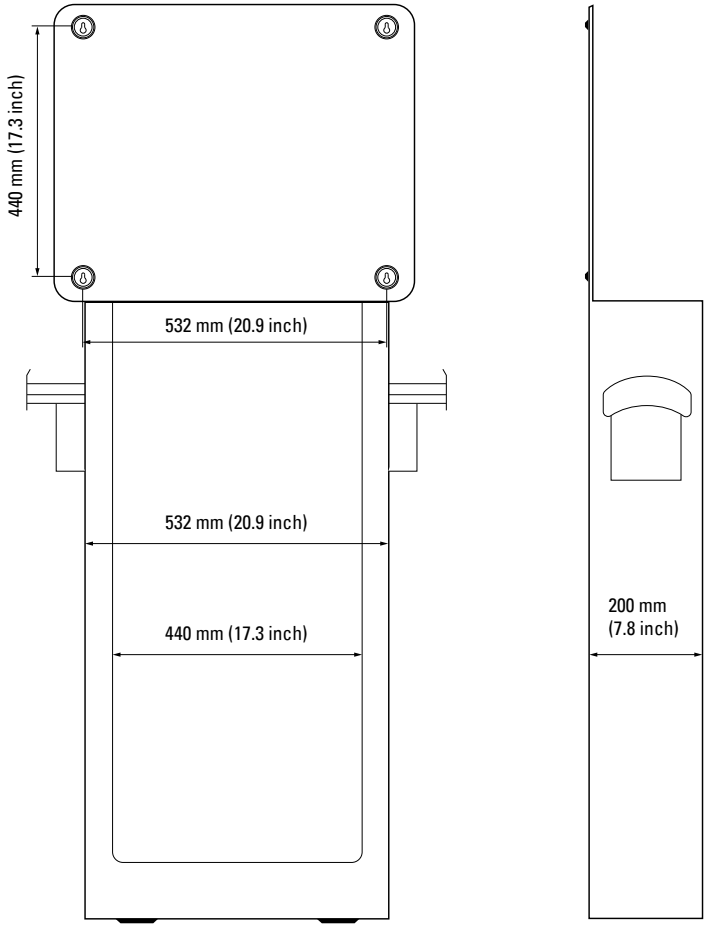
Figure 14. The base of the EV charger pedestal with dimensions



Tag	Description
1	Concrete base
2	Opening for electrical cables
3	M10 stainless steel threaded rods
A	Top view of the concrete base
B	Overview of floor-mounted pedestal on concrete base.

Mounting the EV charger onto the floor-mount pedestal

Figure 15. Front and side views of the pedestal without the EV charger



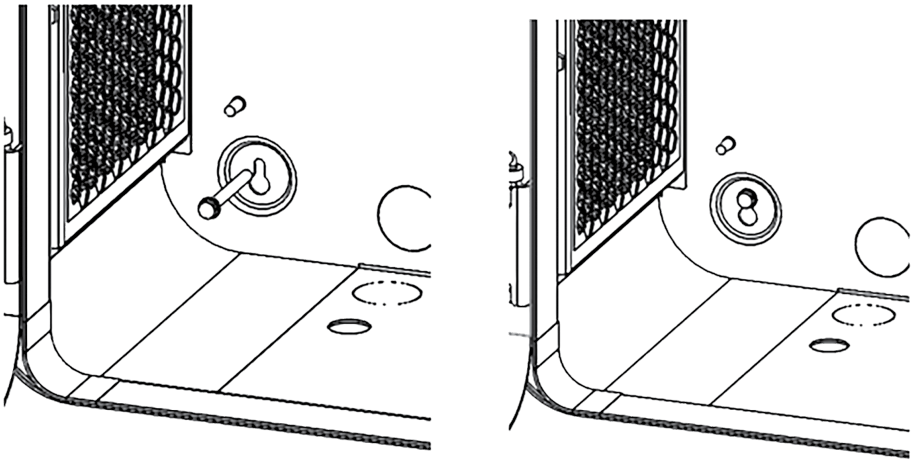
Follow these steps to install the unit onto the floor-mount pedestal:

Step 1. Place the 4 gaskets on the back of the EV charger.

Step 2. Fix the unit to the back plate of the pedestal using the four provided M6 stainless steel screws, as described in Figure 16.

Be careful not to break the emergency stop button on the bottom of the charger when mounting the unit to the backplate.

Figure 16. How to fix the unit on the backplate of the floor-mount pedestal

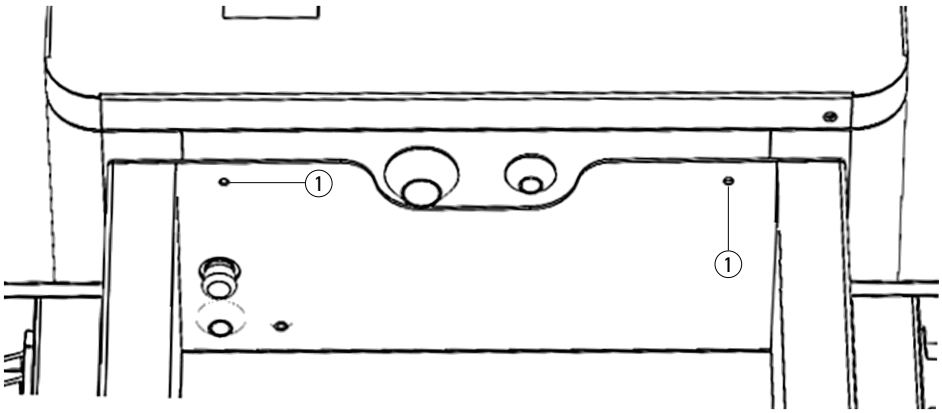


Step 3. Securely lock the four M6 screws.

Step 4. Drill 2x Ø7 holes in the bottom of the housing of the Green Motion DC 22 EV charger on the places corresponding with the holes in the floor-mount pedestal and clean the metal shavings. See Figure 17.

Step 5. Break out the 2 knockout holes in the bottom of the EV charger with a screwdriver.

Figure 17. Bottom view of the EV charger mounted on the floor-mount pedestal



Tag	Description
1	M6 x 12 stainless steel screws

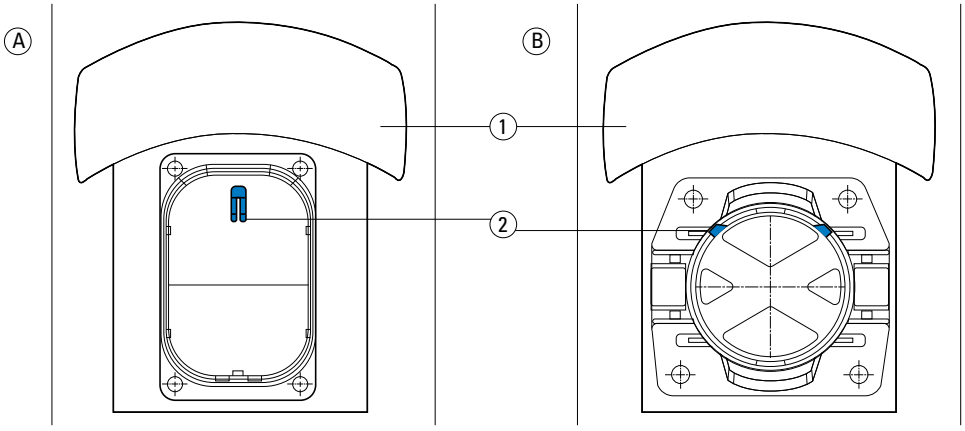
Step 5. Fix the bottom of the EV charger using the two provided M6 x 12 stainless steel screws and two hexagonal nuts with a notched base to the pedestal.

Once the EV charger is mounted on the pedestal, fix the plug holders to the cable supports on the sides of the pedestal.

Position the plug holders very carefully, ensure that the polarizing keys are on the top side of the plug holder before fixing the plug holders to the pedestal. See Figure 18.

