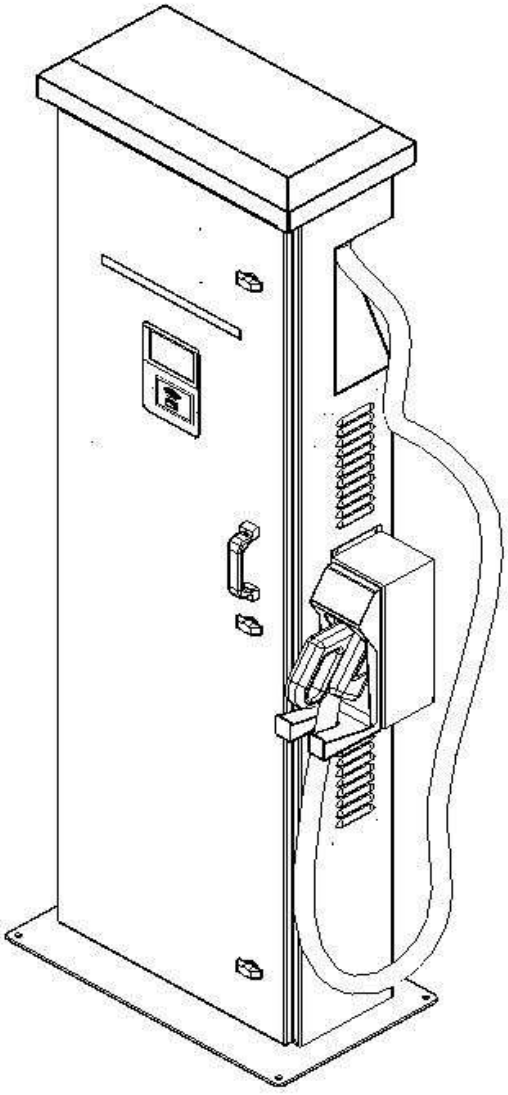
Installation Manual

Ksipra DC 30KW Charger



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1 About this document

1.1 Function of this document

The document is only applicable for this EVSE Ksipra DC 30KW.

The document gives the information that is necessary to install the EVSE.

1.2 Target group

The document is intended for qualified installation engineers.
For a description of the required qualifications, refer to section *3.3*.

1.3 Language

The original instructions of this document are in English (EN-US). All other language versions are translations of the original instructions.

1.4 Illustrations

It is not always possible to show the configuration of your EVSE. The illustrations in this document show a typical setup. They are for instruction and description only.

1.5 Units of measurement

SI units of measurement (metric system) are used. If necessary, the document shows other units between parentheses () or in separate columns in tables.

1.6 Typographical conventions

The lists and steps in procedures have numbers (123) or letters (abc) if the sequence is important.

1.7 How to use this document

1. Make sure that you know the structure and contents of this document.
2. Read the safety chapter and make sure that you know all the instructions.
3. Do the steps in the procedures fully and in the correct sequence.
4. Keep the document in a safe location that you can easily access. This document is a part of the EVSE.

1.9 General symbols and signal words

Signal word	Description	Symbol
Danger	If you do not obey the instruction, this Refer to section can cause injury or death.	
Warning	If you do not obey the instruction, this Refer to section can cause injury or death.	
Caution	If you do not obey the instruction, this can cause damage to the EVSE or to property.	
Note	A note gives more data, to make it easier to do the steps, for example.	
-	Information about the condition of the EVSE before you start the procedure.	
-	Requirements for personnel for a procedure.	
-	General safety instructions for a procedure.	
-	Information about spare parts that are necessary for a procedure.	
-	Information about support equipment that is necessary for a procedure.	
-	Information about supplies (consumables) that are necessary for a procedure.	

-	Make sure that the power supply to the EVSE is disconnected.	
-	Electrotechnical expertise is required, according to the local rules.	

Note: It is possible that not all symbols or signal words are present in this document.

1.10 Special symbols for warnings and dangers

Symbol	Risk type
	General risk
	Hazardous voltage that gives risk of electrocution
	Risk of pinching or crushing of body parts
	Rotating parts that can cause a risk of entrapment

Note: It is possible that not all symbols are present in this document.

1.11 Related documents

Product data sheet	Owner
Installation manual	Qualified installation engineer Owner
User manual	Owner

1.12 Manufacturer and contact data

Manufacturer

VerdeMobility

Address: 33, H M Patel Rd, VU Nagar, Vithal Udyognagar, GIDC, Vitthal Udyognagar INA, Anand, Gujarat 388121

Contact data

The local representative of the manufacturer can give you support on the EVSE.

Mail Address: support@verdemobility.com

1.13 Abbreviation

Abbreviation	Definition
AC	Alternating current
CAN	Controller area network
CPU	Central processing unit
DC	Direct current
EMC	Electromagnetic compatibility
EV	Electric vehicle
EVSE	Electric vehicle supply equipment
MiD	Measuring Instruments Directive
OCPP	Open charge point protocol
PE	Protective earth
PPE	Personal protective equipment
RFID	Radio-frequency identification

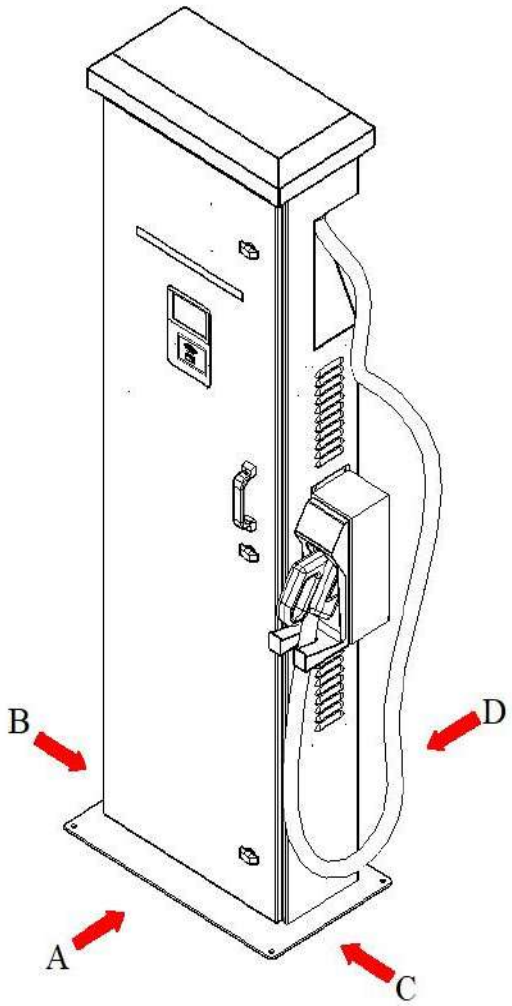
Note: It is possible that not all abbreviations are present in this document.

1.14 Terminology

Term	Definition
Network operating centre of the manufacturer	Facility of the manufacturer to do a remote check on the correct operation of the EVSE.
Cabinet	Enclosure of the EVSE, including the components on the inside.
Combo Charging System CCS2 Gun	Europe and India DC fast charging method for electric vehicles.
Contractor	Third party that the owner or site operator hires to do engineering, civil and electrical installation work.
Grid provider	Company that is responsible for the transport and distribution of electricity.
Local rules	All rules that apply to the EVSE during the entire lifecycle of the EVSE. The local rules also include the national laws and regulations.
Open charge point protocol	Open standard for communication with charge stations.
Owner	Legal owner of the EVSE.
Site operator	Entity that is responsible for the day-to-day control of the EVSE. The site operator does not have to be the owner.
User	Owner of an EV, who uses the EVSE to charge the EV

Note: It is possible that not all terms are present in this document.

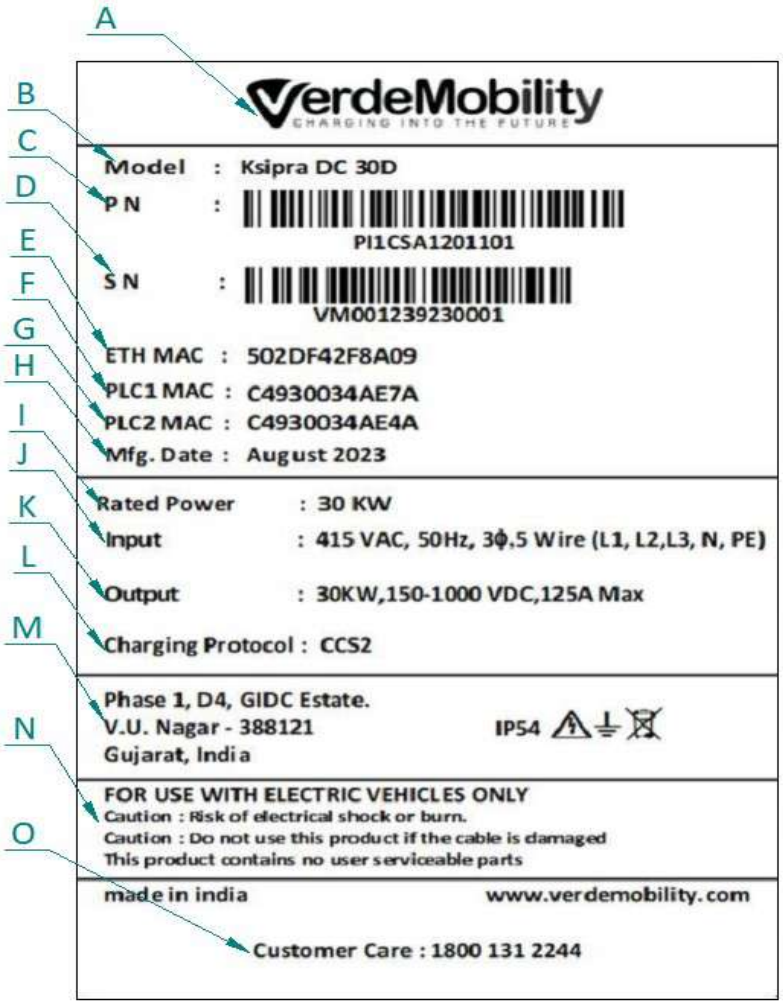
1.15 Orientation agreements



A- Fort Side: Face forward to be EVSE during normal use.
B- Left Side
C- Right Side
D- Rear Side

