

Electric charging station WBSH1-7

User manual and data sheet

Thank you for choosing the SmartDHOME electric vehicle charging station. Below are all the technical specifications and procedures for correct installation.



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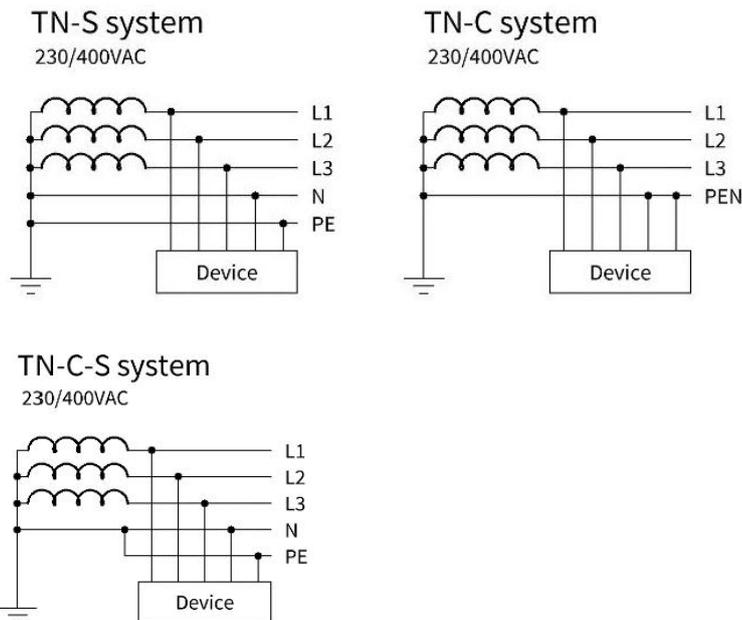
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Abbreviations and Safety Notes

	Abbreviation	Description
1	IEC	International Electrotechnical Commission
2	EV	Electrical Vehicle, this can be BEV (battery EV) or PHEV (plug-in hybrid EV)
3	EVSE	Electric Vehicle Supply Equipment (IEC61851-1)
4	OBC	On-board charger (of an EV)
5	LCD	Liquid crystal display
6	LED	Light-emitting diode
7	RFID	Radio frequency identification
8	CMS	Central management system (Manages EVSE and has the information for authorizing users for using its EVSE)
9	OCPP	Open charge point protocol (A standard open protocol for communication between EVSE and a central system and is designed to accommodate any type of charging technique)
10	IP	Ingress protection
11	HMI	Human-Machine Interface
12	RCMU	Residual current monitoring unit
13	MCB	Automatic switch
14	Kw	Kilo Watt (power unit)
15	A	Ampere (unit of current)
16	V	Volt (voltage unit)
17	Hz	Hertz (frequency unit)
18	TN	



19	PE	Grounding (protection)
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The following warning signs, mandatory signs and information signs are used in the WBSH1-7 charging station.

Warning signs



ATTENTION: Warning of electrical hazards.

This signal is intended to alert the user that if the device is not used correctly, serious personal injury or extensive property damage may occur.



ATTENTION: Warning of a dangerous point or dangerous situation.

This signal is intended to alert the user that minor personal injury or material damage may occur if the device is not used as required.



Indicates the possible consequences in case of contact with electrostatic sensitive components.



ATTENTION: Danger of combustion.



Access prohibited to unauthorized personnel.



Access prohibited for people wearing pacemakers.



Use all protective equipment.



Mandatory use of helmet.



Indicates texts, notes and important points



Indicates all information relating to the recycling of the materials used.



Indicates assemblies or parts that must be disposed of properly. It is forbidden to dispose of in generic bins.

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Environment



- The WBSH1-7 charging station must be installed in areas far from flames and flammable materials, in order to avoid serious damage to things and/or people.
- The WBSH1-7 charging station must not be installed in areas containing explosive materials; otherwise dangerous explosions could occur.
- Do not leave flammable or explosive substances near the charging station, in order to avoid serious damage to things and / or people.



- The WBSH1-7 charging station must be installed in a place free of dust, gases or vapors harmful to insulation.
- The charging station for electric vehicles must be installed in a place free from vibrations and violent shocks. For good ventilation, mount the charging station vertically.
- The station must not be installed at ground level. In addition, a drainage channel must be positioned around the charging station because, otherwise, the equipment could be damaged.

Installation



All protective equipment must be worn when installing the charging station.



- Installation and wiring must be performed by qualified personnel to avoid shocks and electrocution.
- Before installation, make sure you do not have any live parts, in order to avoid shocks and electrocutions.
- Be sure to ensure a good grounding of the charging station to avoid shocks and electrocution.
- Be sure to stow the charging socket in the side holder of the charging station to avoid shocks and electrocution.
- Do not leave metals such as bolts, gaskets inside the charging station; otherwise, dangerous explosions and fires could occur.