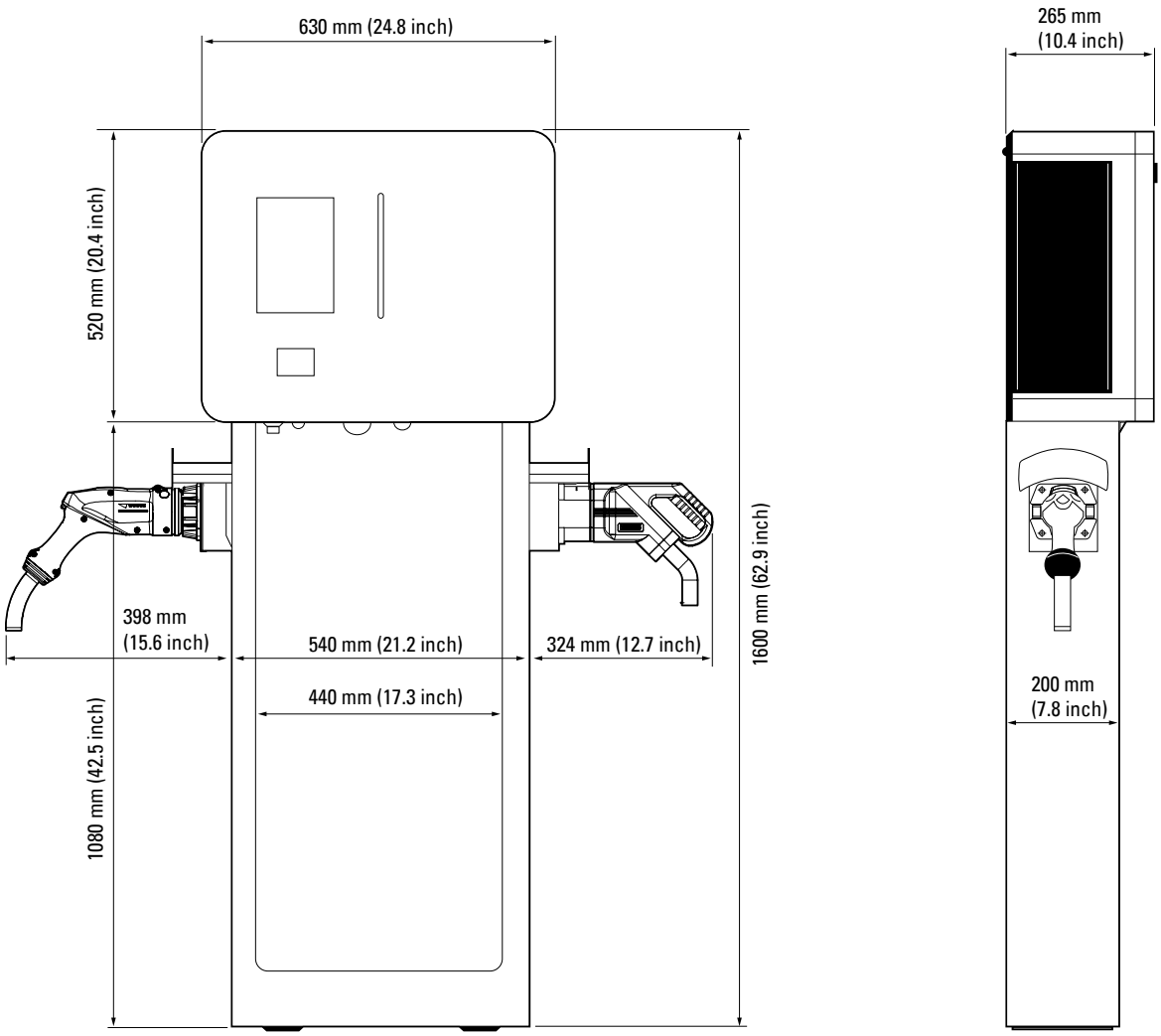
Plug holders can be mounted to the right and/or left side of the EV charger depending on site configuration and user preferences. See Figure 19.

Figure 18. Positioning of the plug holders on pedestal with regard to the orientation of the polarizing keys



Tag	Description
1	Cable supports
2	Polarizing keys
A	CCS plug holder
B	CHAdeMO plug holder

Figure 19. Front and lateral views of the EV charger and plug holders mounted on the froor-mount pedestal



6. Electrical connections and wiring

6.1 Cautions



Before carrying out any operations, ensure you have read and understood this manual. Do not make changes and do not carry out maintenance operations not described in this manual. The manufacturer does not accept responsibility for injuries to people and damages to things occurred if the information within this manual has not been read and followed.



The installation, commissioning, maintenance or retrofitting must be carried out only by professional and qualified personnel.



It is strictly prohibited to open the product by unqualified personnel.

6.2 Standard wiring

To connect the EV charger to the electrical panel, professional and qualified personnel should consult Table 6 and consider the following guidelines.

Table 6. Overview of parameters for dimensioning of the protective devices and power supply line

Green Motion DC 22 EV charger nominal power range	22 kW
Nominal input voltage	400 V AC, 50 Hz
Nominal input current	32 A
Power supply system	3 phase
Power supply terminal max. section	16 mm^2



DC leakage protection is provided by means of electrical galvanic separation and an internal Insulation Monitor Device.

Eaton recommends that DC EV chargers installed in a TT system are equipped with an RCD upstream in accordance with IEC 60364-7-722.

Eaton recommends that DC EV chargers installed in a TN system where a fire hazard is present are equipped with an RCD upstream in accordance with IEC 60364-7-722.

Eaton's support teams can help with the selection of the proper RCD to be used.

In case of connection in TN-C-S networks, earth rods must be used.

It is not possible to install the unit in an IT grid configuration.

Always refer to local regulations which may differ from and can supersede the international regulations
listed above.

The circuit breakers and the power cable minimal cross-sections shall be over-dimensioned to ensure the functionality of the EV charger at higher temperatures.

During installation, other important issues such as selection of a suitable line circuit breaker must be considered.

It is permitted to supply the 32 A terminal, under the following conditions:

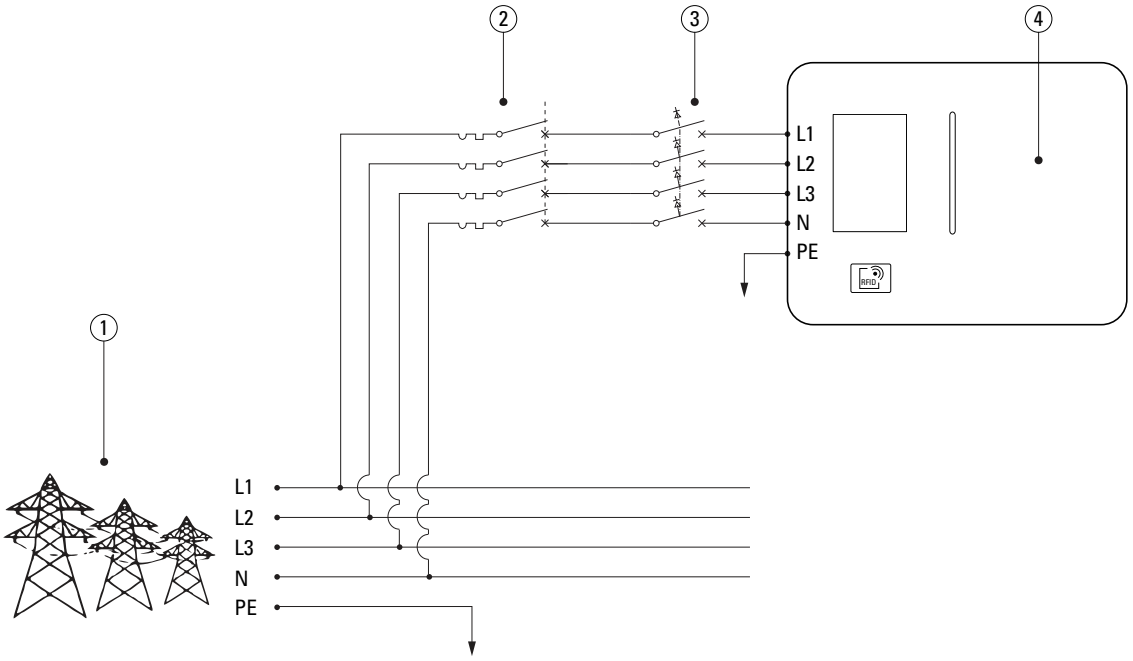
- If the temperature where the circuit breaker is located does not exceed its reference value.
- If the circuit breaker can withstand the maximum current without tripping under the worst temperature conditions.
- Please refer to local standards for further details.

When dimensioning the line circuit breaker, the increased ambient temperatures in the distribution cabinet must also be considered. Under certain circumstances, this can make a reduction of the charging current specification necessary in order to increase the system availability.