2 Description

2.1 Type plate



(1) A- Manufacturer
(2) B- Model Name
(3) C- Barcode with the Part Number of the EVSE
(4) D- Barcode with Serial Number
(5) E- Ethernet MAC Address
(6) F&G- PLC MAC Address
(7) H- Production Date
(8) I- Rated Power
(9) J- EVSE Input Side Rating
(10) K- EVSE Output Side Rating
(11) L- Charging Gun Type
(12) M- Address of Manufacturer
(13) N- Safety Identification
(14) O- Customer Care number

Note: Find the type of plate on your EVSE to see the applicable data.

2.2 Intended use

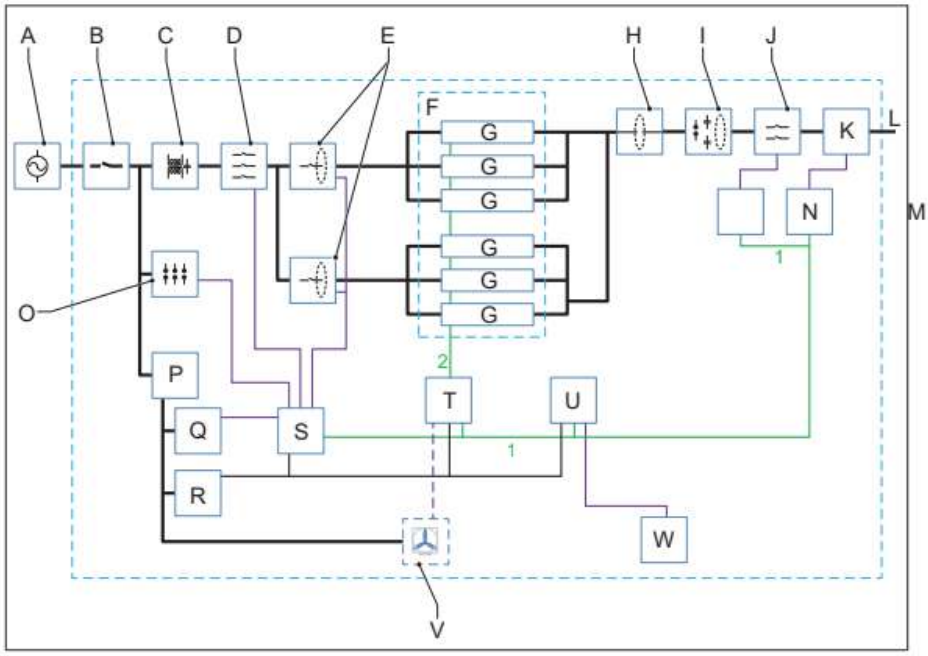
The EVSE is intended for the DC charging of EVs. The EVSE is intended for indoor or outdoor use. The properties of the electrical grid, the ambient conditions and the EV must comply with the technical data of the EVSE.
Only use the EVSE with accessories that the manufacturer provides and that obey the local rules.

Danger: General risk

- If you use the EVSE in any other way than described in the related documents, you can cause death, injury and damage.
- Use the EVSE only as intended.

2.3 Working principles

2.3.1 Ksipra DC 30KW

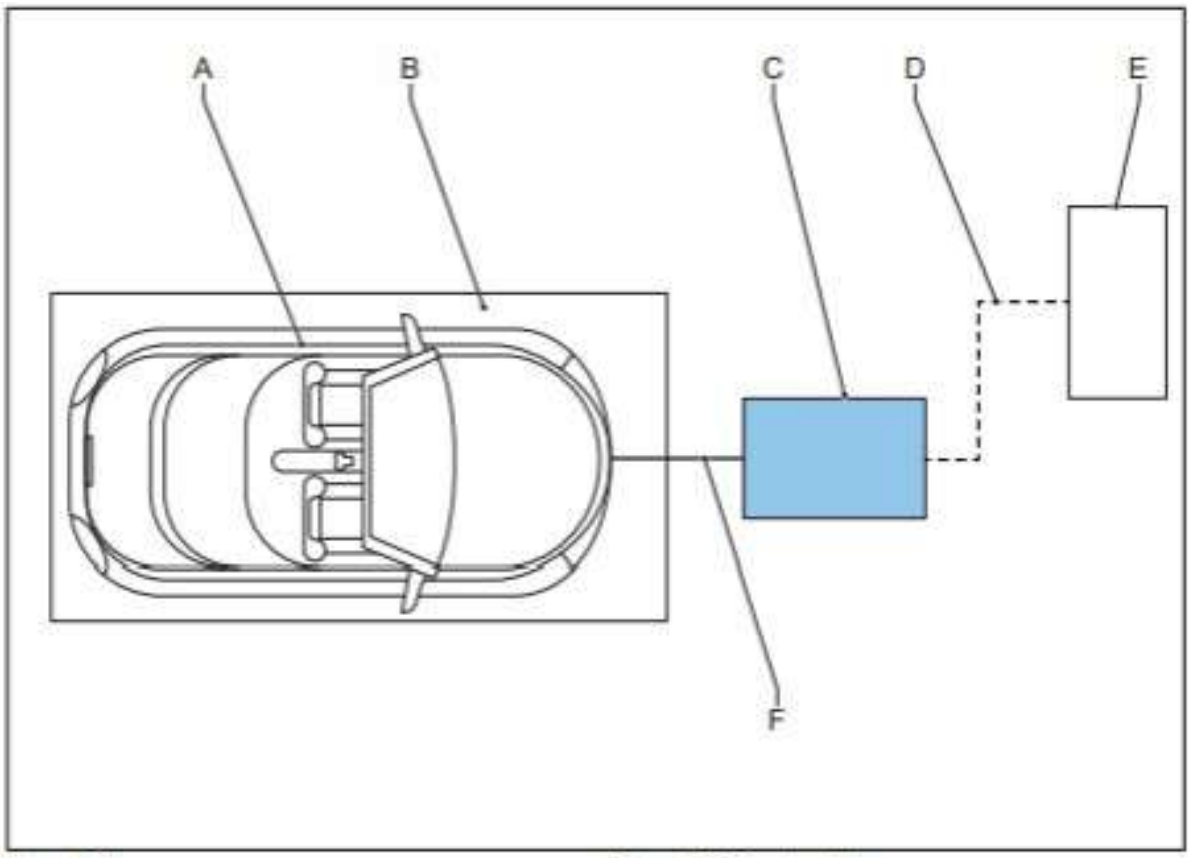


A	AC input cable	N	Charge protocol interface
B	Manual switch	O	Surge-protection device
C	EMC filter	P	Residual-current device
D	AC contactor	Q	Heater
E	Residual-current device and breaker	R	Auxiliary power supply
		S	Cabinet controller board
F	Power module matrix	T	Power bridge
G	Power module	U	Touchscreen
H	DC filter	V	Cooling fan
I	DC contactor	W	LED for the illumination of the exterior of the EVSE
J	DC fuse		
K	Overcurrent protection device	1	CAN bus signal 1
L	Charge cable	2	CAN bus signal 2
M	Insulation management interface		

- Black and bold lines: power connection
- Black and thin lines: auxiliary power connection
- Green lines: CAN bus
- Purple lines: control signal or monitoring signal