- Be sure to ensure a good grounding of the charging station to avoid shocks and electrocution.
- Make sure that the charging station is correctly connected to the mains in order to avoid shocks and electrocutions.
- Any uncovered parts must be protected by using insulating material.

Operation



- It is strictly forbidden to bring minors or people with reduced capacity near the charging station to avoid injury.
- It is advisable not to persist in attempting to recharge if there is an error or fault message on the display.

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- At any time, in the event of an emergency (such as fire, smoke, anomalous sounds, water leakage, etc.) it is possible to press the emergency button in order to interrupt the recharge cycle and send the "Stop" alarm to the station. charging. Subsequently, if the fault persists, we recommend that you contact our customer support by visiting the site: <http://helpdesk.smartdhome.com/users/register.aspx>
- Do not start charging if even part of the device is damaged.
- The electric vehicle can only be charged with the engine off and stationary.



Do not recharge your electric vehicle in rain or thunderstorms.

Maintenance



During maintenance operations, all protective devices must be used.



The replacement of accessories must be carried out by qualified personnel; otherwise, explosions and dangerous fires could occur.

NOTE: For more information on this, we recommend that you contact our customer support immediately by visiting the website: <http://helpdesk.smartdhome.com/VDSmartdhome/users/Login.aspx>



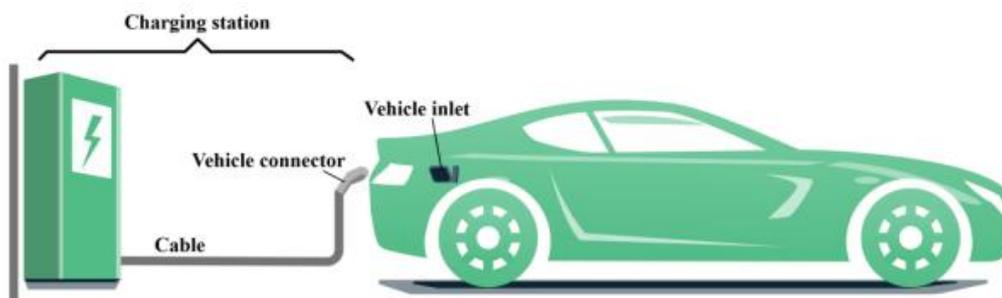
- It is advisable to carry out a safety inspection at least once a week.
- Keep the charging connector clean and dry; if necessary, clean with a clean, dry cloth.

Certification

- IEC 61851-1:2019

Charging connection

- IEC 61851-1 (3.1.12)



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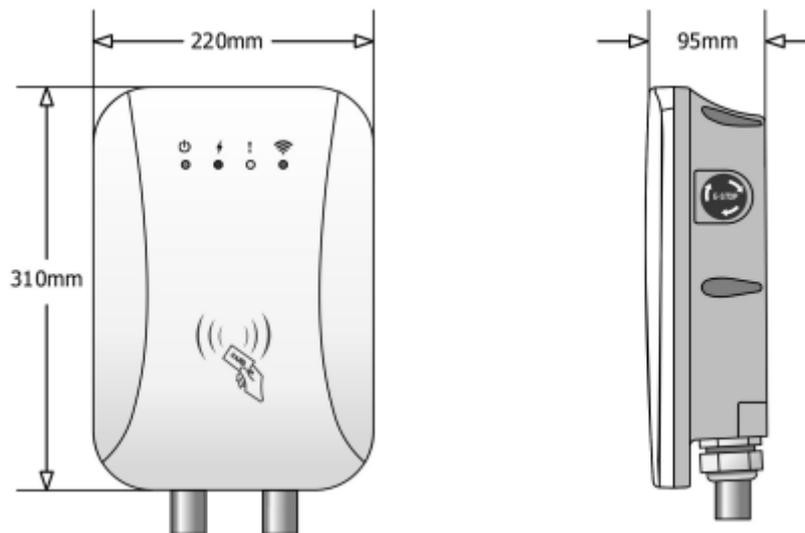
Charging interface

- IEC 62196-2



Description and Data Sheet

The WBSH1-7 charging station is ideal for charging electric vehicles and can be installed in residential environments, hotel parking, garages and car parks. For a correct installation please carefully follow the following manual.



Data Sheet

Power	7kW
Rated current	32 A
Minimum dimensions of the input power cable	Copper cable, 3x6 mm ²
Input voltage	Single phase AC, 230V±10%
Nominal frequency	50/60 Hz

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Circuit

Input circuit terminals L1 – N – PE

Charging method 3 modes

Charge control

Light indicators 4 LEDs (Indicate four states: power, charge, fault and network)

- Ethernet (RJ-45 interface)

Communication interface

- Wi-Fi (2.4 GHz)
- ModBus (RS-485 interface)

Communication protocol OCPP 1.6

RCD inside Type B

Safety protections Overvoltage, over temperature, overcurrent and earth protection.

