

Bornet+[®]

Charging Station - Installation Manual



CHARGING STATION INSTALLATION MANUAL

2020-14-09 Fifth Edition

EN

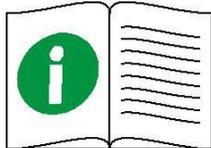
Content

1. Installation Guide	4
1.1 Safety first	4
1.1.1 Safety and user information	6
1.2 Delivery package / accessory pack	8
1.3 Installation requirements	9
1.4 Dos and don'ts	10
1.5 Installation notes	11
1.6 Cleaning and maintenance	12
1.7 Introduce	13
1.7.1 Product information	13
1.7.2 Technical specifications	14
1.7.3 The dimensions	15
1.7.4 Drawing	16
1.7.5 Mounting plate	17
1.7.6 Expansion bolts and screws	18
1.7.7 Charging station body	19
1.7.8 Charging plug	20
1.7.9 Style - wall mounted	21
1.7.10 Style - Stake	22
1.8 The installation procedure	23
1.8.1 Installation tools	23
1.8.2 Installation process	24
1.8.3 Electrical connection	27
1.9 First commissioning	28
1.10 Environment	32
1.11 Contact	33

1. Installation Guide

1.1 Safety first

Please observe all following safety and user information:



Relevant local regulations for operating electrical devices always apply.



Indicates: Risks arising from damage to the device Risks for other users.



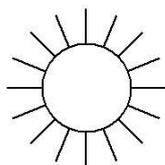
Indicates: Dangerous electrical currents / Dangers to life and body parts.



Indicates: important information and particularities.



1. Suitable for garages, carports or outdoor as well as for underground parking garages, apartment blocks, hotel parking lots etc.
2. for wall mounting or freestanding with matching Duostar stainless column,
3. IP class: IP 55(Splash-proof)



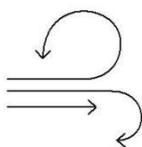
Charging station should not be directly exposed to sunlight.



The installation site must offer protection against rain and running water or other liquids.



Keep away from fire to ensure personal safety.



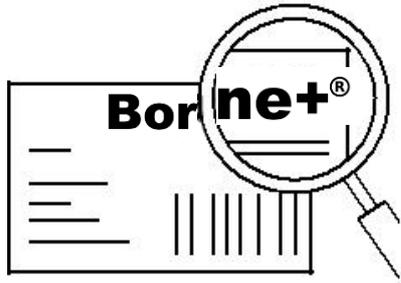
The installation site must offer sufficient space.

We recommend that this product be installed in a place that is rainproof and sun proof, or it can be equipped with protective function.

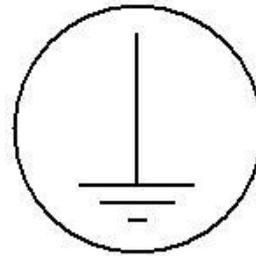


This can reduce the possibility of failure and extend the life of the product. If you need support, please contact your supplier.

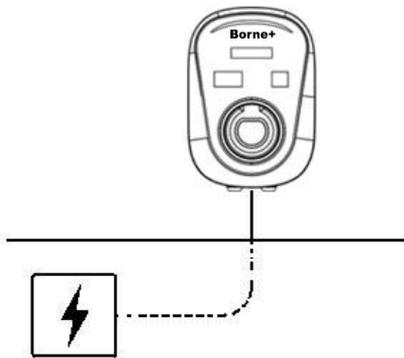
1.1.1 Safety and user information



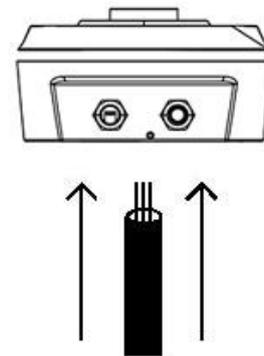
The rated voltage must be observed.



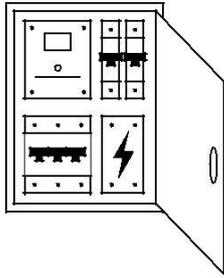
Charging station must be connected to a protective earth conductor



1. Ideally, the installation site should already provide for a connection to the electricity grid.
2. Otherwise, a power supply cable must be installed especially.
3. If unsure, please contact your Specialist electrical contractor



1. Ideally, the cable entry is from the underside of the housing base
2. Above or below surface power supply possible.



The power supply in the domestic power distribution box must be protected separately by a suitable and accurate dimension miniature circuit breaker (C characteristic)



Complies with all technical safety requirements, standards and guidelines.