Overview

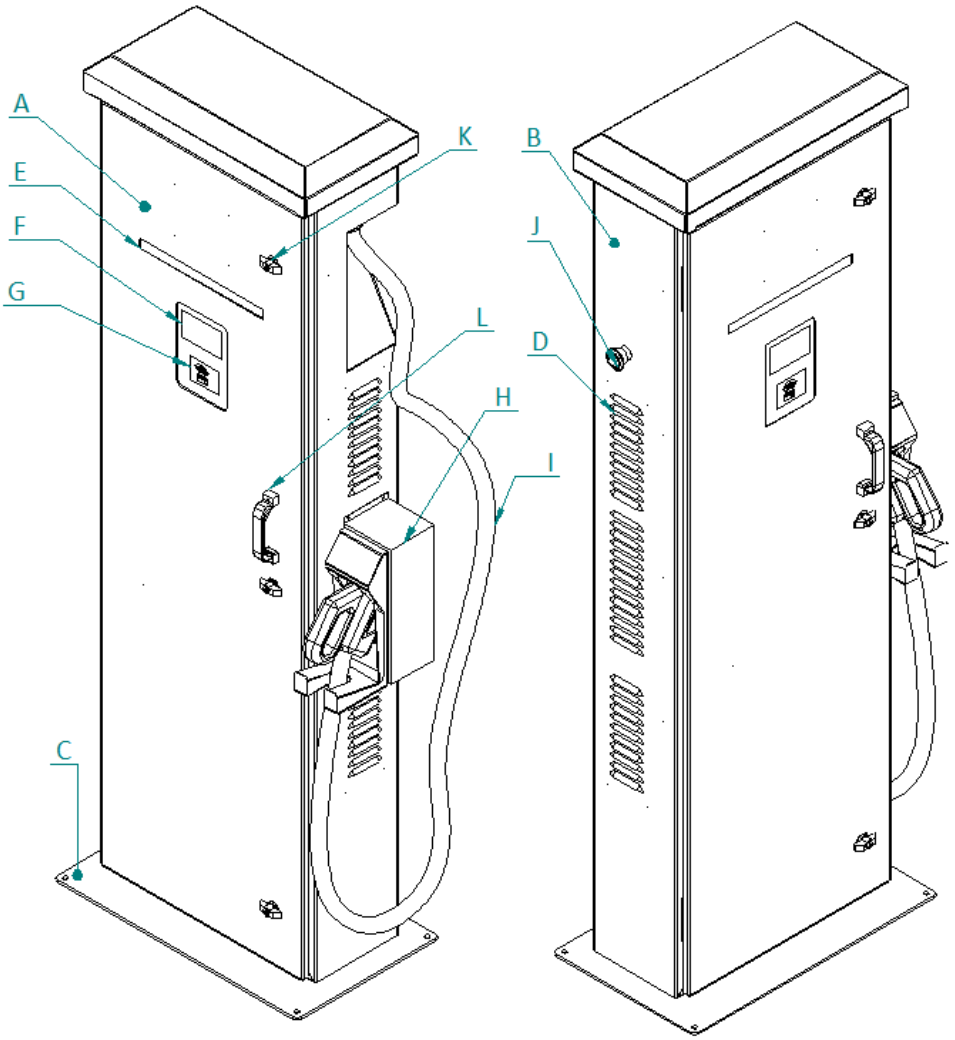
2.3.1 Overview of the system



A EV
B Parking space
C EVSE
D AC input cable
E Power distribution board
F EV charge cable

Part	Function
EV	The EV of which the batteries need to be charged
EVSE	Refer to section 2.3.2
Parking space	Location for the EV during the charge session
AC input cable	To supply the electrical energy to the EVSE
Power distribution board	To connect the EVSE to the AC grid input
EV charge cable	To conduct the charge from the EVSE to the EV

2.3.2 Overview of the EVSE outside

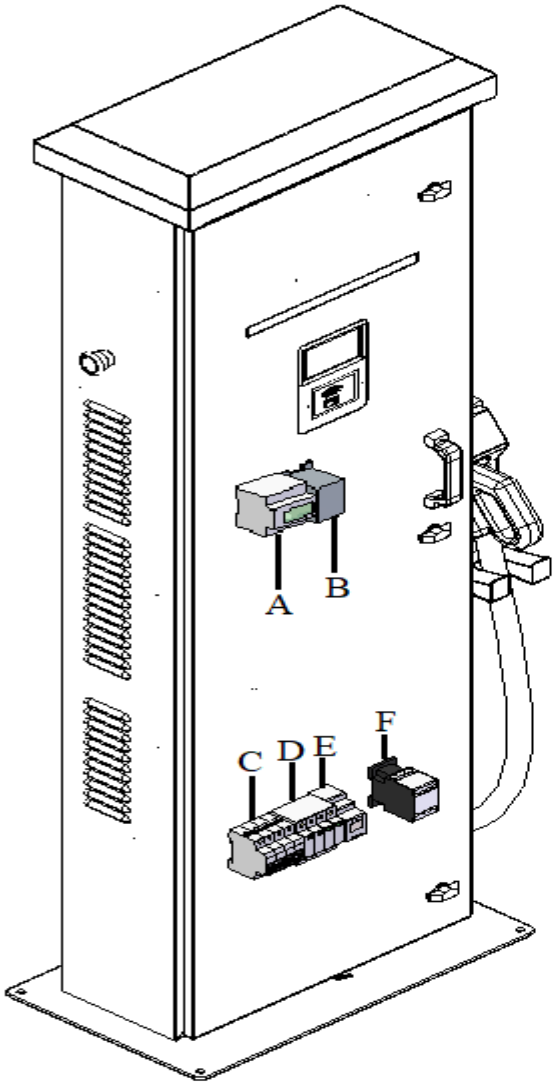


A - Door
B - Enclosure
C - Foundation Plate
D - Air Ventilation
E - Light Indocator
F - LCD Display
G - RF ID Tag
H - Gun Holder
I - Gun Cable
J - E-Stop Button
K - Door Lock
L - Door Handle

Part	Function
Door	To give authorized personnel access to the inside of the EVSE.
Enclosure	To show the identification data of the EVSE.
Foundation Plate	To fix the EVSE.
Air Ventilation	To prevent a blockage of the air outlet.
Light Indicator	To give status of the EVSE.
LCD Display	Function.
RFID Tag	To read the information from an RFID card.
Gun Holder	To fix the gun after unplug from car.
Gun Cable	To pay for the charge session
Emergency stop button	To stop the EVSE when there is an emergency

Door Lock	To control and monitor the charge session
Door Handle	To reduce the accessibility of unqualified persons to the inside of the EVSE

2.3.3 Overview of the EVSE inside



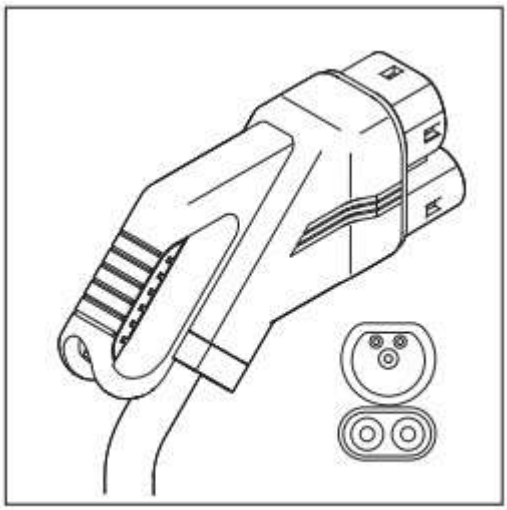
A - Energy Meter
B - DC Insulation Monitor
C - Miniature Circuit Breaker
D - Surger Protective Device
E - Power Relay
F - Contactor

Part	Function
Energy Meter	For Voltage, Current and Power measurement.
DC Insulation Monitor	Monitoring of the isolation resistance between positive-Ground and Negative-ground.
Miniature Circuit Breaker	They are designed to trip during an overload or short circuit to protect against electrical faults and equipment failure.
Surge Protective Device	protect electrical systems and equipment from surge events by lighting surge and switching transient voltages and diverting surge currents.

Power Relay	They provide a high level of isolation between the control signal (coil) and the output (contacts) – typically with a rated impulse voltage.
Contactor	Used for making and breaking an electrical power circuit.

2.4 Options

2.4.1 EV charge cable, CCS2 Combo Gun

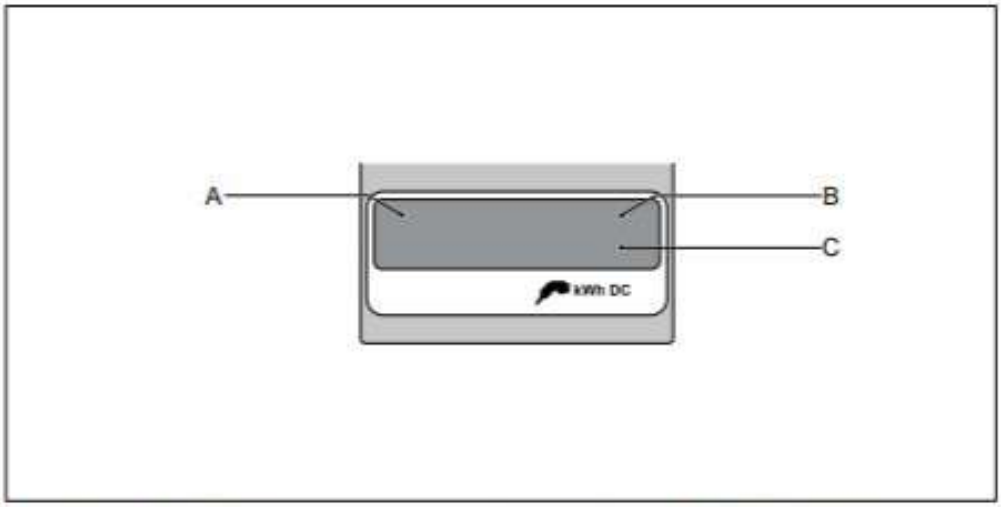


A EV charge cable

2.4.2 Fiscal metering system

The EVSE can optionally be equipped with an MID compliant DC energy meter. This upgrade can be installed in the factory or in the field.

Note: The presence of the MID compliant DC meter is mandatory in some countries. Do a check of the regulations that are applicable in the country of installation.