The nominal current must be determined in accordance with the type plate data in coordination with the desired charging power and the supply line.

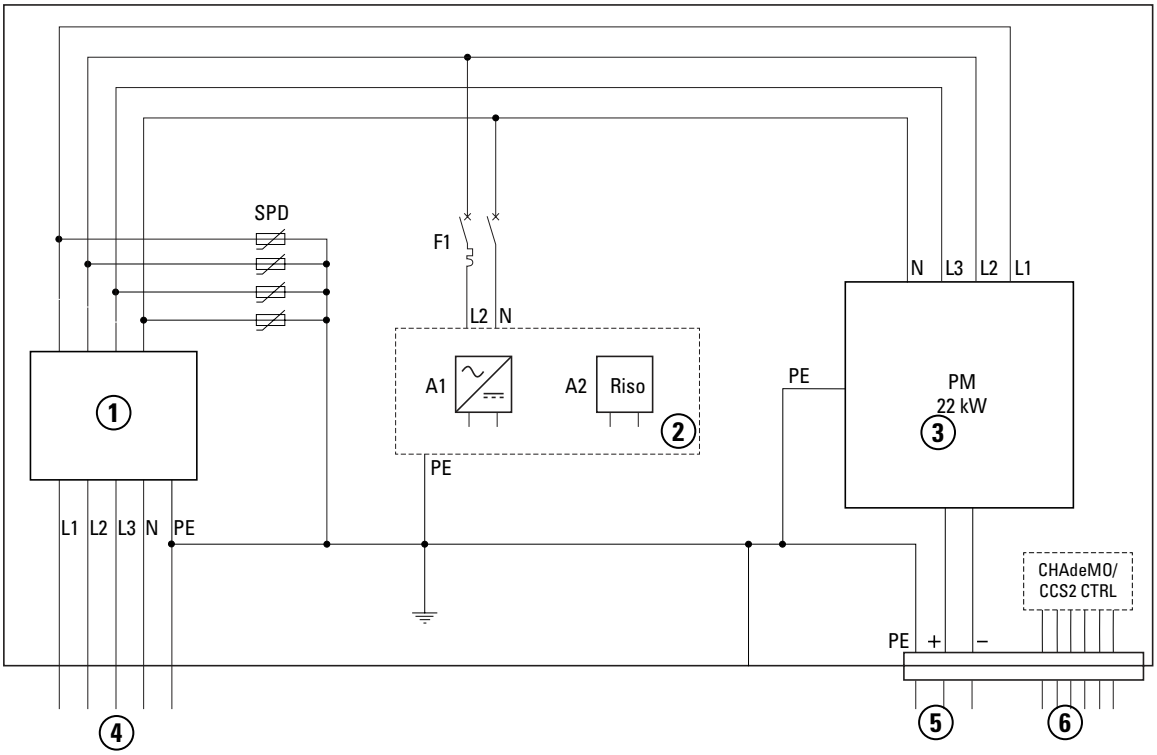
Figure 20. Green Motion DC 22 EV charger wiring

Tag	Description
1	Grid
2	Circuit breaker
3	RCD (optional)
4	Green Motion DC 22 EV Charger



A detailed connection diagram of the Green Motion DC 22 EV charger in Figure 21 shows the main components, including the input filtering and surge protection, power module, and the charging outputs.

Figure 21. Detailed connection diagram of the EV charger



Tag	Description
1	EMI filter
2	Auxiliary controls
3	AC-DC power module
4	Input, 3 x 400 V_{AC}
5	Output, CSS or CHAdeMO
6	CCS2/CHAdeMO control interface

Eaton recommends the use of the equipment in Table 7 as protective devices.

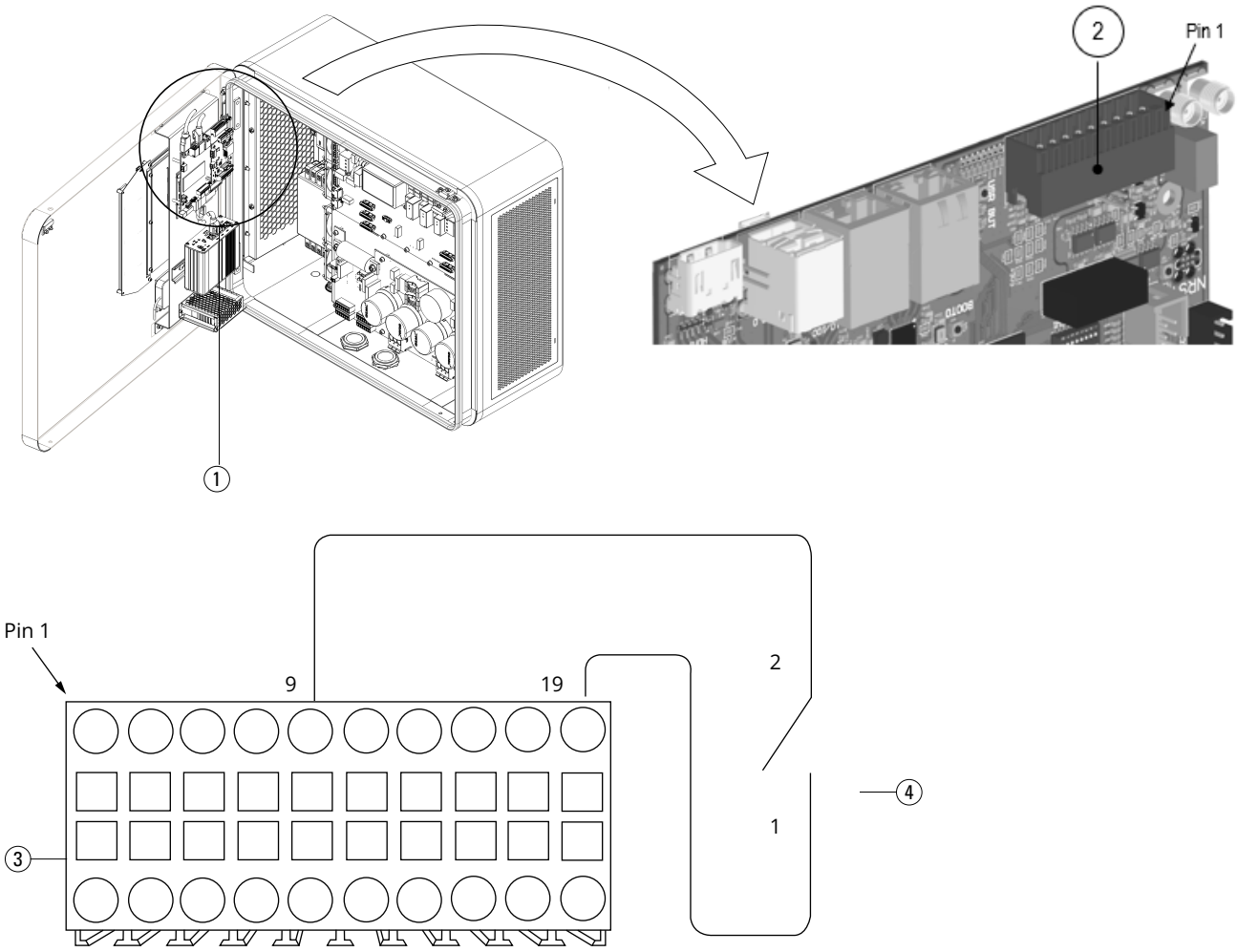
Table 7. Recommended protective devices for the Green Motion DC 22 and DC 22 Mobile EV chargers

Type	Eaton	Article number
40 A 3+N miniature circuit breaker for 32 A supply current	FAZ-C40/3N	278979

6.2.1 Remote shutoff DC

For remote shut-off of the EV charger, an external dry contact can be connected according to the schematic in Figure 22.

Figure 22. Connection of a dry contact to the Control unit (PCB) of the Green Motion DC 22 EV charger



Tag	Description
1	Control unit (PCB) GMCU-MPB2
2	Header J7
3	J7 Mating Connector
4	External NO Dry Contact

The dry contact should normally be in an open mode.

To connect your dry contact to the Green Motion DC 22 EV charger, follow these steps:

Step 1. Open the Green Motion DC 22 EV charger. See Section 6.2.1.

Step 2. Access the Control unit. See Section 6.2.1.

Step 3. Locate the header J7 and mating connector.

Step 4. Locate Pin 9 and Pin 19 on J7 mating connector.