Represents the current state of technology

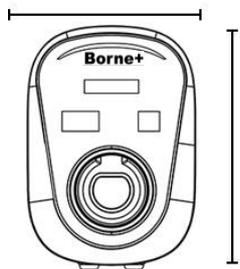


DC fault current detection is required by law in many countries

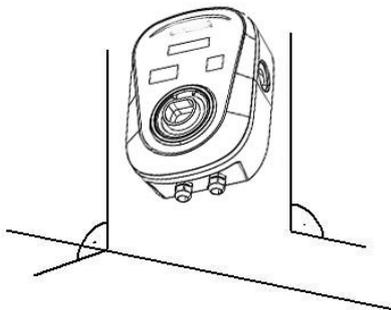
1.2 Delivery package / accessory pack

Product installation manual	1
RFID card	3
Instruction	1
APP function manual	1
Installation manual	1
Installation drawing	1
EU-Declaration of Conformity	1

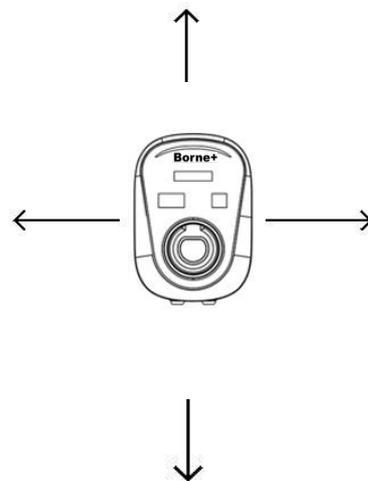
1.3 Installation requirements



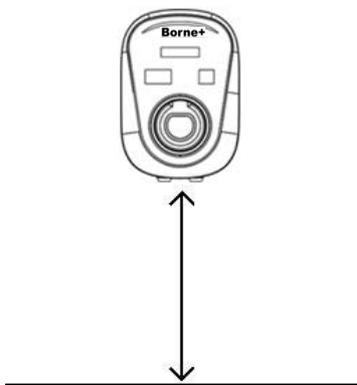
The installation surface
measures at least
262 x 222 mm
(height x width).



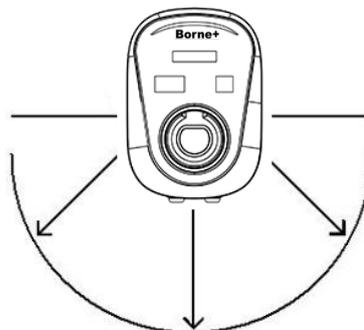
The mounting substrate
must be level and firm.



Minimum distances
to other technical
installations must be
observed.

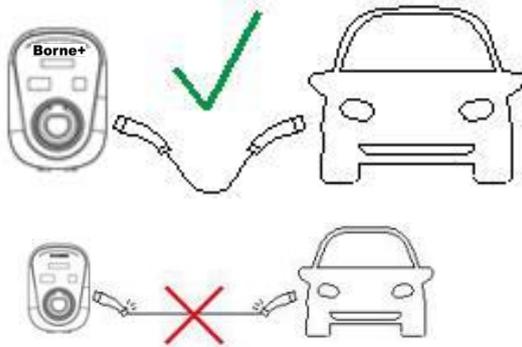


The installation height is
between 140 and 160 cm
(floor to bottom edge of housing).

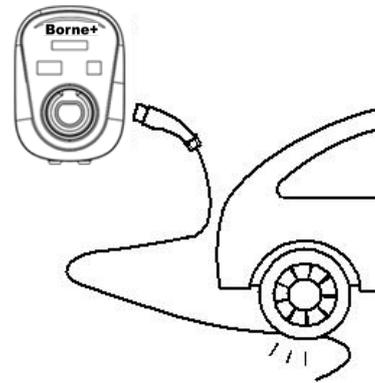


The installation site must be freely
accessible.

1.4 Dos and don'ts



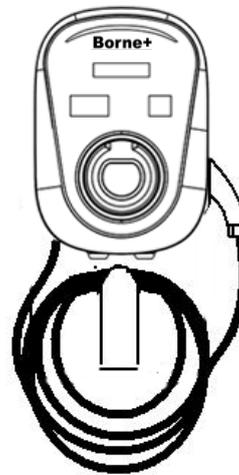
The charging cable must not be under strain, during the charging process.