Assembly Wall mounting

Charging connector IEC 62196-2, Tipo 2

Length of the charging cable 5m (Standard configuration)

Dimensions 309 mm x 215 mm x 114 mm

Weight ≤ 8Kg

Color and material

Front panel: White, Polycarbonate (PC)

Back cover: Gray, Polycarbonate (PC)

IP code IP65

Altitude ≤ 2000m

Storage temperature - 40 ~ 75°C

Operating temperature - 30 ~ 55°C

Relative humidity < 95% (not condensed)

Vibration < 0,5 G

Place of installation You can install the device indoors and outdoors with good ventilation.

ATTENTION! Make sure that there are no flammable substances present on the installation site.

NOTE! On the right side of the charging station there is a plate specifying the model and all the basic technical specifications.

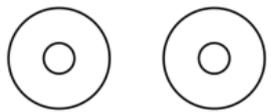
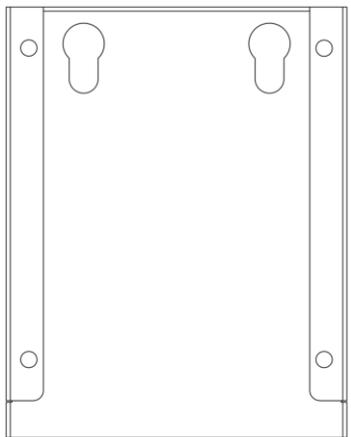
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<p>AC EV Charging Station</p> <p>Input Phase: IP + N + PE Rated Input: 230VAC, 50/60Hz, 32A Rated Output: 230VAC, 50/60Hz, 32A Rated Power: 7kW Connector: IEC 62196-2, Type 2 Location: Indoor / Outdoor IP Code: IP 54 OTR: -30 ~ 55°C</p>	<div style="text-align: center;">  </div> <ol style="list-style-type: none"> 1. This equipment should be reliably grounded before use. 2. Installation, wiring and maintenance should be done by personnel with professional qualification. 3. Do not expose to flammable gas. 4. Failure to read user manual carefully before use may lead to improper operation.
 *****0001 Manufactured: 08/2021  	MADE IN CHINA

Package Contents

- Charging station for electric vehicles
- Wall mounting accessories:

A	
B	
C	
D	

- 2 RFID cards

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- Socket for electric charging
- Quality certificate
- User manual

Pre-Installation

Note: Before continuing with the installation phase, it is necessary to read all the points listed below.

- Check that all accessories are included in the package and that there are no transport damage.
- Verify that the product and features comply with the order.



ATTENTION!

- If there are differences in the order and/or missing parts, please do not proceed with the installation and immediately contact our customer service by visiting the site: <http://helpdesk.smartdhome.com/users/register.aspx>
- Please keep the packaging for the duration of the warranty



The paper and packaging used are all recyclable materials.

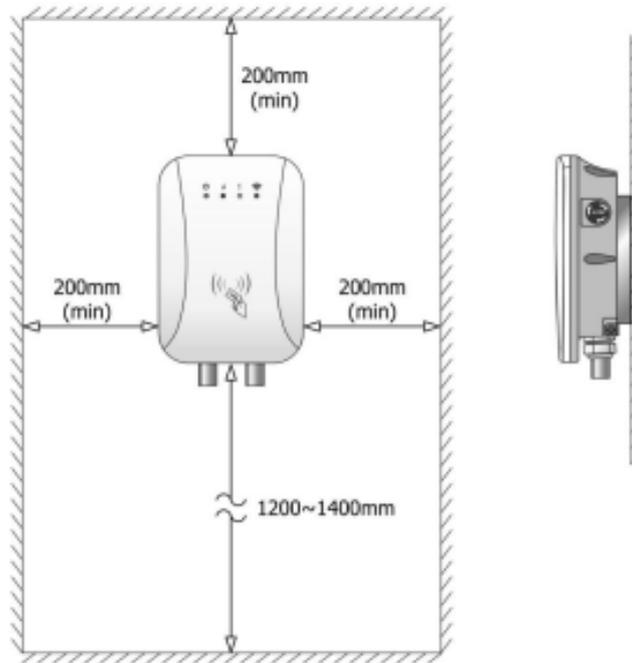
Note: During the transport and pre-installation phase, attention must be paid to the following points:



- This product is an electrical appliance; therefore it is recommended to handle it with care avoiding shocks and violent vibrations.
- The WBSH1-7 charging station must not be carried by dragging the connector and the charging cable.
- The front panel of the product cannot be subjected to stress.
- In order to ensure a long life of the WBSH1-7 charging station, it is recommended not to install the charging station in environments subject to high temperatures which could limit the life and cause structural changes to the product.
- If you want to install the charging station on the wall, the following spaces must be respected.