Step 5. Connect the dry contact on Pin 9 and Pin 19 of J7 mating connector by passing through the communication cable gland in the bottom of the DC charger.

Step 6. Carefully attach the cables with the ones already present and close the Green Motion DC 22 EV charger.

6.3 Electrical connection and terminals

Before starting connection operations, ensure that the external AC mains isolator switch and/or main circuit breaker is switched off (open).

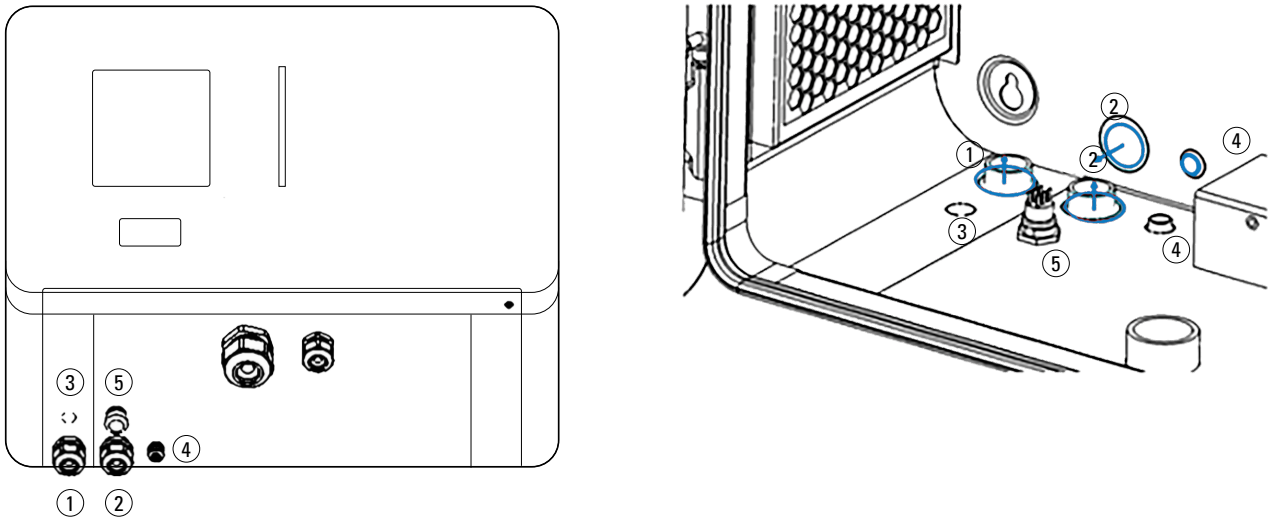
It is not possible to install the EV charger in an IT grid.

Follow the next steps to connect the EV charger to the power supply:

Step 1. Open the front door of the EV charger. Please refer to Chapter 8.1 of this manual on how to open the Green Motion DC 22 EV charger.

Step 2. Remove the cable glands from the cables if necessary and insert AC power supply cables into the unit (see Figure 23). The cable entries for power and communication cables are from the bottom-left side or from the rear-left side of the EV charger. There are three possible knockout holes for the power cable and three possible knockout holes for the ethernet cable as shown in Figure 23. To feed the cables into the EV charger, knock out one of the holes for the power cable and one for the Ethernet cable.

Figure 23. Locations of the AC power supply and communication cable entries inside the unit



Tag	Description
1	Cable entry for input power cable when mounted on pedestal
2	Alternative cable entry for input power cable
3	Cable entry for the ethernet cable when mounted on pedestal
4	Alternative cable entry for the Ethernet cable
5	Emergency stop button

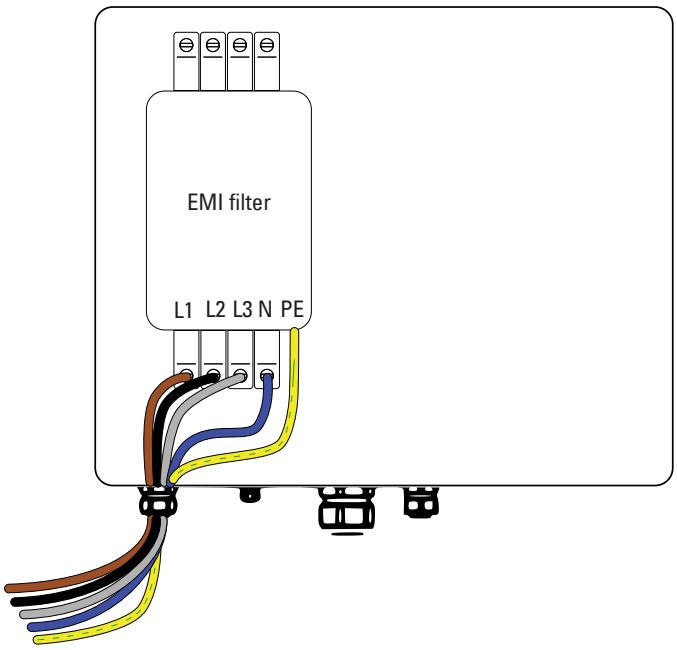
Step 3. The electrical connection is made directly to the terminals of the EMI filter (Figure 24), located at the bottom left of the EV charger.

Follow the instructions below to wire the EV charger to the power supply.

Connect the three phases (L1, L2, L3), neutral (N) and earth (PE) cables to the terminals of the EMI filter, respecting the correct assignment:

- Phase (L1) → L1 terminal
- Phase (L2) → L2 terminal
- Phase (L3) → L3 terminal
- Neutral (N) → N terminal
- Protective earth (PE) → PE bolted joint

Figure 24. AC power supply connection inside the Green Motion DC 22 EV charger



Be careful not to reverse the phases with the neutral. If this happens, the system might malfunction.

6.4 Earth connection (MANDATORY)

Check that the protective earth conductor from the supply network is properly connected to the bolted joint on the EMI filter (see Figure 24).

Verify the electrical continuity between the front door and the EV charger housing. Check for continuity by measuring between areas not covered by insulating material (paint, rubber, dirt, etc.)

6.5 Indicators and User interfaces

The EV charger has three indicator and user interface means, as shown in Chapter 3:

- LED indicator,
- Color touchscreen display,
- Emergency stop button.

6.5.1 LED indicator

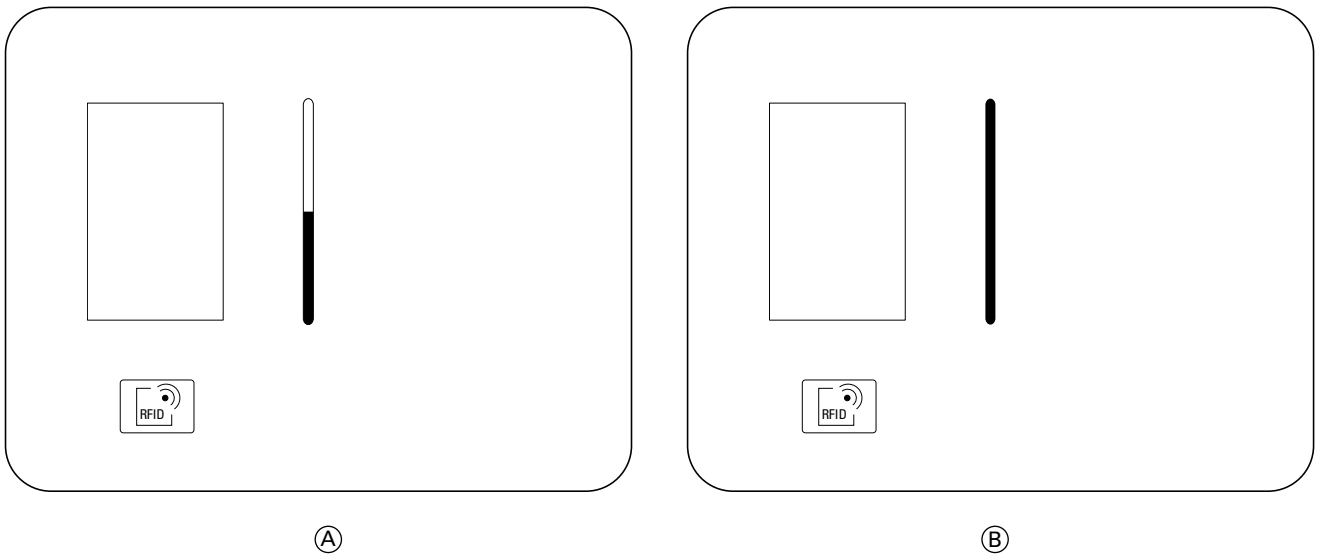
The EV charger is equipped with a LED indicator located on the front door. See Figure 1. Table 8 summarizes all possible LED indicator states that may occur during operation, providing a brief explanation for each.