A Time (hh:mm:ss)
B Date (YY-MM-DD)
C Delivered DC power (kWh)

2.5 External residual-current device

The manufacturer does not supply an external residual-current device. If an external residual-current device is required because of local rules, this section helps you to select the correct device.

Situation: the local rules require an immunity for short current peaks over PE during the EV charging process

At the start of the EV charge cycle, a relay switches and engages the AC input power to the power modules. Incidental current peaks can occur. For the specifications of the current peaks.

A combination of these factors is the source of these current peaks:
- Asynchronous engagement of the phases in the relay
- The electrical capacity of the AC input power part of the EVSE

The amplitude of the current peaks can change. These factors are the source of the differences:
- The location of the EVSE
- The power grid
- The earth impedance

3 Safety

3.1 Liability

The manufacturer is not liable to the purchaser of the EVSE or to third parties for damages, losses, costs or expenses incurred by the purchaser or third parties if any target group mentioned in the related documents does not obey the rules below:

- Do not misuse or abuse the EVSE.
- Only make changes to the EVSE, if the manufacturer approves in writing of the changes.

This EVSE is designed to be connected to and to communicate information and data via a network interface. It is the sole responsibility of the owner to provide and continuously ensure a secure connection between the EVSE and the network of the owner or any other network.
The owner shall establish and maintain any appropriate measures (such as but not limited to the installation of firewalls, application of authentication measures, encryption of data and installation of anti-virus programs) to protect the EVSE, the network, its system and the interface against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information.
The manufacturer is not liable for damages and/or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage and/or theft of data or information.

3.2 General safety instructions

- This document, the related documents and the warnings included do not replace your responsibility to use your common sense when you do work on the EVSE.
- Only do the procedures that the related documents show and that you are qualified for.
- Obey the local rules and the instructions in this manual. If the local rules contradict the instructions in this manual, the local rules will apply.

If and to the extent permitted by law, in case of inconsistency or contradiction, between any requirements or procedure contained in this document and any such local rules, obey the stricter between the requirements and procedures specified in this document and the local rules.

3.3 Required qualifications for the installation engineer

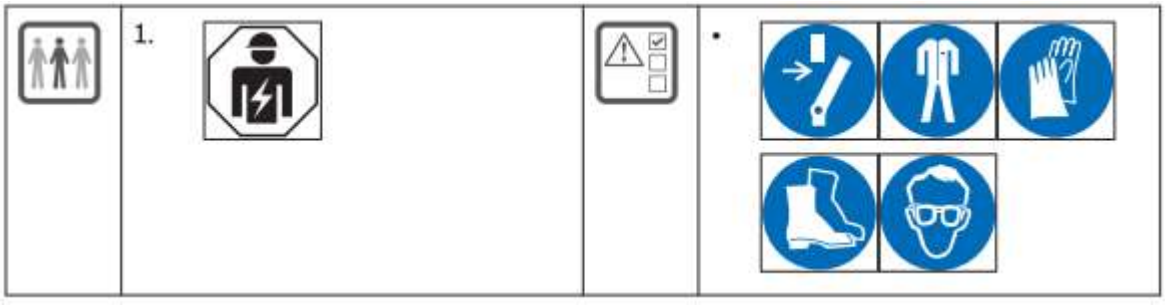
- The qualified installation engineer fully knows the EVSE and its safe installation.
- The installation engineer is qualified to work on high-voltage and high-current electrical installations.
- The qualified installation engineer obeys all local rules and the instructions in the installation manual.
- It is the responsibility of the owner of the EVSE to make sure that all qualified installation engineers obey the local rules, the installation instructions, and the specifications of the EVSE.

3.4 Personal protective equipment

	Protective clothing
	Safety gloves
	Safety shoes
	Safety glasses

3.5 Safety instructions during installation

Preliminary requirements



- Do not use adaptors or conversion adapters.
- Do not use cord extension sets.

- Make sure that there is no voltage on the AC input cables during the complete installation procedure.
- Keep unqualified personnel at a safe distance during installation.
- Only use electrical wires of sufficient gauge and insulation to handle the rated current and voltage demand.
- Make sure that the load capacity of the grid is in accordance with the EVSE.
- Earth the EVSE correctly. Refer to section 3.7
- Make sure that the wiring inside the EVSE is protected from damage and cannot get trapped when you open or close the cabinet.
- Make sure that water cannot enter the cabinet.
- Protect the EVSE with safety devices that the local rules specify.
- Make sure that the EVSE is connected to an earthed, metal, permanent electrical system. Alternatively, install an equipment-earthing conductor with circuit conductors. Connect this earthing conductor to an equipment-earthing terminal or lead on battery charger.
- Make sure that the connections to the EVSE comply with all applicable local rules.

3.6 Safety instructions during transport

Preliminary requirements

- Make sure that the hoisting equipment or forklift truck can lift the EVSE safely. Take into account the mass and the center of gravity of the EVSE.
- Obey the safety instructions that apply to the hoisting equipment or the forklift truck.
- Put on the correct personal protective equipment.

3.7 Safety instructions for earthing

Preliminary requirements

- Make sure that the EVSE is connected to an earthed, metal, permanent electrical system. Alternatively, install an equipment-earthing conductor with circuit conductors. Connect this earthing conductor to an equipment-earthing terminal or lead on battery charger.
- Make sure that the connections to the EVSE comply with all applicable local rules.

3.8 Signs on the EVSE

Symbol	Risk type
	General risk

	Hazardous voltage that gives risk of electrocution
	Risk of pinching or crushing of body parts
	Rotating parts that can cause a risk of entrapment
	PE
	Sign that means that you must read the manual before you install the EVSE
	Waste from electrical and electronic equipment

Note: It is possible that not all symbols are present on the EVSE.

3.9 Discard parts or the EVSE

- Obey the local rules to discard parts, packaging material or the EVSE.

4 Transport

4.1 Transport the EVSE to the site

A transport company delivers the EVSE close to the site.The movement of the EVSE to its final location is your responsibility.

- If you need to store the EVSE before installation, obey the ambient conditions for storage.

4.2 Transport the EVSE on the site

4.2.1 Hoist the cabinet

Preliminary requirements

	1. The cabinet is unpacked. Refer to section *5.4.1.*		• Hoisting equipment, including cables, swivel eye bolts or bolts with lifting loops. Refer to section *8.4.*

Note: Risk of pinching or crushing, the cabinet is heavy

• Make sure that the hoisting equipment can lift the cabinet safely. Obey the safety instructions that apply to the hoisting equipment. Take into account the dimensions, the mass and the centre of gravity of the EVSE.

Caution:
- Do not drop the cabinet.
- Do not tilt the cabinet more than allowed.

4.2.2 Move the cabinet with a forklift truck

Preliminary requirements

	1. The cabinet is unpacked. Refer to section *5.4.1.*		• Forklift truck. Refer to section *8.4.*

Note:

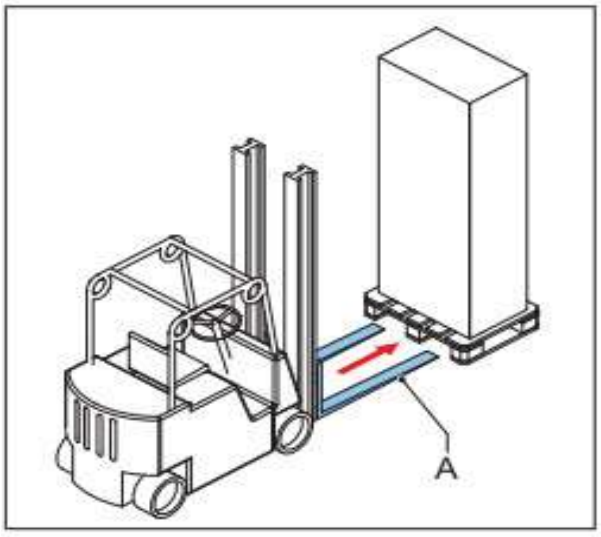
Risk of pinching or crushing, the cabinet is heavy

• Make sure that the forklift truck can lift the cabinet safely. Obey the safety instructions that apply to the forklift truck. Take into account the mass, the dimensions and the centre of gravity of the EVSE.

Caution:
- Do not drop the cabinet.
- Do not tilt the cabinet more than allowed.

Procedure

1. Move the forks (A) of the forklift truck in the gaps at the side of the cabinet.
2. Move the cabinet to the correct location.



5 Installation

5.1 General installation procedure

Preliminary requirements

	1. All required permits to agree with the local rules, are granted. 2. The AC input cable is available.		• There is no voltage on the AC input cable during the complete installation procedure.
	• Tools for installation. Refer to section *8.4*.		

Procedure

1. Prepare the site.
2. Unpack the EVSE.
3. Move the cabinet above the correct location.
4. Do the mechanical installation.
5. Do the electrical installation.
6. Prepare for commissioning.

Note: Make sure that there is some distance between the foundation and the cabinet to guide the cables into the EVSE.

5.2 Site preparation

5.2.1 Prepare the site

1. Make sure that the space and the airflow around the cabinet is sufficient.
2. If the local rules require the installation of an external residual-current device, install an external residual-current device.
3. Design the site so that the charge cables can get to the inlet for the charge cables on the EVs. For the length of the charge cables.
4. Prepare the cables:

- AC input cable.
- PE wire. The diameter depends on the length, method of installation and other factors. Make sure that the PE wire agrees with the safety instructions.