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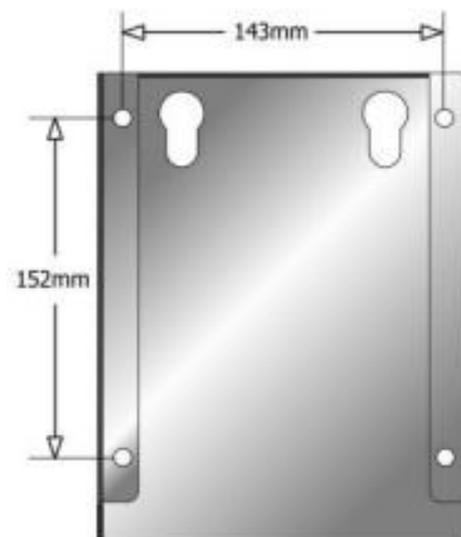


- It is recommended to install the charging station in a place with good ventilation, without direct sunlight and sheltered from wind and rain.
- To ensure good ventilation, mount the charging station vertically and leave enough space.

Installation

For a correct installation follow the following steps:

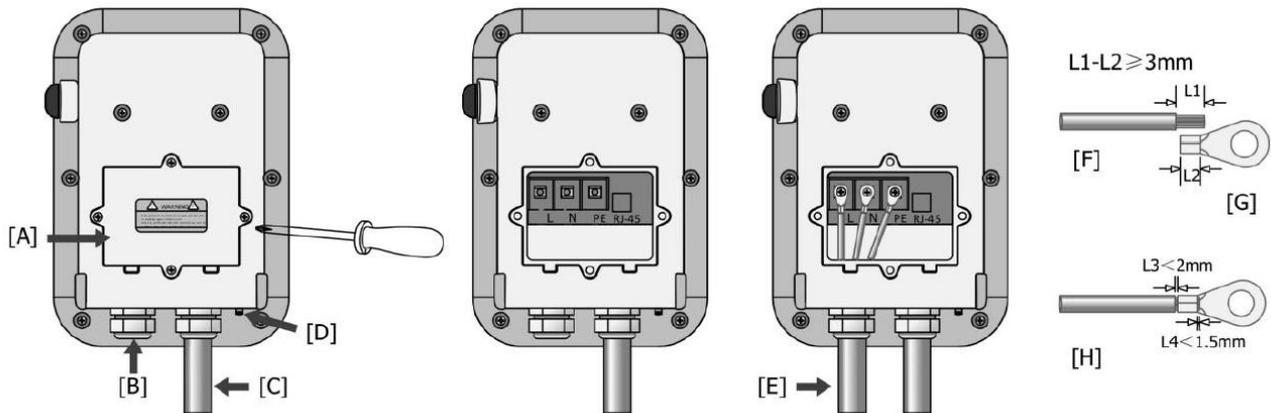
- Drill four holes of 10 mm in diameter and 50 mm in depth, with appropriate height and with center distance of 143 mm x 152 mm. Then fix the accessories to the wall with expansion screws.



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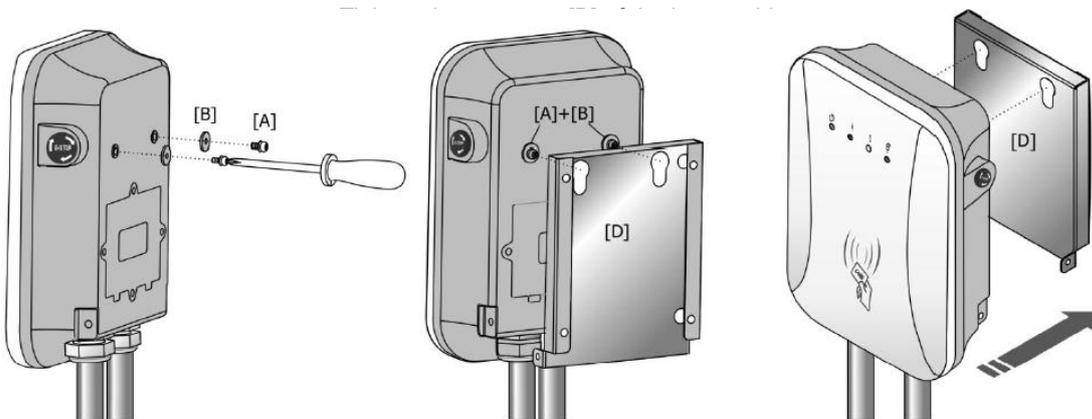
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- As shown in the figure below, unscrew the four screws to open the terminal covers [A]. Then continue with the wiring.



- [A] Terminal covers
- [B] Grommet of the input cable
- [C] Charging cable
- [D] Grommet of the network cable
- [E] Input power cable
- [F] Thread
- [G] Ring terminal
- [H] Conductor with ring tab.