Table 8. LED indicator states of the Green Motion DC 22 EV charger

Visual state	Description	Status
	No light	Stopped or not powered
	Incremental green light Flashing green light Steady green light Breathing green light	Integrity check Start-up stage Ready for use Waiting for user interaction
	Steady white + flashing red dot light	No internet / No server connection
	Flashing blue light Breathing blue light Steady blue light	Charge start-up stage Vehicle in charge Vehicle charged / Reserved
	Steady yellow light	Not in service / Maintenance
	Breathing orange light	Updating stage
	Red light on	Error in charging / Hardware fault /Emergency switch on
	No light + flashing red light	Integrity check failed

During the charging process, the LED indicator also shows the state of charge of the vehicle, as per Figure 25.

Figure 25. LED indicator of the state of charge

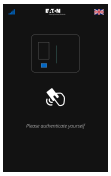


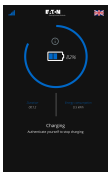
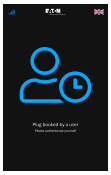
Tag	Description
Ⓐ	50 % charge of the vehicle
Ⓑ	100 % charge of the vehicle

6.5.1 Color touchscreen display

Green Motion DC 22 EV charger is equipped with a color touchscreen display located on the front door. See Figure 1. Table 9 provides examples of the screens. Due to continuous improvement, it is possible that changes will be implemented in the future to enhance the user experience.

Table 9. Examples of information available from the color touchscreen display

Display	Description
	Touchscreen display. Touch the screen to wake up.
	Authentication screen. Before any operation, ensure that the 4G sign is colored in blue. If the bar graph is RED, there is no connection to the server. Choose your language by touching the flag. Present the RFID badge on the RFID reader to initiate authentication. See Figure 1.
	Select appropriate plug.

Display	Description
	State of charge of the vehicle.
	This charger is not part of your eMSP and you do not have roaming rights. You can not charge with your RFID card. If available use Scan & Charge.
	Authentication failed due to network issues. Try again. Check that the 4G sign is colored in blue.
	Charger is out of order. Maintenance is needed before putting the charger back in service.
	Contact the technical support to put the charger in service.
	Charging station is already booked by a user. If you are not the one who booked it you cannot start charging.
	Unplug and reconnect the vehicle to correct the error.
	After checking that there is no more risk, release the emergency stop button located on the bottom side of the unit. See Figure 3.
	Open door detected. The door needs to be closed before starting a new charging session

7. Commissioning

Professional and qualified personnel must be an expert in the field, and is therefore responsible for commissioning the system in accordance with the manufacturer's instructions and local legislation.

Please fill out the installation checklist available on www.eaton.com and ensure that all the points in the checklist have been properly executed (see Chapter 7.1).

7.1 Unit switch-on

Before switching on the EV charger, check the effectiveness of the safety measure(s) of the system in accordance with the local regulations.

Electrical systems or devices must be checked by the installer of the system before commissioning and switching on the unit.

Before switching on the product, please do the following:

Step 1. Check that the unit is correctly fixed to the wall or the floor-mount pedestal in accordance with local regulations.

Step 2. Check that the electrical connections have been made correctly in accordance with local regulations.

Step 3. Check that the protective earth connection (MANDATORY) has been made correctly in accordance with local regulations.

Step 4. Perform checks on the continuity of the connections of the protective conductor, insulation resistance, RCD triggering current, triggering time, etc., in accordance with local regulations.

Step 5. Verify that the front door is closed and secured with the locking screws.

If the checks listed above were successful, proceed as follows:

Step 1. Close the external AC mains isolator switch and/or turn on the main circuit breaker.

Step 2. Wait for the display to turn on.

Step 3. Visit the link or scan the QR code to fill out the installation checklist form at:
https://content.eaton.com/en-gb-installation-checklist-ev-chargers

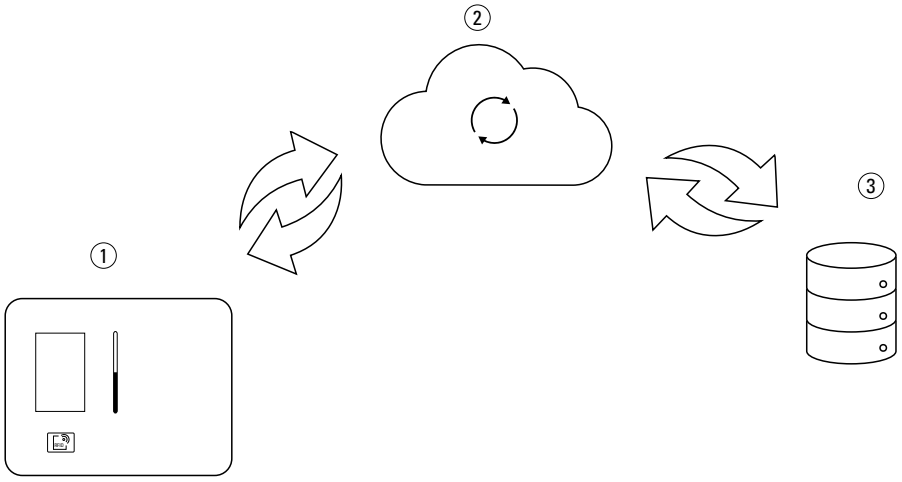
Figure 26. QR code for installation checklist online form

7.2 Online station

The Green Motion DC 22 EV charger uses a software management system, Eaton Charging network manager which controls the EV charging stations network. Refer to the Eaton Charging network manager user manual, available on www.eaton.com, for further details.

The Green Motion DC 22 DC EV charger communicates with the remote database via the cloud infrastructure.

Figure 27. Simplified illustration of Green Motion DC 22 EV charger communication



Tag	Description
1	Green Motion DC 22 EV charger
2	Cloud
3	Remote database

It is possible to establish the communication via internet in two ways:

1. LAN network: In this case the unit(s) are directly connected to a local modem/router that provides internet connection
2. SIM card: In this case a modem/router is installed inside the unit, and a SIM card must be configured. This is an option.



To configure the router/modem the EV charger must be powered and in standby mode.



Commissioning and configuring of the router of the EV charger must be performed by professional and qualified personnel who are responsible for complying with existing standards and local installation regulations.

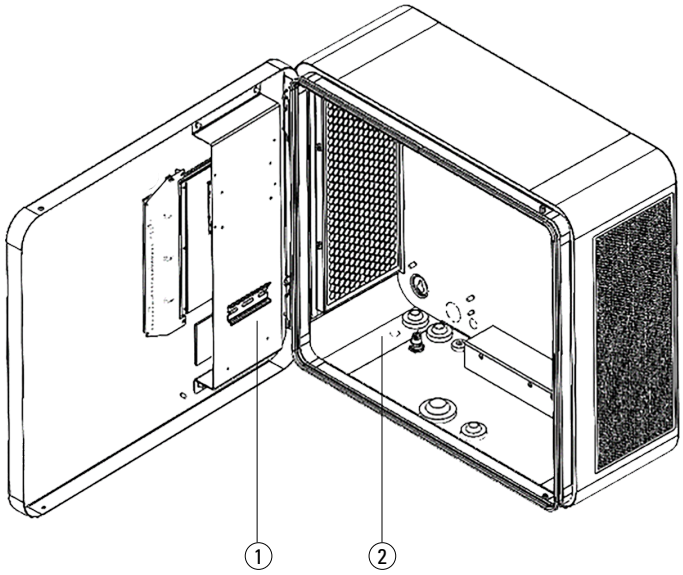


WARNING - Any operation requiring the opening of the charger can lead to electric shock hazards.

Please refer to Chapter 8.1 of this manual on how to open the Green Motion DC 22 EV charger housing.

It is possible to configure the network settings of the router located inside the EV charger. The router is located inside the EV charger, mounted on the DIN rail on the front door of the housing as shown in Figure 28.