The charging cable and the charging connector must not be driven over.

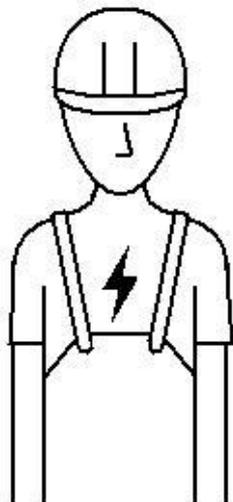


The charging cable must not be coiled, be kinked or twisted



The charging cable must be stored tightly and stored.

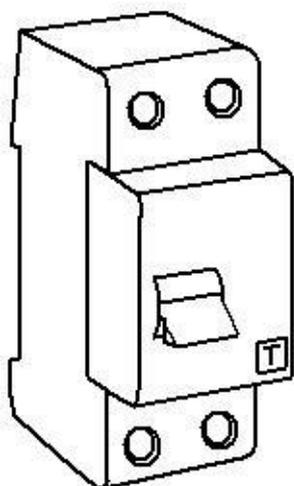
1.5 Installation notes



(De-)installation and repairs must only be carried out by a specialist electrical contractor

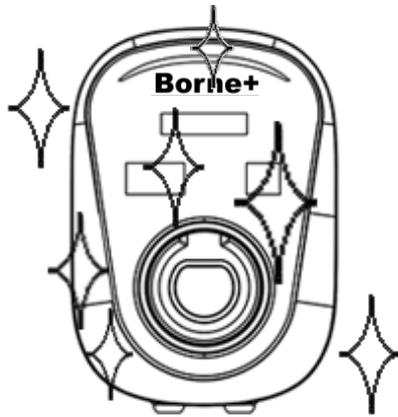
No modifications must be made to the charging station

None of the components have to be maintained by the user

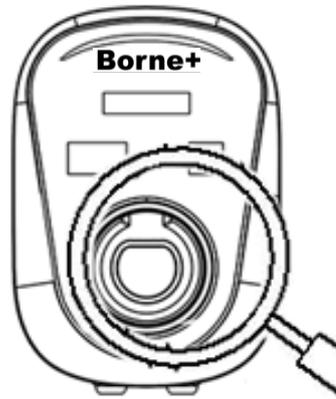


The different models have a bit difference in their sizes , appearance and function.

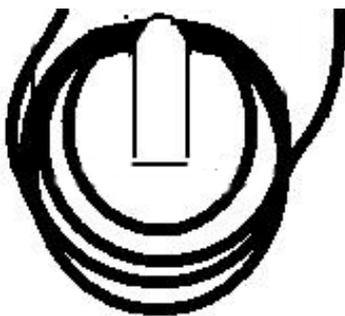
1.6 Cleaning and maintenance



Charging station must only be cleaned using a dry cloth.



Maintenance must be checked regularly.



Cable must be checked regularly if there is any damage or aging phenomenon.

1.7 Introduce

1.7.1 Product information

Borne+

MANUFACTURER :	DUOSIDA
MODEL NUMBER :	2030-SES-32-O-3
SERIAL NUMBER :	XXXXXXXX
DATE OF MANUFACTURE :	XXXXXXXXXX
RATED SUPPLY VOLTAGE :	400V/AC 50/60HZ
RATED OUTPUT VOLTAGE AND CURRENT :	400V/AC,32A,22KW
NUMBER OF PHASES :	THREE-PHASE
IP CODE :	IP55(STORAGE) IP54(MATED WITH VEHICLE)
OPERATING TEMPERATURE:	-30°C~+50°C

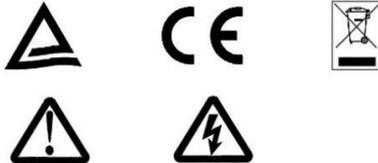
DANGER:High Voltage.Please don't open the cover
WARNING:Only for charging battery electric vehicles and plug-in hybrid electric vehicles
WARNING:Don't unplug or plug in the plug in the case of electricity