Contact the manufacturer if you require a specific configuration.

Note: The cables enter the cabinet from the bottom.
• Consider the maximum opening of the cable inlet when you prepare the cables.

5. Prepare the foundation for the cabinet.

5.2.2 Control the space and airflow around the cabinet

1. Make sure that the floor space agrees with the requirements.
2. Make sure that the air flow inlet and outlet cannot get blocked. Think of snow or objects.

5.3 Prepare the foundation

5.3.1 Prepare the foundation general procedure

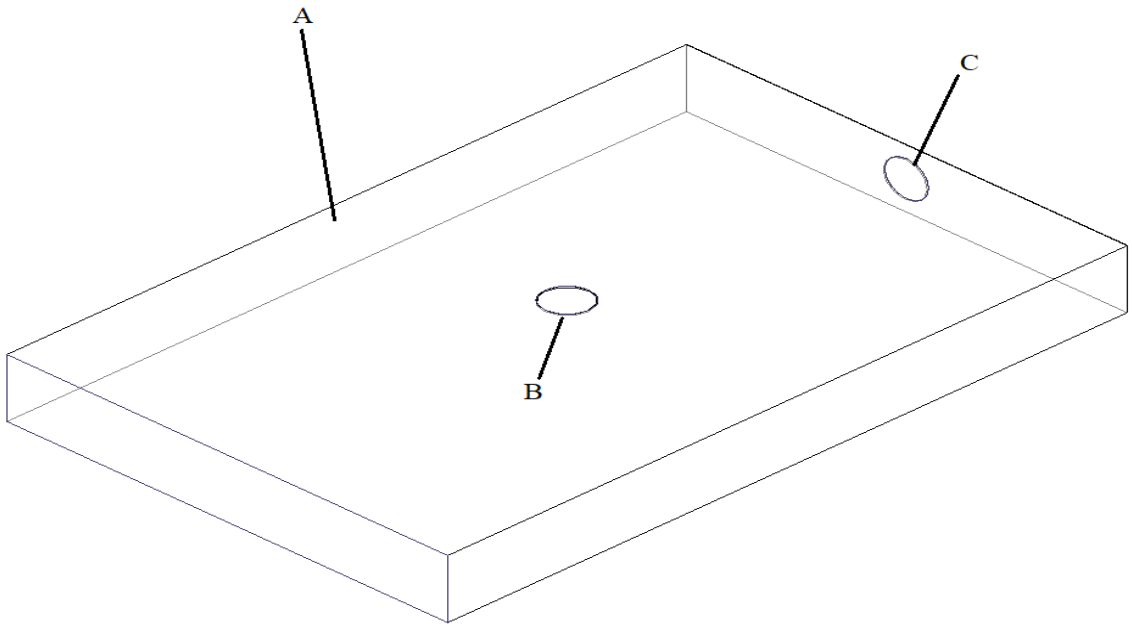
1. Select the correct foundation, based on the surface you install the cabinet on.
2. Embed the cables in the ground with or without a cable duct.

5.3.2 Prepare a standard prefab foundation

Preliminary requirements

- Prefab foundation. Refer to section *8.10.4*.

Procedure



1. Make the foundation (A). Do one of these steps:

- Contact the manufacturer to order the foundation for your EVSE.

- Make the foundation according to the specifications.

2. Dig the hole for the foundation (B). For the specifications.

Caution: Make sure that the top surface of the foundation is above the ground level, to prevent intrusion of water.

3. Guide the cables to the locations (C).
4. Install the foundation in the hole.
5. Put the cables through the openings (D) in the foundation. Apply the full cable slack.

5.3.3 Prepare a custom foundation

Preliminary requirements

- Custom foundation. Refer to section *8.10.5*.

Procedure

1. Make the custom foundation.
2. Route the cables through the opening in the foundation. Apply the full cable slack.

5.4 Unpacking

5.4.1 Unpacking procedure

1. Remove the packaging material.
2. Discard the packaging material.
3. Do a visual check for damage on the outside and inside of the EVSE.
4. Make sure that all parts are delivered according to the order.
5. If you find damage or the parts are not according to the order, contact the local representative of the manufacturer.

5.5 Mechanical installation

5.5.1 Mechanical installation procedure

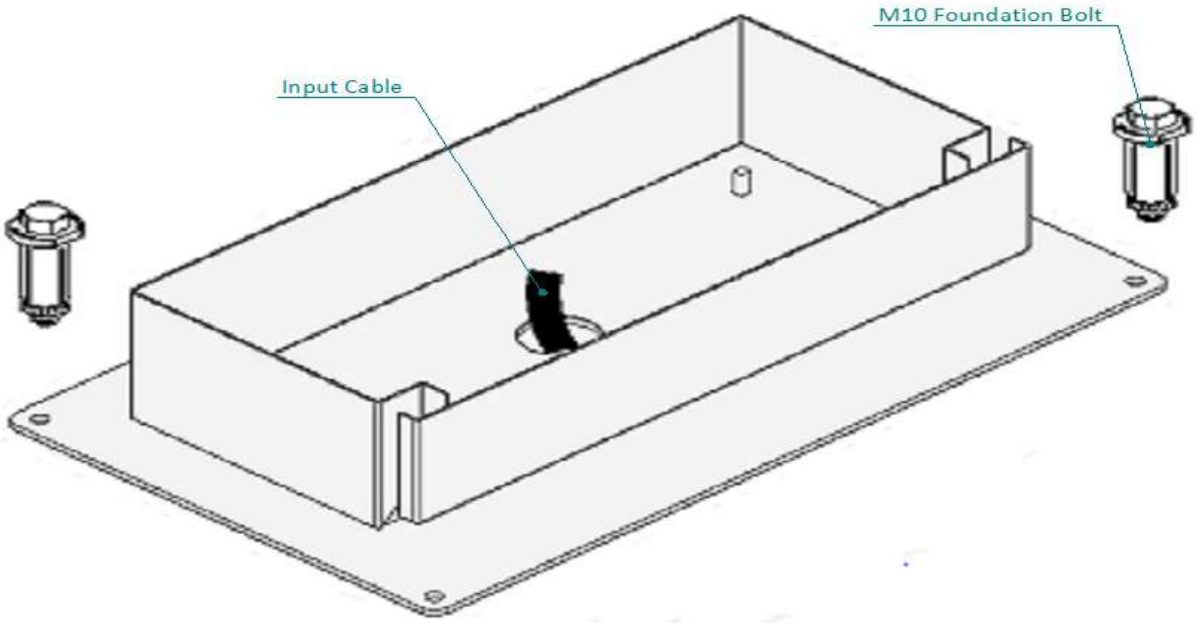
Preliminary requirements

1. The cabinet is above the foundation.

Procedure

1. Open the cable inlet and remove the cable gland.
2. Guide the cables through the pipe from foundation.
3. Install these parts:
    a. Cabinet on the foundation.
    b. Cabinet fixing with Anchor fastener bolt.

5.5.2 Install base plate and Cable input



Procedure

1. Set the base plate on foundation.
2. used four M10 foundation bolts for fixing the base plate. Shown in figure.
3. Supply Cable input from the centre of the hole shown in figure.

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4. If it is necessary, remove the cable gland for the supply cable.

5.6 Electrical installation

5.6.1 Electrical installation procedure

Preliminary requirements

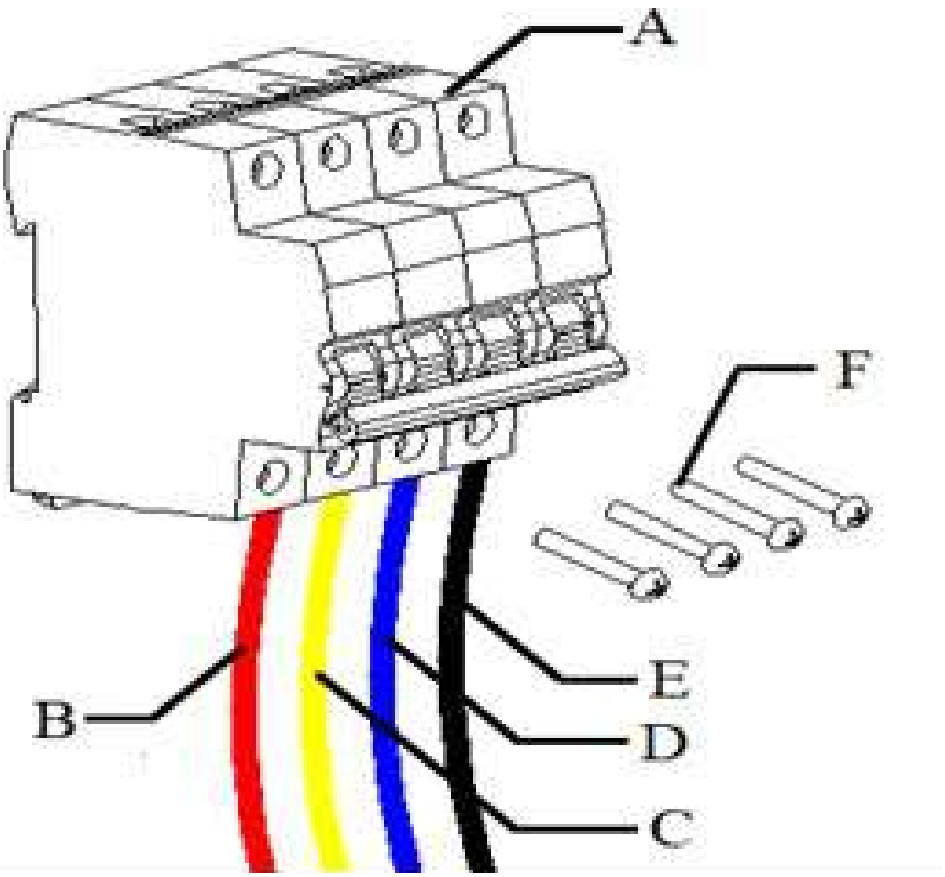
Procedure

1. Open the front door.
2. Connect the wires of the AC input cable.
3. Connect the PE wire.
4. Close the door.

5.6.2 Connect the wires of the AC input cable

Preliminary requirements

	1. The front and right doors are open.		• Wire end rings M11 • Fasteners M11
	• Wire stripper pliers • Wire end ring tool • Torque socket wrench		• 