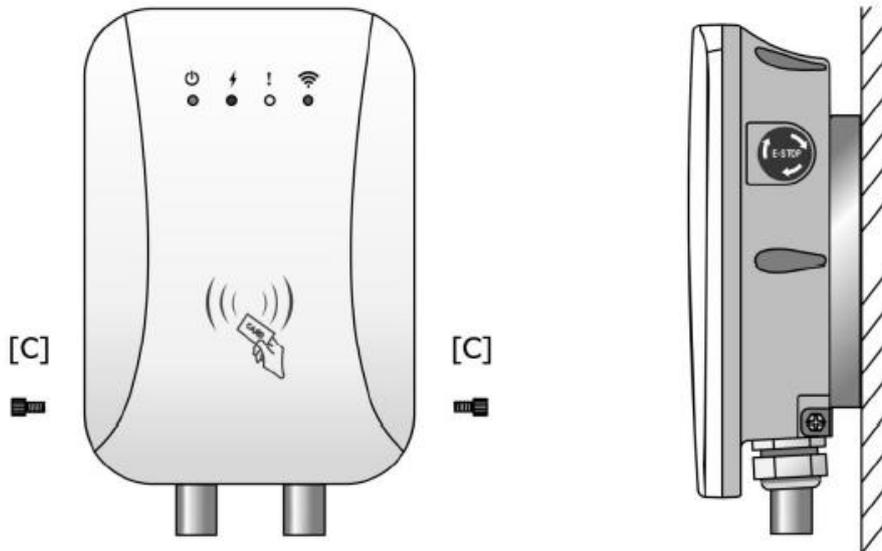
- Remove 10/12 mm of insulation from the conductor [F] using a wire stripper and insert the copper conductor into the crimp area of the ring terminal [G], then press the ring terminal with pliers and crimp the conductor as described above [H].
- Loosen the cable grommet [B] to pass the prepared power cable through it.
- Screw the three screws to connect each cable to their respective input terminals.
- Screw in the four screws to close the terminal covers [A].



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- As shown in the figure above, position the mounting accessories [A] and [B] on the charging station and fix everything to the plate positioned on the wall.
- Tighten the accessories [C] at the left and right ends to secure the charging station as shown in the figure:

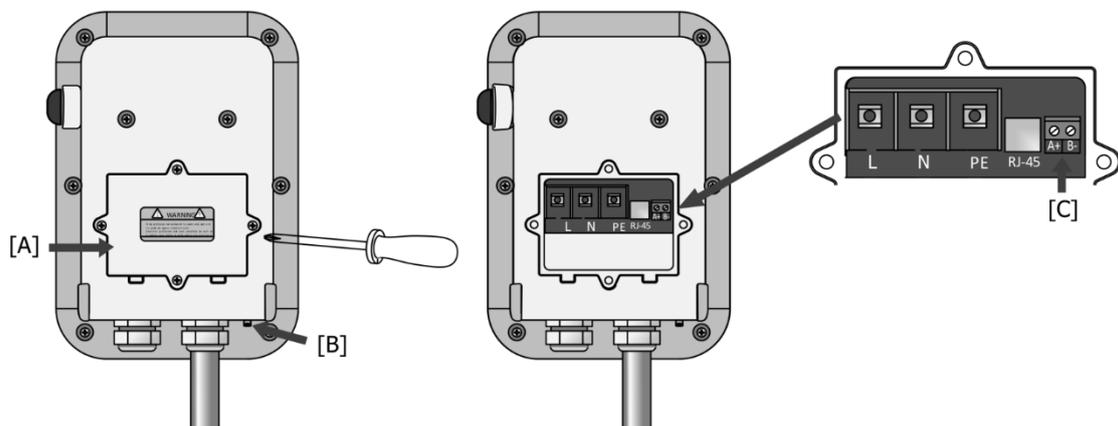


Note for use:

The WBSH1-7 charging station is equipped with a type 2 charging connector. Therefore, when in standby, insert the charging connector into the empty connector socket. In addition, it is recommended to use expansion screws to secure the empty socket in a suitable position next to the charging station.

RS-485 (ModBus)

The WBSH1-7 recharging station has the ModBus communication protocol, of the RS-485 type; all the steps for a correct configuration are shown below.



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[A]	Terminal covers
[B]	Cable gland for network cable or ModBus communication cable (RS-485)
[C]	ModBus communication terminals (RS-485) - A + and B +

- Remove the terminal covers [A] from the rear of the charging station.
- Loosen the cable gland [B] and insert the cables for ModBus communication.
- Connect the ModBus communication cables to the respective terminals A + and B +. Finally fix all the cables and cover the terminal board of the charging station.