Figure 28. Location of the router/modem in Green Motion DC 22 EV charger



Tag	Description
1	Location of the router/modem
2	Ethernet cable entry

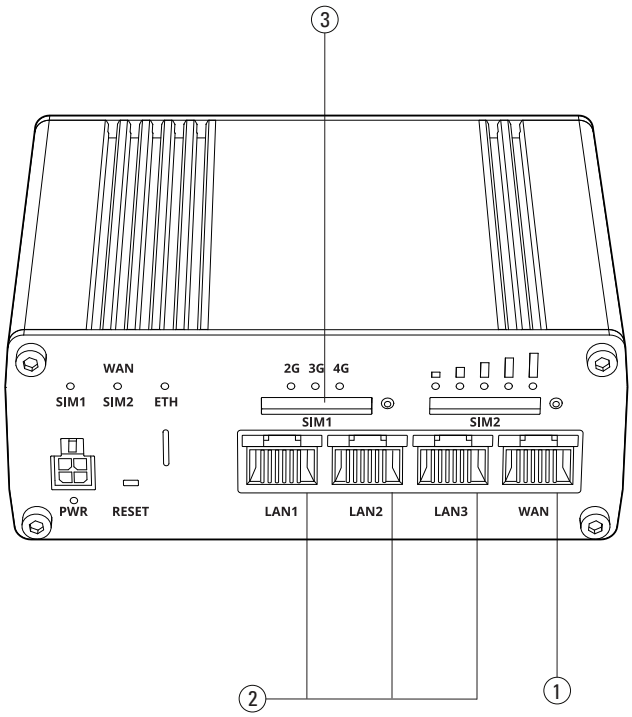
7.2.1 Configure an online station via LAN network

The EV charger router is pre-configured. However, some final setup steps are required to complete the installation. If you face any difficulties during setup, you can contact Eaton technical support for assistance via email at BGTechSupport@eaton.com.

Follow the steps below to configure the router of the unit for connection via LAN network:

Step 1. Connect your laptop with one of the LAN ports of the router via an Ethernet cable. See Figure 29.

Figure 29. Teltonika RUTX09 modem/router



Tag	Description
1	WAN Ethernet port
2	LAN Ethernet ports
3	SIM card slot

Step 2. Ensure the laptop is below the same subnet of the RUTX09 router. The default IP address of the router is 192.168.52.1. The default IP address, as well as the login credentials, can also be found on a printed label on the router unit.

Step 3. Connect to the router. If a step-by-step configuration menu "Setup Wizard" appears, ignore it and go directly to the menus described below.

Step 4. Go to the Network> WAN menu.

Step 5. Activate the WAN network and deactivate the other networks.

Step 6. Press Save & Apply.

Step 7. Authorize the management of the router from the WAN (Only in a private network). Go to System> Administration> Access control.

Step 8. Check Enable Remote HTTP and Enable Remote HTTPS.

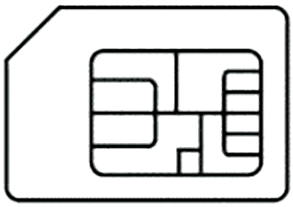
Step 9. Connect the WAN ethernet port of the Teltonika RUTX09 router via an ethernet cable to a local modem. The ethernet cable can be routed through the dedicated opening on the bottom-left or rear-left side of the Green Motion DC 22 EV charger. See Figure 23.

7.2.2 Configure an online station via SIM card (optional)

The communication via SIM card is intended as optional. Please contact your Eaton service representative to enable it using the email address BGTechSupport@eaton.com.

The SIM card is a mini-SIM 2FF format. The connection will be established automatically with the Eaton Charging network manager. Sometimes the SIM PIN can create connection issues. If this happens, please contact your Eaton service representative.

Figure 30. Example of a SIM card

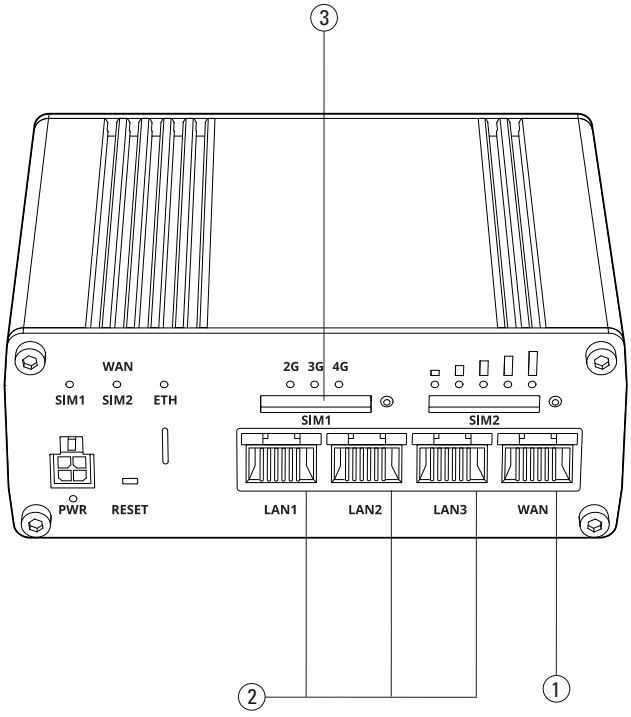


Always make sure the EV charger is on standby mode before inserting or removing the SIM card.

Follow the steps below to configure the modem/router of the unit for connection via SIM card:

Step 1. Connect your laptop with one of the LAN ports of the router via an ethernet cable. See Figure 31.

Figure 31. Teltonika RUTX09 modem/router



Tag	Description
1	WAN Ethernet port
2	LAN Ethernet ports
3	SIM card slot

Step 2. Ensure the laptop is below the same subnet of the RUTX09 modem/router. The default IP address of the router is 192.168.52.1. The default IP address, as well as the login credentials, can also be found on a printed label on the router unit.

Step 2. Ensure the laptop is below the same subnet of the RUTX09 modem/router. The default IP address of the router is 192.168.52.1. The default IP address, as well as the login credentials, can also be found on a printed label on the router unit.

Step 3. Connect to the modem/router. If a step-by-step configuration menu "Setup Wizard" appears, ignore it and go directly to the menus described below.

Step 4. Go to the Network> WAN menu.

Step 5. Activate and edit the MOB1S1A1 network. If necessary, enter the APN and the PIN code of the SIM card.

Step 6. Press Save & Apply.

Step 7. Insert the SIM card in the SIM card slot on the modem/router.

7.2.3 Closing the front door after configuration of online station



WARNING – Not closing and securing the front door after configuring the online station can lead to electric shock hazards.

Please refer to Chapter 8.1 of this manual on how to close the Green Motion DC 22 EV charger housing.

7.3 How to start charging

To start the charging session, simply connect the appropriate charging cable to the electric vehicle socket. Hold the RFID card in front of the reader.

If the card is recognized, the LED starts flashing blue and then it shows the charge level (battery state of charge). Refer to the description in Chapter 6.5.1.

If the CHAdeMO plug is used, it is mandatory for the user to select the plug on the screen. Refer to the next section.

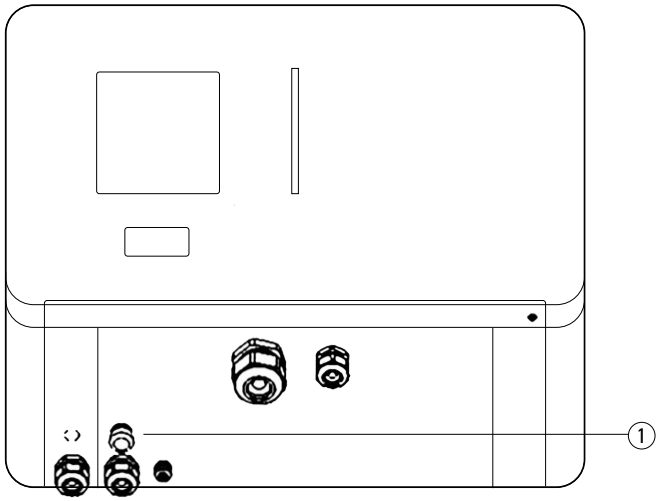
If the card is not authorized, the charging will not start and a red triangle is displayed on the charging station status display. See Chapter 6.5.1.

If the charging cable is disconnected from the electric vehicle and there is no power consumption within two minutes, the user is automatically deauthenticated.

7.4 Emergency stop button

The emergency stop button is located on the bottom left side of the Green Motion DC 22 EV charger, as per Figure 32. Push the button in case of emergency.