Procedure

1. Prepare the wires:

a. Cut the wires (B) to (E) so they can reach the connectors on the manual switch (A).

b. Strip the insulation from the end or the wires.

Make sure that the strip length agrees with the wire end rings.

c. Attach the wire end rings to the end of the wires. Use the wire end ring tool.

2. Attach the wires to the connectors:

- Red L1 wire (B) to the MCB first hole.
- Yellow L2 wire (C) to the MCB second hole.
- Blue L3 wire (D) to the MCB third hole.
- Black neutral wire (E) to the MCB fourth hole.

Use the Screws (F) for tight the cable in MCB.

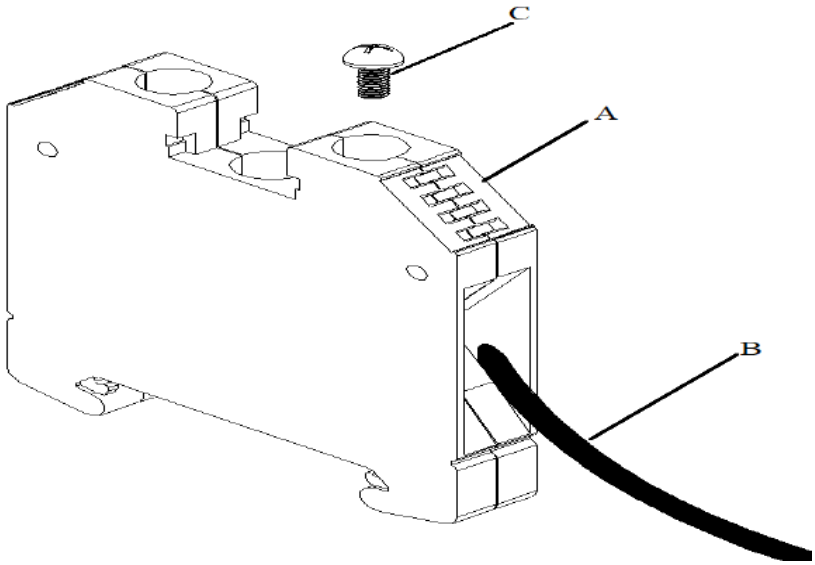
3. Tighten the Screws (F) to the correct torque.

5.6.3 Connect the PE wire

Preliminary requirements

	1. The front and right doors are open.		• Wire end ring M11 • Fasteners M11
	• Wire stripper pliers • Wire end ring tool • Torque socket wrench		• 

Procedure



1. Prepare the wire:

a. Cut the PE wire (A) so that it can reach the PE Connector (B).
b. Strip the insulation from the end or the wire. Make sure, that the strip length agrees with the wire end ring.
c. Attach the wire end with lugs (C) to the end of the Wire. Use the crimping tools for lugs tight with wire ends.

2. Attach the PE wire to the PE Connector. Use the Screws.

3. Tighten the screw to the correct torque.

5.7 Prepare for commissioning

Preliminary requirements

Danger:

Hazardous voltage

- Do not commission the EVSE. Only a service engineer of the manufacturer is qualified to commission the EVSE.

1. Tell the owner to make the EVSE ready for commissioning.

2. Make sure that the site agrees with these requirements:

   - The EVSE is installed.
   - AC input power is available from the grid provider.
   - You are present during the commissioning, for assistance and to energize the power to the EVSE on the power distribution board.
   - Internet access is available, through 2G/3G/4G or Wi-Fi.
   - An EV must be available with a compatible connection. If the EVSE has more than one connection type, an EV of each type must be available.
   - The site operator or owner is available to receive instructions from the service engineer of the manufacturer.

3. Make sure that these data are available:

   - Contact data of the contact person on site.
   - Address of the EVSE.
   - Site name.
   - Exact location of the EVSE: longitude and latitude. If there are more EVSEs on one location, make sure that the coordinates are slightly different (at least 0.0001 degree) so that the EVSEs

are not at the same location on the map.

- Specification of the external fuse at the power distribution board
- Date that the installation is done.
- Special remarks, for example to decline the authorization for the service engineer of the manufacturer to take photos.
- Photo of the surroundings of the EVSE

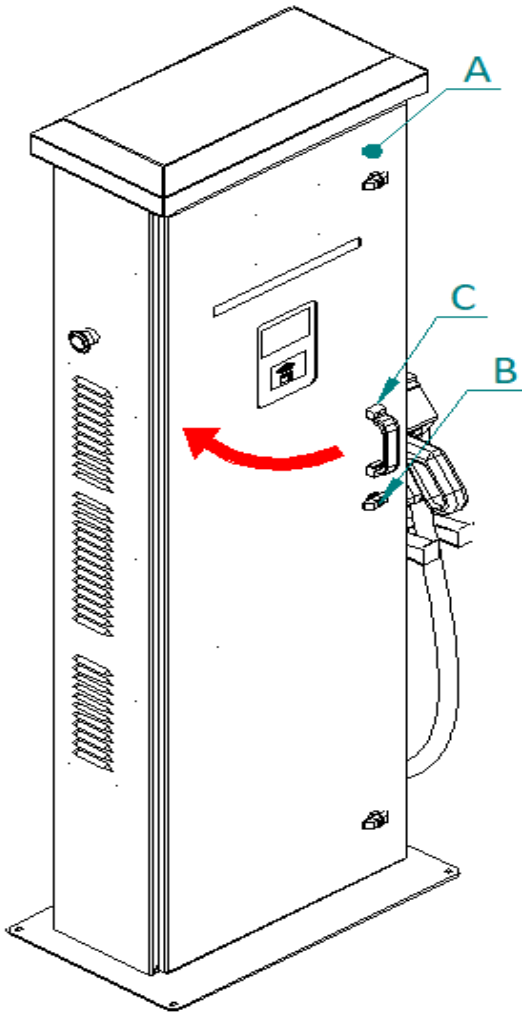
6 Access to parts

6.1 Open the doors

Preliminary requirements

	• Door key

Note: There is one unique door key for each cabinet.



Procedure

1. Unlock the lock (B) of the door (A). Use the door key.
2. Open the front door.
3. Use the Handle (C) for open the door.

6.2 Close the doors

Preliminary requirements

- Door key

Procedure

1. If the door (A) is open, close the door (A).
2. Lock the lock (B) of the front door(A). Use the door key.
3. Close the front door.
4. Use the Handle (C) for close the door.

Danger:

Hazardous voltage

- Make sure that only qualified persons have access to the door key.

Note: There is one unique door key for each cabinet.

7 Troubleshooting

7.1 Troubleshooting procedure

1. Try to find a solution for the problem with the aid of the information in this document.
2. If you cannot find a solution for the problem, contact your local representative of the manufacturer.

8 Technical data

8.1 Parts included in the delivery

Parameter	Specification
EVSE	Refer to the type of plate. Refer to section 2.1
Door key	Door key for the cabinet

8.2 Required tools for installation

Parameter	Specification
Drill machine	Size: 10mm drill bit
Spanner set	Size: 4 to 22 mm
Crimping tools	Size: HSC8 6-4A, 0.08-10mm²
Torx screwdriver	Size: 15, 20 and 25
Torx angled or bit with ratchet	Size: 20
Open spanner	Size: M5 (8mm), M6 (10 mm), M10 (15 mm), M12 (19 mm) and M16 (24 mm)
Torque socket wrench	5 to 20 Nm, size M8 (13 mm) and M6 (10 mm)
Ratchet spanner with socket and extension	Size: M5 (8 mm) and M6 (10 mm)
Tie-wraps	Standard
Voltage tester	To switch 200 mA of test current (exam-ple: Duspol)
Digital multimeter	Standard
Hoisting equipment or forklift truck	Capable to lift the EVSE safely.take into account the dimensions,the mass,the centre of gravity and the maximum tilt angle. Refer to different sections in this document.
Parameter	**Specification**
Swivel eye bolts or bolts with lifting loops (to use with hoisting equipment)	Thread M10
Wire stripper pliers	To strip the wires of the AC input
Wire end ring tool	Size: M11

8.3 Torque specifications

Parameter	Specification [Nm]
Fasteners for the PE wire	Between 33 and 44
Fasteners for the L1, L2, L3 and neutral	Between 33 and 44

8.4 Ambient conditions

Parameter	Specification
Environment, general	Indoor and outdoor
Storage temperature	-30°C to +70°C
Temperature during use	-20°C to +70°C 2500 m
Maximum altitude above sea level	2500 m
Temperature derating	40’C

8.5 Mass and center of gravity

Mass

Mass	Specification
cabinet	The type of plate shows the specification.