Borne+

MANUFACTURER :	DUOSIDA
MODEL NUMBER :	2080-SES-32-5C-3
SERIAL NUMBER :	XXXXXXXX
DATE OF MANUFACTURE :	XXXXXXXXXX
RATED SUPPLY VOLTAGE :	400V/AC 50/60HZ
RATED OUTPUT VOLTAGE AND CURRENT :	400V/AC,32A,22KW
NUMBER OF PHASES :	THREE-PHASE
IP CODE :	IP55(STORAGE) IP54(MATED WITH VEHICLE)
OPERATING TEMPERATURE:	-30°C~+50°C

DANGER:High Voltage.Please don't open the cover
WARNING:Only for charging battery electric vehicles and plug-in hybrid electric vehicles
WARNING:Don't unplug or plug in the plug in the case of electricity



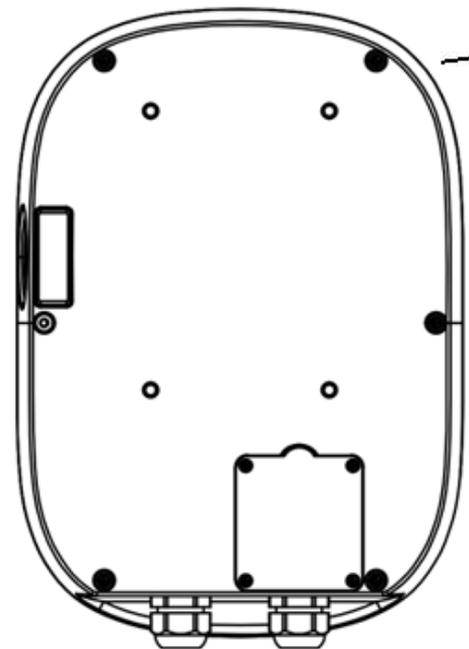
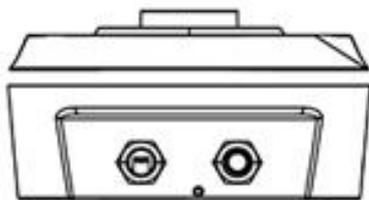
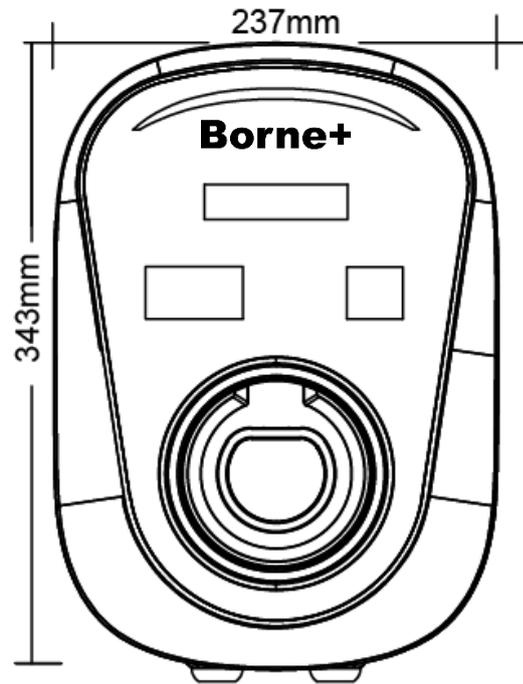
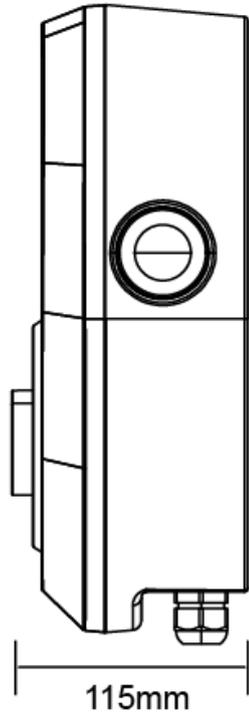
1.7.2 Technical specifications

Naming	Technical specifications
Regulations	IEC 61851-1
Charging power mode 3	to 22 kW
Nominal voltage	400 V / 3 AC
Rated current	to 32 A adjustable from 6 to 32 A in 1 A steps
Nominal frequency	50 Hz
connection technology	Screw clamp technology
Charging connection / coupling	Type 2
Length of charging cable	3,5 m, 5 m, 7,5 m
Operation / status information	LED lights and LED screen
IP class	IP55 (splash proof)
Residual current detection	AC 30mA, DC 6 mA
Ventilation	no ventilation is required
operating temperature	-30°C - + 50°C
Protection class	I
Overvoltage category	III
Weight	Note 1