Figure 32. Location of the emergency stop button



Tag	Description
1	Emergency stop button

8. Maintenance

Installation, commissioning, maintenance or retrofitting of the EV charger must be performed by professional and qualified personnel who are responsible for complying with existing standards and local installation regulations.

Before starting connection operations, ensure that the external AC mains isolator switch and/or main circuit breaker is switched off (open).

Any operation requiring the opening of the housing of the EV charger can lead to electric shock hazards.

In case the unit shows a failure and the emergency stop button is pushed, check the integrity of the unit, cables and connectors before starting the maintenance process.

The opening of the EV charger as well as any configuration changes must be carried out by a qualified electrician in accordance with the local safety and electrical regulations and laws.

Disconnect the unit from the power supply and wait at least 10 minutes to allow its components to cool down and any static electricity storage devices to discharge, before carrying out any maintenance on the unit. The housing could overheat during its operation or be heated by direct sunlight, and it can cause burns by contact. To avoid burns, please use suitable PPE or wait for the equipment to cool down before accessing it.

Green Motion EV chargers are equipped with tamper detection functionality. In case the EV charger is opened while powered on, a notification will be sent to the backed server. The EV charger will also prevent the connected EV from charging.

8.1 How to open/close the Green Motion DC 22 EV charger housing

Before attempting to open the EV charger, ensure that the external AC mains isolator switch and/or main circuit breaker is switched off (open).

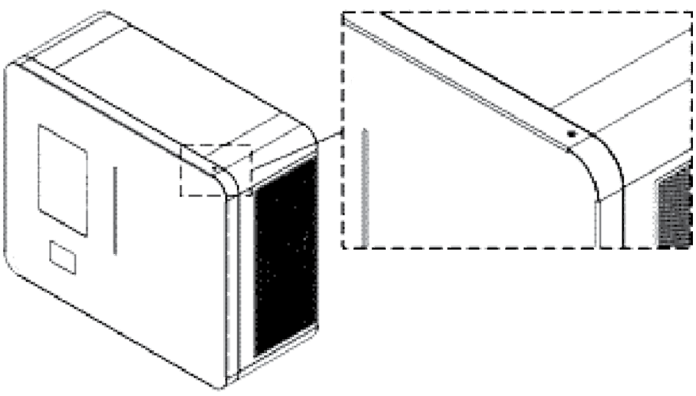
Wait at least 10 minutes after disconnecting the unit from the power supply to allow its components to cool down and any static electricity storage devices to discharge, before operating on the unit.

Follow these steps to open the housing of the EV charger.

When removing the front door, be careful not to damage any cables connected to the display and the electronics boards.

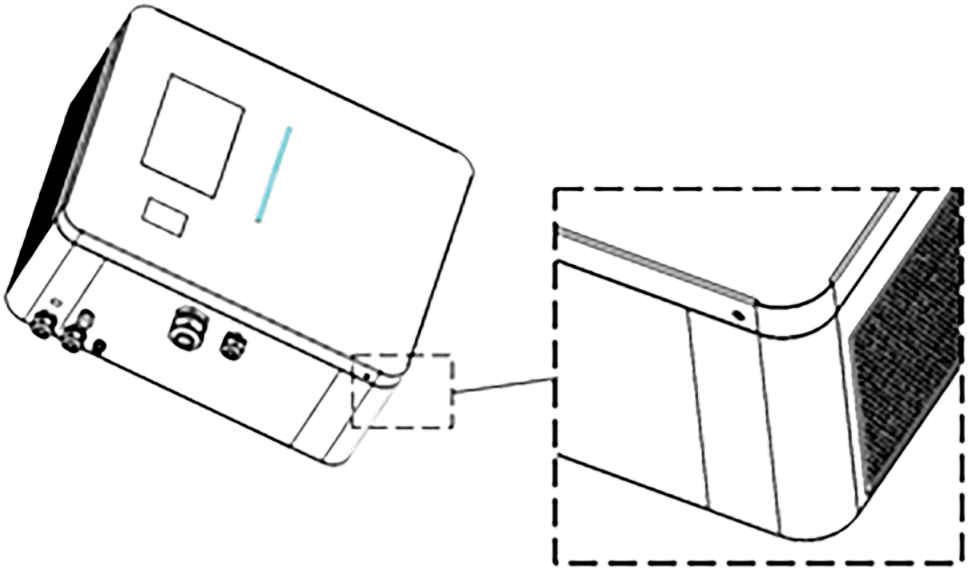
Step 1. Loosen and remove the screw located on the top-right side of the front door, using the T20 screwdriver.

Figure 33. Location of the screw at the top of the unit



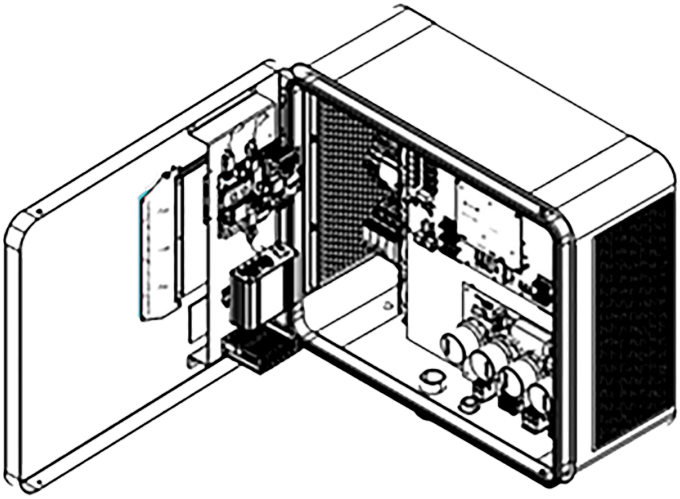
Step 2. Loosen and remove the screw located on the bottom-right side of the front door, using the T20 screwdriver.

Figure 34. Location of the screw at the bottom of the unit



Step 3. Open the front door sideways.

Figure 35. The unit with the door open



8.2 How to set the unit as out of order

The Green Motion DC 22 EV charger can be set as out of order by following the steps below:

1. On site method: Press the emergency stop button.
2. Remote method: Access the Eaton Charging network manager and set the unit as out of order.

8.3 Replace the SIM card

To replace the SIM card, proceed as follows:

Step 1. Remove the existing SIM card from the card slot. See Chapter 7.2.2.

Step 2. Insert the new SIM card into the card slot. See Chapter 7.2.2.

8.4 Cleaning or replacing filters

Before starting connection operations, ensure that the external AC mains isolator switch and/or main circuit breaker is switched off (open).

Please make sure that the fans are turned off and that the EV charger is not in use during the maintenance operation. Moving fans can be dangerous and cause finger injuries.

Please make sure the filters are checked on a yearly basis to ensure they are not obstructed and working properly. In case of obstruction, filters need to be replaced as soon as possible. In case of obstruction, Eaton recommends not to use the unit and wait for the replacement of the filters.

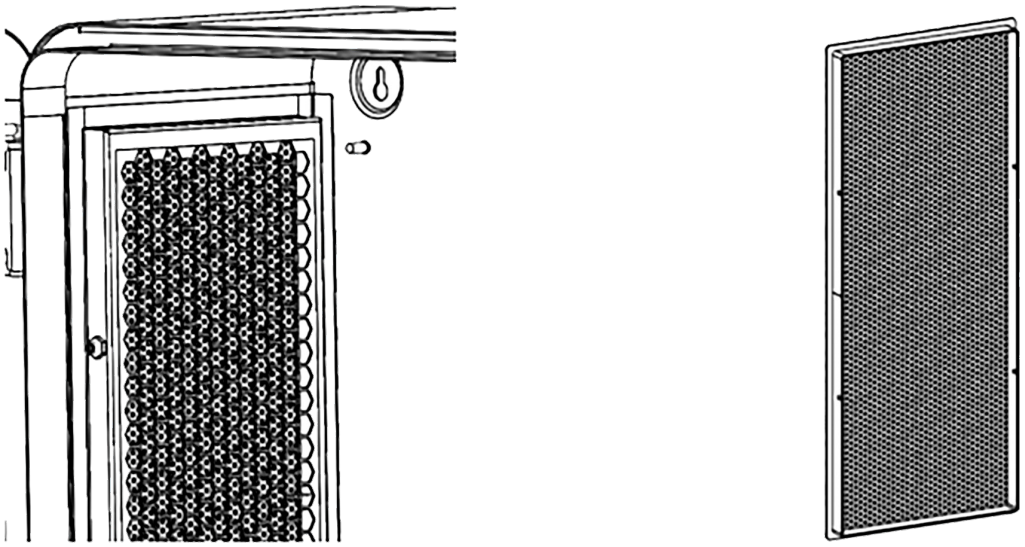
Please contact your Eaton service representative for the new filter reference using the email address BGTechSupport@eaton.com.