8.6 Noise level

Noise level	Specification
Maximum noise level	< 62 dB(A)

8.7 Transport specifications

Parameter	Specification
Maximum tilt angle during transport	30°

8.9 Dimensions

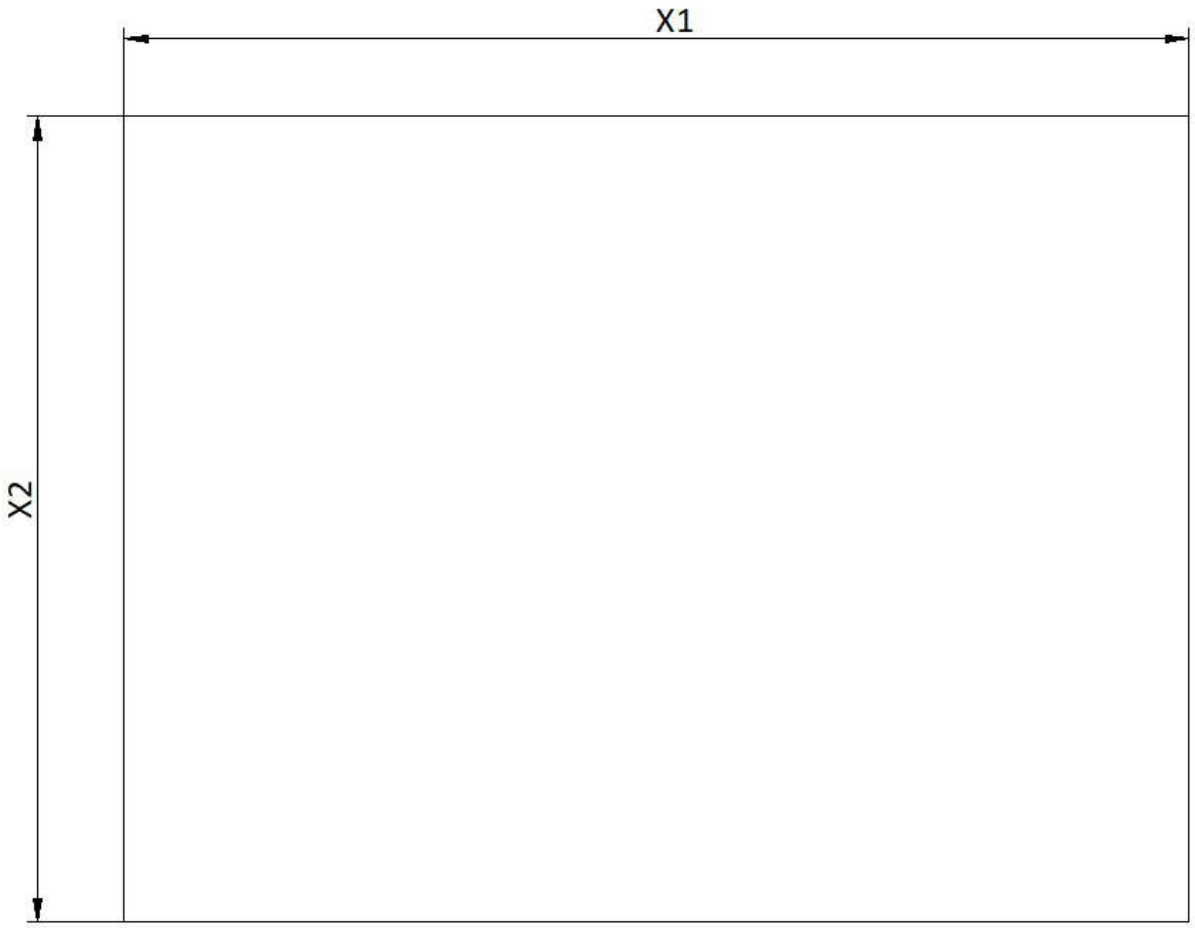
8.9.1 General dimensions

Parameter	Specification (MM)
Width of the cabinet (X-dimension)	565
Depth of the cabinet (Y-dimension	880
Height of the cabinet (Z-dimension)	1900
Length of the charge cable	5000
Maximum opening size of the cable inlet	206 x 30

8.9.2 Cable slack

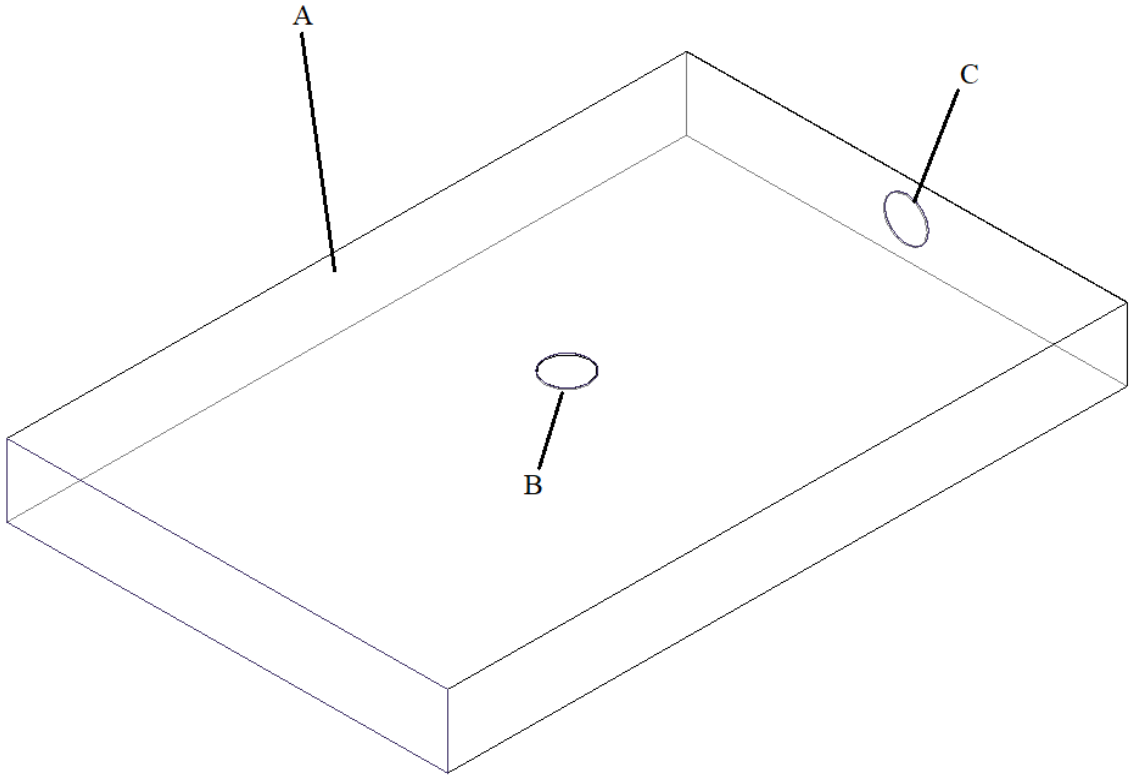
Parameter	**Specification** (MM)
Required cable slack for the Ethernet cable (measured from the top of the foundation)	1000
Required cable slack for the AC input cable (measured from the top of the foundation)	1000