Note:

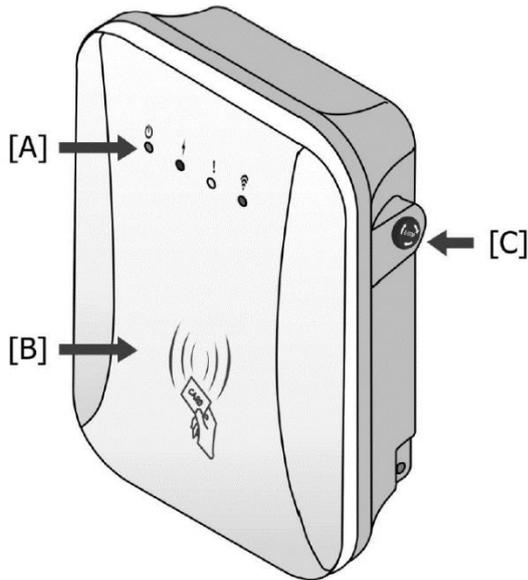
- If the communication distance is less than 100m, a twisted cable can be used.
- In the case of a network consisting of several charging stations, to avoid anti-interference from the RS-485 network, it is recommended to install a 120Ω resistor in the terminal position.

Operations

After completing the connection and installation of the WBSH1-7 charging station, it can be started. The LED it will  light up and it will mean that the station has passed into the Stand-by state. As shown in the figure, the WBSH1-7 charging station has a panel with which it is possible to interact. The main functions are listed below.

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[A] LED

The four LEDs arranged on the main panel indicate the status of: power, charge, fault and network.

[B] Magnetic card area

In the area dedicated to the magnetic card it is possible to swipe the smart card provided and start the recharging cycle.

[C] Emergency button

Use in an emergency. Once the button is pressed, charging will be stopped immediately.

Status of the LEDs

The LEDs on the panel are used to indicate the status of the charging station. The meaning of the colors is as follows:

Icon	LED	Status	Description
	Green	ON	Waiting state
		Twinkle	Ground fault state
	Red	ON	Connected to the electric vehicle
		BLN control	State of charge
	Yellow	ON	Fault status
		Twinkle	ATTENTION! Should the fault persist, contact our customer support immediately by visiting the website: http://helpdesk.smartdhome.com/VDSmartdhome/users/Login.aspx
	Blue	OFF	Unconnected network
		ON	Connected network
		Flashes slowly	The connection to the server is normal
		Flashes fast	Configure WiFi network status

Connection to the Wi-Fi network

Before proceeding with the configuration, prepare a Wi-Fi router operating at 2.4 GHz near the charging station. Then follow the procedure below:

- Start the Wi-Fi router and make sure it can connect to the internet.
- Enable Wi-Fi on your smartphone and connect it to the desired Wi-Fi network.
- Install the “ESPTOUCH” application on the smartphone used for configuration.

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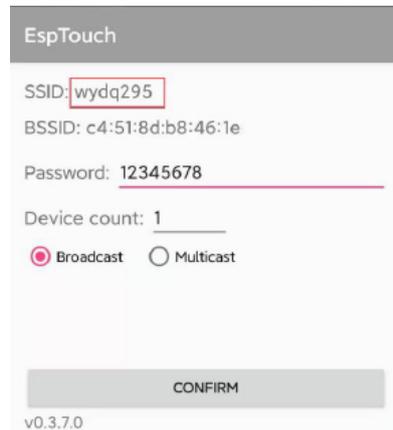


iOS



ANDROID

- Open the ESPTOUCH application, select the desired internet network and enter the password.



- Press and release the emergency button 3 times until the  LED will start flashing quickly. The charging station will now have entered the Wi-Fi configuration mode.
- Click the "Confirm" button on the smartphone.
- The charging station will start the automatic configuration of the Wi-Fi network. The connection of the charging station to the Wi-Fi will be successful when the LED  it will stop flashing and stay on steady.

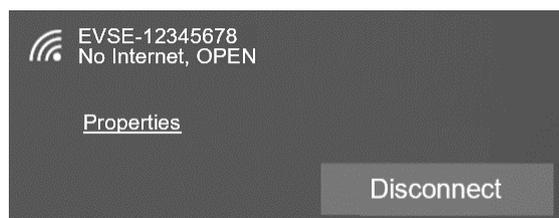
NOTE! To complete the configuration procedure correctly, the charging station and the smartphone must be in the same coverage area as the router.

Parameter configuration

Note: The WBSH1-7 charging station can be configured using a laptop or smartphone connected to the Internet. For a correct configuration follow all the steps below.

- Put the laptop/smartphone in Wi-Fi search mode. Subsequently, the charging station will set itself up in Wi-Fi access point mode, allowing access to the configuration of the parameters.
- Connect your laptop / smartphone to the Wi-Fi signal transmitted by the charging station.

Note: The association to the Wi-Fi network does not require a password to connect to the charging station.