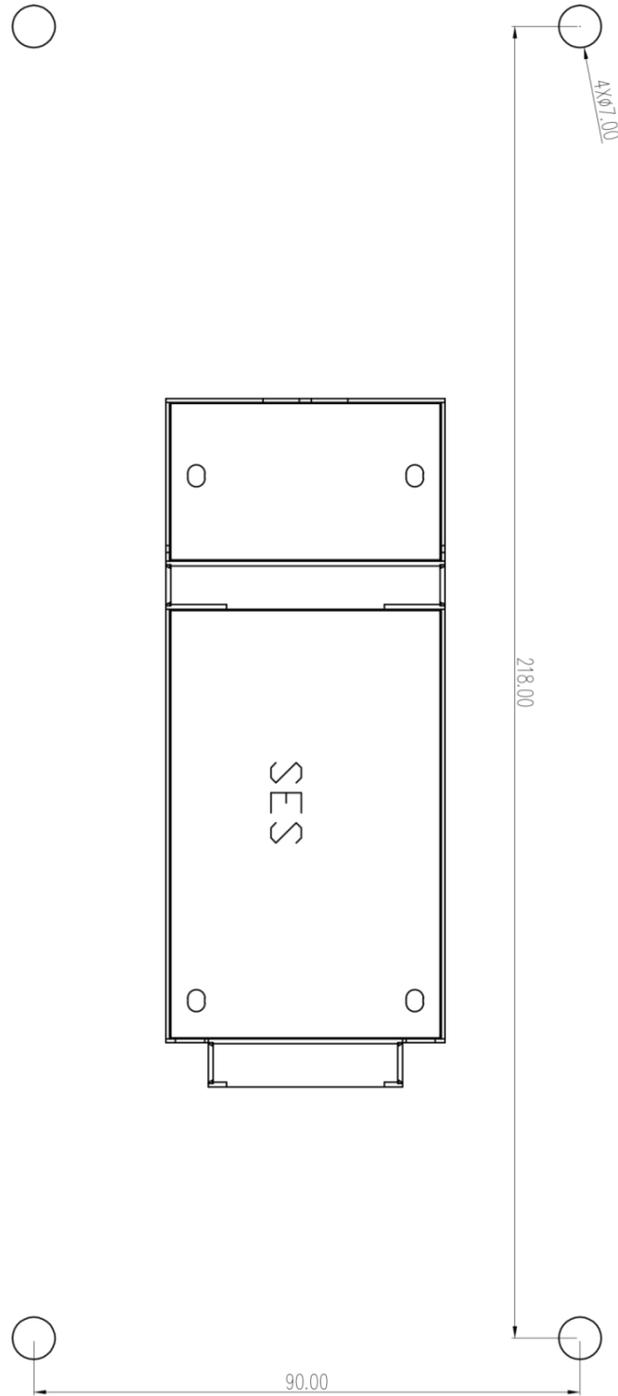
Note1: 2080-SES-32-5C-3 6.5Kg

2030-SES-32-O-3 3.5Kg

1.7.3 The dimensions



1.7.4 Drawing



Installation drawing

1.7.5 Mounting plate



Mounting plate

Fixed behind the charging station housing



Mounting plate

Fixed to wall

1.7.6 Expansion bolts and screws



Screws and tools for fixing charging station



Hook: it is used to wind and fix charging cable

1.7.7 Charging station body



1.7.8 Charging plug



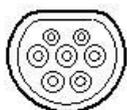
V4-DSIEC2b-EV32P



V4-DSIEC2e-EV32P

Charging gun : Provide 16A / 32A for choosing

Superior protection performance, the protection level reaches IP54 (working state)



1.7.9 Style - wall mounted

Technical specifications



- Installation method: wall mounted
- Maximum power: 22kW
- Communication interface (optional):
 - GPRS WIFI RFID
- Outdoor protection:
 - Without power supply - the waterproof protection grade can reach up to IP55
 - With power supply-The waterproof protection grade state can reach up to IP54, under coupling state.
- Safety regulation: Meet IEC 61851 and IEC 62196
- Operating temperature:
 - ambient temperature - 30 °C to 50 °C

Output type:

- EN 61851-1 MODE 3 OR MODE 2
- 22KW: 400VAC@32A

Basic functions:

- Starting mode:
 - charge when plug
 - smart charge for APP
- Reminder function:
 - charging indication
 - fault indication
- Self-test function: fault self-position (can be checked in the background after being networked)
- Human-computer interaction
- Safety protection
 - Double leakage detection and protection
 - Emergency stop button protection
 - Over current, over voltage, under voltage and over temperature protection
- Data record if Power off (can be checked in the background system if being networked)
- Surge protection meets the latest IEC 61851 standard
- EMC meets the latest IEC 61851 standard

1.7.10 Style - Stake

Technical specifications



- Installation method: stake-type mounted
- Maximum power: 22kW
- Communication interface: (optional)
 - GPRS WIFI RFID
- Outdoor protection:
 - Without power supply - the waterproof protection grade can reach up to IP55
 - With power supply-The waterproof protection grade state can reach up to IP54,under coupling state
- Safety regulation: Meet IEC 61851 and IEC 62196
- Operating temperature:
 - ambient temperature - 30 °C to 50 °C

Output type

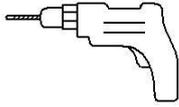
- EN 61851-1 MODE 3 OR MODE 2
- 22KW: 400VAC@32A

Basic functions

- Starting mode
 - charge when plug
 - smart charge for APP
- Reminder function:
 - charging indication
 - fault indication
- Self-test function: fault self-position (can be checked in the background after being networked)
- Human-computer interaction:
- Safety protection
 - Double leakage detection and protection
 - Emergency stop button protection
 - Over current, over voltage, under voltage and over temperature protection
- Data record if Power off (can be checked in the background system if being networked)
- Surge protection meets the latest IEC 61851 standard
- EMC meets the latest IEC 61851 standard