8.9.3 Floor space requirements



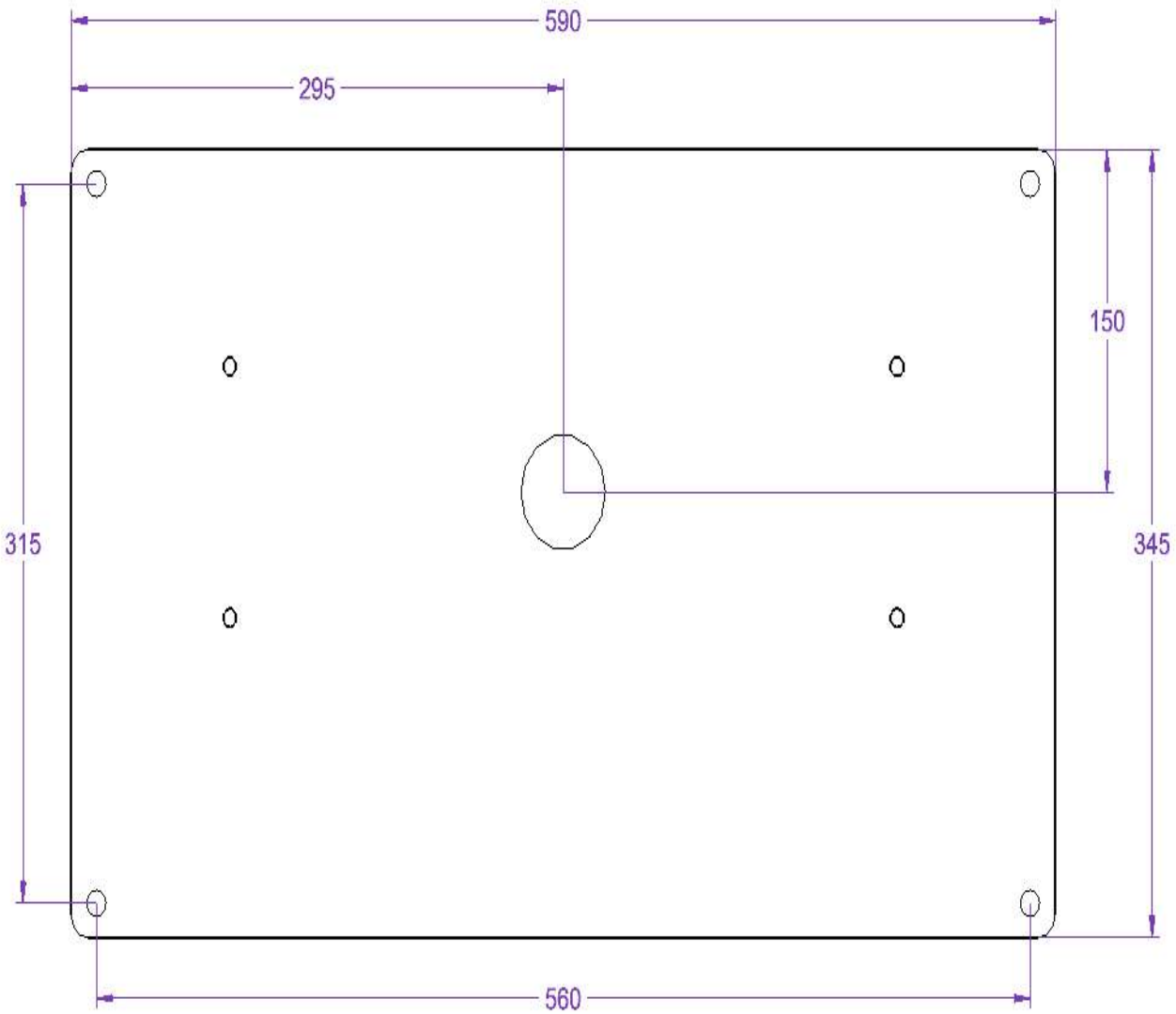
Parameter	**Specification (MM)**
X1	850
X2	550

8.9.4 Prefab foundation



Parameter	Specification (MM)
A	850x550
B	50
C	50

8.9.5 Custom foundation



8.10 Logic interface specifications

General specifications

Parameter	Specification
RFID standard	ISO 14443 A+ B to part 4 and ISO/IEC 15693
RFID-supported applications	Mifare,NFC,Calypso,Ultralight,Pay- Pass,HID and other
Parameter	**Specification**
Network connection	3G/4G modem 10/100 Base-T Ethernet

Ethernet cable

Parameter	Specification
Ethernet type	RJ45
Cable type	8P + PE, shielded
Example of a cable for distance of 75 m or less	HELUKAT 600E
Bandwidth, upload	Minimum 128 kbit/s
Bandwidth, download	Minimum 4 Mbit/s
Availability	99.9%

8.11 AC input specifications

8.11.1 General AC input specifications

Parameter	Specification
Input AC power connection	3P + N + PE
Earthing systems	TN-S TN-C TN-C-S IT
Input voltage range	415 VACS +/- 10% (50 Hz or 60 Hz)
Power factor at full load	> 0.96
Efficiency	> 95% at nominal output power
Total harmonic distortion (current)	< 5%

8.11.2 Ksipra DC 30KW

Parameter	Specification (A)
Maximum rated input current per phase	42AMP maximum

Note: There are power limiting options available. Ask the manufacturer.

8.12 DC output specifications

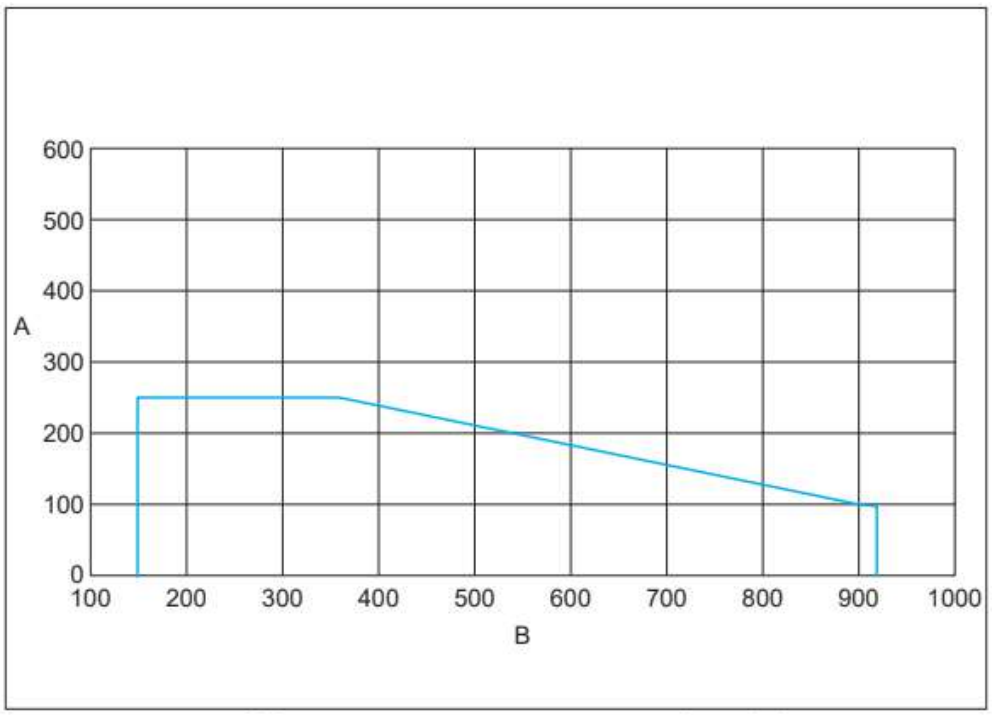
8.12.1 General specifications

Parameter	Specification
DC output voltage range, CCS2 Gun	150-1000 V DC
Minimum DC output current	5 A
Connection standard	CCS-2 Gun

8.12.2 Ksipra DC 30KW

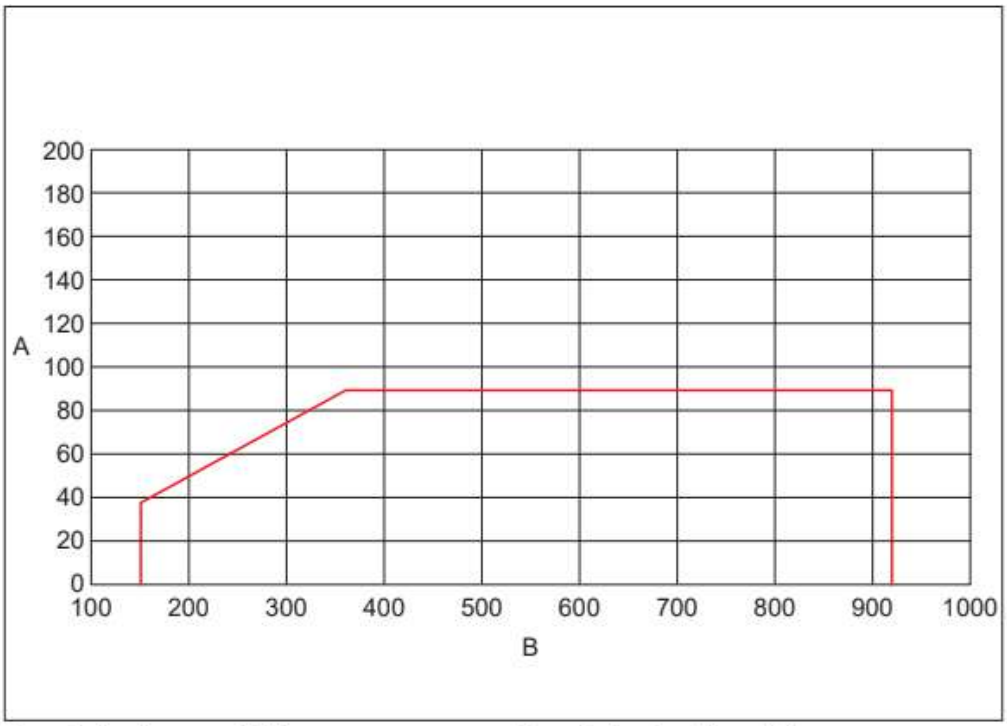
Parameter	Specification
DC output power, mode 1, continuously on one EV Charge Cable	Maximum 30 kW
Maximum DC output current, CCS	125 A

Output current in function of output voltage – pending



A Output current [A] B Output voltage [V]

Output power in function of output voltage - pending



A Output power [kW] B Output voltage [V]

8.14 Power consumption

8.14.1 Ksipra DC 30KW

Parameter	Specification (Kw)
Power consumption during normal operation per day	<3kw

8.15 Current peaks during the start of a charge cycle

Parameter	Specification
Duration of the current peaks	25 µs
Maximum current peak	42 A