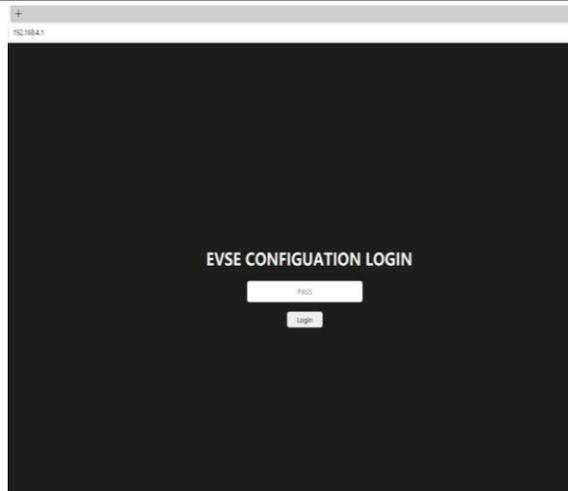


- Start the browser and enter the address 192.168.4.1 in the address bar, then you will have access to the configuration.

Note: Do not Google the address, otherwise the procedure will fail.

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- Enter the password 12345678 to access the configuration menu. It is advisable to change the password once logged in.

EVSE CONFIGURATION

User Options

WiFi SSID: MYwifi — Enter your WiFi name

WiFi password: 12345678 — Enter your WiFi password

Plug and play: No — Select the start charging mode:
YES- Plug and play
NO - Swipe card or scan QR code

Advanced Options

Only change these if you are qualified to install this product.

Serial Number: 8888888888888888 — Serial number displayed on screen
No need to change it

OCPP server: ws://cms-*****com:8090 — URL of your own OCPP server

OCPP version: OCPP1.6-J — Version of OCPP communication
NO - Not use OCPP communication

OCPP AuthPass: 111111 — OCPP Auth password

Access point name: EVSE-12345678 — Enter a new name of Wifi hotspot

Alternative server: Yes — Exchange data with supplier backstage
YES – Permit; NO - Not permit

Charging current: 32 — Set the maximum charging current

Login password: ***** — Change a new login password

SAVE — Change a new login password

RESTART — Restart button for settings take effect

- After modifying the parameters, click “SAVE” to save all the data correctly. Then click “RESTART” to restart the recharging station and make all the changes made active.

Note: By entering the data of your access point (ex. Home/work) the charging station will automatically connect to the access point indicated to communicate with the application.

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Start charging

To correctly start the charging of your vehicle it is advisable to follow all the steps indicated below:

- Park your electric car, turn it off and put it in parking mode.
- Unhook the charging socket from the side support of the station.
- Plug the charging socket into the socket of your electric car. If the connection is successful, the "Connection" LED will light up.
- In the "Plug and play" charging mode, the charging process will start automatically as soon as the plug is inserted into the appropriate socket of the car.



- In "swipe card" or "QR code scan" mode, follow the instructions on the display after correctly inserting the charging socket inside the socket of your vehicle.

Download APP

After completing the installation and configuration procedure, if you need to check the status of your charging station, you can install the application, following the steps below.

If you have an **ANDROID device**, you can download the "WE E-Charge" application using the QR code:



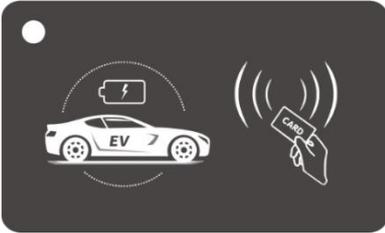
If you have an **iOS device**, you can download the "WE E-Charge" application using the QR code:



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RFID card reader



The WBSH 1-7 charging station is equipped with a RIFID card reader that allows you to start and stop the charging process by using the card.

Emergency button

The charging station is equipped with an emergency button which has the purpose of interrupting the charging in case of anomalies. At any time, in the event of any emergency, you can press the button and immediately leave the charging station.

Note: In case of any anomalies with the device, make sure you have pressed the emergency button and immediately contact our customer support by visiting: <http://helpdesk.smartdhome.com/users/register.aspx>

Charging interruption

To stop charging your vehicle correctly, it is advisable to follow all the steps indicated below:

Note: The charging station will automatically stop the charging process when the car is fully charged.

- In the "plug and recharge" mode, you can automatically stop charging by activating the unlocking directly on the electric car (remote control or cockpit). In case the charging does not stop, it is recommended to try to disconnect the socket manually. When the "Charging" LED goes out, the charging process will be finished.
- When the recharging station is in "QR code scanning" mode, click on the "Stop" button to stop recharging.
- Once you have finished charging your electric vehicle, please manually remove the station socket from the electric car and place it in the side socket of the charging station.

Management Errors

The WBSH1-7 electric vehicle charging station is equipped with automatic fault protection. The error handling table is shown below.