1.8 The installation procedure

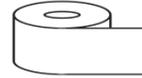
1.8.1 Installation tools



Electric drill



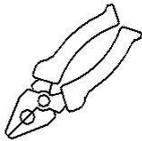
Wrench



adhesive tape



bolt driver



Pliers



Knife



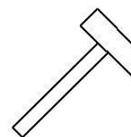
scissors



pencil

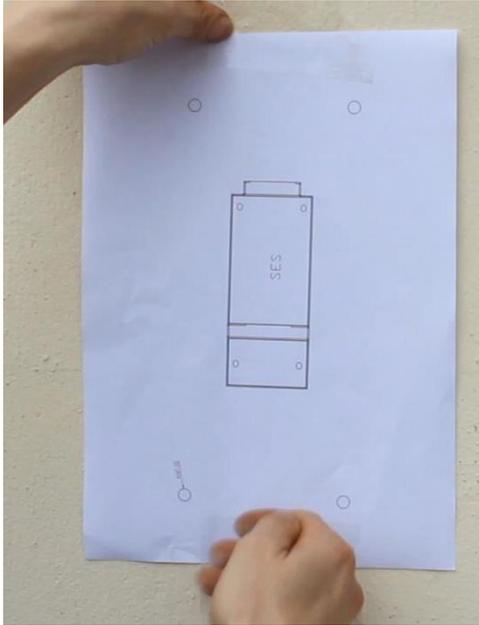


screw

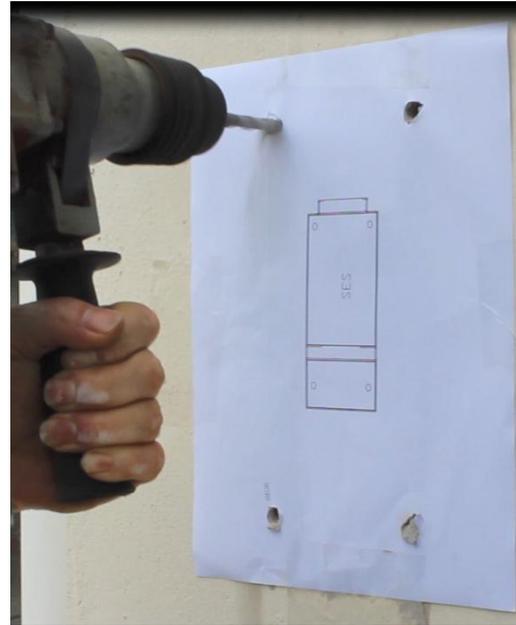


hammer

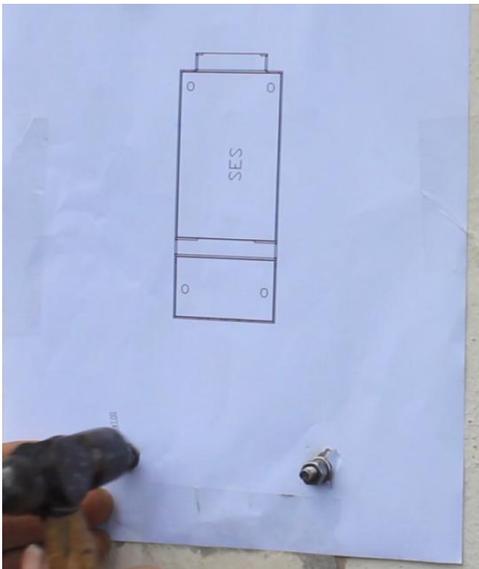
1.8.2 Installation process



1. Stick the drawing on the wall with tape to decide the drilling hole position.



2. Drill holes in the four corners with an electric drill.



3. Knock the expansion screws in fixed holes with a hammer.



4. Hang the mounting plate on the screws.



5. Tighten the top screws with a wrench.



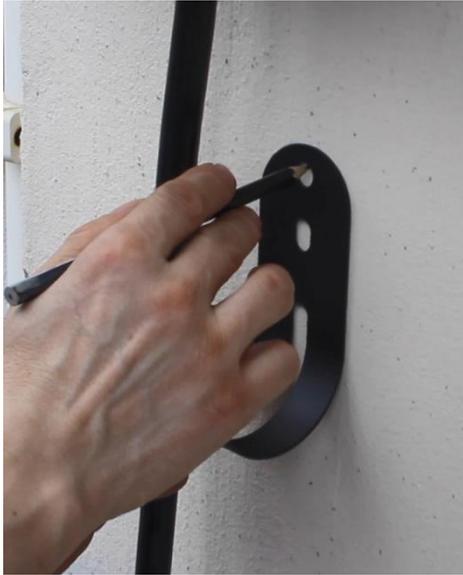
6. Tighten the lower screws with a wrench.



7. Hang the main body of the charging station on the mounting



8. Tighten the anti-theft screw to ensure outdoor safety plate.



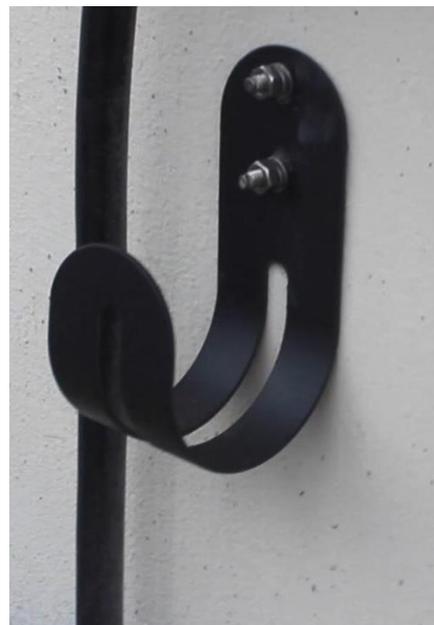
9. Use a pencil to draw the location where the hook needs to be punched.



10. Use an electric drill to make holes in the drawing position.



11. Drive the expansion screws in with a hammer.



12. Tighten the screws with a wrench.

1.8.3 Electrical connection

Requirements

- Connect the wires to the RCD in sequence
- Pay attention to the correct order when connecting.
- Reversing the polarity of the cables will destroy the electronics of the wallbox.
- Setting the charging current.
-

!!!ATTENTION!!!

The charging current must never be set higher than the line fuse itself.

If the wallbox is to be operated with an output of 11 kW, it must be protected with a 20 A fuse (over current protection).

If the wallbox is to be operated with an output of 22 kW, it must be protected with a 40 A fuse (over current protection).

1.9 First commissioning

- Pay attention to release the emergency stop switch. Arc-LED and cyclo-LED is blue.
- The nameplate is located to the left of the charger.
- You can start charge with plug in charging gun or use the APP.
- the power supply has been established when arc-LED blink and cyclo-LED often on.