Follow the steps below to replace the filters:

Step 1. Open the housing by removing the fixing screws as described in section 8.1.

Step 2. It is possible now to replace the filters. The filters are located on both left and right sides of the units, behind the air flow grid. Using a 2.5 mm hex key, remove the 2 screws attaching each filter cartridge to the unit. See Figure 36.

Figure 36. Location of the filter on the left side of the unit



Step 3. Please screw the new filters behind the air flow grid.

Step 4. Close the front door and restart the unit.

8.5 Dismount



Before starting any maintenance operations, ensure that the external AC mains isolator switch and/or main circuit breaker are switched off. Disconnect the unit from the power supply and wait at least 10 minutes to allow its components to cool down and any static electricity storage devices to discharge, before removing the unit. The housing could be heated by direct sunlight and it can cause burns by contact. Please use suitable PPE or wait for the equipment to cool down before accessing it.

To uninstall the unit:



Step 1. Disconnect any load if present.

Step 2. Open the housing by removing the fixing screws as described in section 8.1.

Step 3. Disconnect the AC power supply cables from the EMI filter terminals and the protective earth bolted joint.

Step 4. Disconnect the communication cables and external controls where present.

Step 5. Dismount the floor-mounted pedestal if present.

Step 6. The product can now be removed for disposal or repair.

8.6 Firmware updates



It is mandatory to install and maintain the units with the latest system updates to enable new features and bug fixes, or the guarantee conditions may be voided.

For units that are online, this must be done via the Eaton Charging network manager software platform. Please refer to the Eaton Charging network manager user manual, available on www.eaton.com, for further details. For units that are offline, please contact your Eaton service representative using the email address BGTechSupport@eaton.com.

8.7 Disposal

When the EV charger reaches the end of its service life, the end user should contact professional and qualified personnel for disposal instructions.

Please refer to www.eaton.com/recycling for further details.



The EU Directive on Waste Electrical and Electronic Equipment (WEEE) (Directive 2012/19/EU) establishes common rules on the management of electrical and electronic equipment and minimizes its impact – from design until disposal – on the environment. As a manufacturer of electrical and electronic equipment, Eaton actively supports the requirements of the WEEE Directive.

In compliance with the EU standard EN 50419 for marking of electrical and electronic equipment, we include the crossed-out wheeled bin symbol on our products. This symbol alerts users that these products should be recycled in accordance with local environmental regulations and not discarded with household waste. When end users recycle WEEE they are helping to ensure that they are neither incinerated nor sent to landfill, minimizing the potential negative impact on human health and the environment.

Any device that is no longer needed must therefore be returned to the distributor or disposed of via an authorized collection and recycling center in the area. Eaton encourages all its customers and end users to make responsible decisions when disposing of products.

Eaton is not responsible for the transportation of the device to the collection point or recycling center.

9. Troubleshooting



This section contains information and procedures for solving problems that may occur with the EV charger.



Check the warnings or error messages and act as indicated in Table 10.

If the problem persists, contact your Eaton technical support representative using the email address BGTechSupport@eaton.com.

Table 10. List of alarms and troubleshooting

Possible problems	Solutions
Router does not connect during configuration	Check that the EV charger is powered and in standby mode.
The EV charger does not start	Check the led status color and read the indication display on the screen. Check the power supply on the electrical panel, switch off and reset the circuit-breaker to restart it.
The EV charger indicates that the emergency stop button is pushed	Check that the unit is not damaged, the installation and commissioning have been correctly made. Check the led status color and read the indication display on the screen. The emergency stop button is located underneath the EV charger's main case. Pull it out until it clicks into open position. If the unit was set as out of order, it is possible now to change the physical status directly from the Eaton Charging network manager.
The EV charger visual indicators are red	Check the led status color and read the indication display on the screen. Try to disconnect the electric vehicle from the EV charger and retry. Check the emergency stop button, it should be pulled out.
Antenna bar graph is red	Check the led status color and read the indication display on the screen. Check that the connection of the EV charger to the backend is available / network is available.
Authentication refused	Check the led status color and read the indication display on the screen. Check that the user is recognized, and authorized user subscribed to the charging point operator database. Check that the connection of the EV charger to the backend is available.
The socket visual indicators are red	Check the led status color and read the indication display on the screen. Check the power supply on the electrical panel, switch off and reset the circuit-breaker to restart it.
The charging cable cannot be released from the vehicle	Check the led status color and read the indication display on the screen. In some cases, the user must unlock the plug from the electric vehicle's dashboard or use the key control (long press may be required). In case the user is not able to remove the cable, press the emergency stop button to release the cable. The emergency stop button can then be set to the initial position, after inspection.
The vehicle does not charge	Check the led status color and read the indication display on the screen. Check the condition of the CCS or CHAdeMO cable. Check the power supply on the electrical panel, switch off and reset the circuit-breaker to restart it. Try starting and moving the vehicle, then try charging again.

10. Technical data

10.1 Rating plate

To locate the rating plate on the equipment, refer to Figure 37.

The technical specifications shown in this manual do not replace those that appear on the rating plate attached to the equipment.

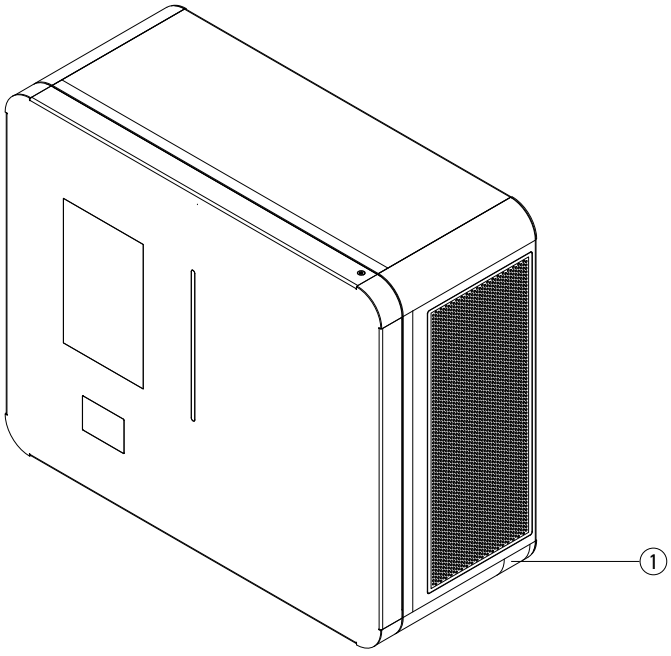
The labels attached to the equipment must NEVER be removed, damaged, soiled or hidden for any reason.

The information displayed on the rating plate:

1. Manufacturer
2. Model
3. Ratings
4. Certification marks
5. Warnings
6. Serial number

The labels must NOT be hidden with foreign objects (rags, boxes, equipment, etc.); they must be periodically cleaned and always kept clearly visible.

Figure 37. Location of the rating plate



Tag	Description
1	Rating plate

10.2 Technical datasheet

The latest version of the technical datasheet is available for download from www.eaton.com/greenmotiondc22.

The Green Motion DC 22 EV charger complies with the standards listed in the Table 11.

Table 11. List of standards the Green Motion DC 22 EV charger complies with

Certifications and standards	
General	
Charging mode	IEC 61851-21-1, IEC 61851-21-2, IEC 61851-23 and IEC 61851-24
Insulation	IEC 60664-1
Safety	IEC 61439-1 and IEC 61439-7
Cable	
Version	IEC 62196-1 and IEC 62196-3
Electromagnetic compatibility	
Product	IEC 61000-6-1 and IEC 61000-6-3 IEC 61000-3-11 and IEC 61000-3-12
Communication	
ISO	15118
DIN	70121
CHAdeMO	0.9/1.2

11. Contact support information

Should any technical problems arise during the operation of the charging station, contact your Eaton technical support representative for assistance using the email address BGTechSupport@eaton.com. The following information should be provided when contacting the Eaton technical support representative:

- Product model and serial number
- Fault messages

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