Information on the indicator	Class	Error	Resolution
Flashes once slowly and once quickly.	Abnormal voltage	11	Check the connection between the charging socket, the charging station and the electric car socket. If the fault persists, disconnect and reconnect the charging socket.
Flashes once slowly and then twice quickly.	Emergency Stop	12	The emergency button has been pressed. After resolving the fault, turn the emergency button to release and reset the charging station.
Flashes once slowly and	Under tension	13	<ul style="list-style-type: none">• Check that the incoming cables are connected

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then three times quickly.				correctly.
Flashes once slowly and then four times quickly.	Overvoltage	14		<ul style="list-style-type: none"> • Check the input voltage. • Check that the incoming cables are connected correctly. • Check the input voltage.
Flashes once slowly and then five times quickly.	Overtemperature protection	15		Check that the charging station is not installed in high temperature environments.
Blinks once slowly and then six times quickly.	Measurement failure	16		Switch off and restart the charging station.
Flashes once slowly and then seven times quickly.	Anti-discharges	17		<p>Check that the charging socket and its cable are not damaged or wet.</p> <p>NOTE! If they are damaged, it is advisable to disconnect the charging station and contact our customer support immediately through the following link:</p> <p>http://helpdesk.smartdhome.com/users/register.aspx</p>
Flashes once slowly and then eight times quickly.	Short circuit in OUT	18		<p>Check that the charging socket and its cable are not damaged or wet.</p> <p>NOTE! If they are damaged, it is advisable to disconnect the charging station and contact our customer support immediately through the following link:</p> <p>http://helpdesk.smartdhome.com/users/register.aspx</p>
Flashes once slowly and then nine times quickly	Overcurrent OUT	19		<ul style="list-style-type: none"> • Check that the charging socket is connected correctly. • Verify that the on-board charger (OBC) is functional. • Check the output current. <p>NOTE! If the fault persists, contact our customer support through the following link:</p> <p>http://helpdesk.smartdhome.com/users/register.aspx</p>
Flashes twice slowly and once quickly.	Electric car response time-out	21		<ul style="list-style-type: none"> • The battery of the electric car is fully charged. • The charging socket is not properly connected to the car socket, therefore it is advisable to disconnect and reconnect it <p>NOTE! If the fault persists, please contact our customer support via the following link:</p> <p>http://helpdesk.smartdhome.com/users/register.aspx</p>
Flashes twice slowly and then twice quickly.	Electric car not supported	22		The electric vehicle connected to the charging station does not comply with international standards (IEC) and therefore cannot be powered.
Flashes twice slowly and then three times	Attack/release Internal relay	23		The charging station is damaged and requires the assistance of one of our specialized technicians, therefore we

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quickly.				recommend that you contact our customer support through the following link: http://helpdesk.smartdhome.com/users/register.aspx
Flashes twice slowly and then four times quickly.	Failed RCD	24		The RCD protection is damaged and requires the assistance of one of our specialized technicians, therefore we recommend that you contact our customer support through the following link: http://helpdesk.smartdhome.com/users/register.aspx
Flashes twice slowly and then five times quickly.	Ground fault	25		The charging station is not properly grounded, therefore it is recommended to check the input cable (PE) of the power line. Should this type of fault occur, it is advisable to contact a specialized technician to carry out all maintenance operations on the electrical network. NOTE! For any faults on the charging station, we recommend that you contact our customer support immediately through the following link: http://helpdesk.smartdhome.com/users/register.aspx

Maintenance

To ensure the correct functioning of the recharging station, it is advisable to carry out all routine maintenance operations regularly (at least once a month). Here are some useful tips for correct maintenance of the station:

- Check that the equipment is properly connected to earth.
- Check that there are no flammable and explosive objects around the charging station.
- Verify that the junction point of the input terminal is free from anomalies.
- Check that all other end points are not loose.

Note: All operations relating to ordinary maintenance of the charging station must be carried out by a specialized technician.

For more information on this, we recommend that you contact our customer support immediately through the following link:

<http://helpdesk.smartdhome.com/VDSmartdhome/users/Login.aspx>

Disposal

Do not dispose of electrical appliances in mixed urban waste, use separate collection services. Contact the local council for information about available collection systems. If electrical appliances are disposed of in landfills or in inappropriate places, hazardous substances can escape into groundwater and enter the food chain, damaging health and well-being. When replacing old appliances with new ones, the retailer is legally obliged to accept the old appliance for free disposal.

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Warranty and customer support

Visit our website: <http://www.ecodhome.com/acquista/garanzia-eriparazioni.html>

If you encounter technical problems or malfunctions, visit the site:

<http://helpdesk.smartdhome.com/users/register.aspx>

After a short registration you can open a **ticket online**, also attaching images. One of our technicians will answer you as soon as possible.



SmartDH*o*ME

SmartDHOME Srl

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Product Number: 01040-1000-00

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