Explanation of the different light signals

Condition	Arc-LED light	Cyclo-LED light	Remarks
E-stop	Red	Red	
Standby	Blue (flashing)	Blue (flashing)	
Prepare charging	Green	Green	
Charging	Green	Green (flashing)	
End of charging	Green	Blue	
Electric leakage	Red (flashing)	Red (flashing)	
Over voltage Under voltage	Red	Blue	
Overcurrent protection	Red	Green	
Over temperature protection	Red (flashing)	Blue (flashing)	
Hardware failure	Red	Green (flashing)	
Power off	No light	No Light	

Before the first commissioning:

According to "Ordinance on general conditions for grid connection and its use for electricity supply in Low voltage (Low Voltage Connection Ordinance - NAV) " in §19 the following points have to be clarified with the network operator:

„Section 19 Operation of electrical systems, consumables and charging devices, own systems

(1) The system and consumables are to be operated by the connector or user in such a way that faults occur other connectors or users and disruptive repercussions on network operator facilities or Third parties are excluded.

(2) Extensions and changes to systems as well as the use of additional consumer devices are the Notify network operators if this increases the capacity to be maintained or with network repercussions is to be expected. Charging devices for electric vehicles are also prior to commissioning to communicate. Their commissioning also requires the prior consent of the network operator, if their total rated power exceeds 12 kilovoltampere per electrical system; is the network operator in this case, obliged to express itself within two months of receiving the notification. Is that true Network operator, he has the impediment, possible remedial measures of the network operator and the Connected party or user and a time required for this by the network operator. The network operator can regulate details of the content and form of the messages.

(3) The connector or user must notify the network operator before setting up his own system do. The connectors or user must take appropriate measures to ensure that his Own plant no harmful repercussions in the electricity supply network are possible. The connection of own systems is to be coordinated with the network operator. This can be the connection of compliance with the make it dependent on measures to be taken to protect against reverse voltage in accordance with Section 20. "

Before the first commissioning with an electric car the following tests must be carried out with an adapter for vehicle simulation (CP) according to VDE 0122-1:

AC charging		
Measurements according to DIN VDE 0105-100 - recurrent tests in operation		
Measurements		
The following tests are to be carried out with an adapter for vehicle simulation (CP) according to VDE 0122-		
Measurement task	measurement method	values
Continuity of the conductors	Resistance measurement of the conductors	PE <1.0 Ω PA <0.1 Ω
Insulation resistance of the protective conductor to neutral and outer conductors	Measurement of the insulation resistance	≥ 1.0 MΩ
Evidence of the effectiveness of the protective measure is by means of Test adapter in vehicle condition C		
Proof of the effectiveness of the protective measure with residual current device $I_{\Delta N} \leq 30$ mA.	RCD Typ A *1 RCD Typ EV RCD Typ B	$I_{\Delta N} \leq 30$ and note manufacturer's instructions
Proof of the effectiveness of the protective device in the event of a short circuit by measuring the internal resistance ZL-N	measuring the internal resistance	$Z_S \leq \frac{2}{3} \frac{U_0}{I_{\Delta N}}$
Optional		
Measurement of the protective current	f.e. with clamp ammeter	$I_{\Delta N} \leq 0,4 \times I_{\Delta N}$
Measurement of the neutral conductor	f.e. with clamp ammeter	$I_{\Delta N} \leq I_N$
Checking the loading sequence		
Trials loading process according to VDE 0122-1		
Vehicle condition	functional test	result
Status A	no vehicle connected	Yes / No
Status B	vehicle connected, but not ready to load	Yes / No
Status C	vehicle connected and ready for charging, ventilation of the loading area is not required	Yes / No
Status D	vehicle connected and ready for charging, ventilation of the loading area is required	Yes / No
Status E	Failure - short circuit CP - PE via internal diode (charging of DC voltage)	Yes / No

* 1 Observe notes in DIN VDE 0100-722 (VDE 0100-722): 2016-10

(For planning, installation, operation and use, please follow the “Der Technische Leitfaden – Ladeinfrastruktur / Elektromobilität (Version 3)” [Editor: DKE, bdew, ZVEH, ZVEI, & VDE])

1.10 Environment

- This device is used to charge electrically operated Vehicles and is subject to the EU directive 2012/19 / EU on waste electrical and electronic equipment(WEEE).
- Disposal must be according to national and regional Regulations for electrical and electronic equipment respectively.
- Old devices and batteries must not be disposed of with household waste or bulky waste. Before the device disposed of should it be rendered inoperable.
- Dispose of the packaging material in the Your region's usual collection container for cardboard, paper and plastics.



1.11 Contact

Borne+[®]

Add: 10 Place Pinel

75013 Paris, France

Site : www.borneplus.fr

Email : contact@borneplus.fr