

CONTACT / CUSTOMER SUPPORT

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## HOME BOX EV CHARGING STATION WITH FIXED CABLE



**DC Version**

**Ratio**  
**ELECTRIC**

Manual

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## WARRANTY INFORMATION

**Ratio Electric B.V. warrants this product to be free from defects in material, manufacture and design for a period of 3 years after the date of purchase. If this product is defective in materials, manufacture or design during this warranty period, Ratio Electric B.V. will, at its option, repair or replace the product.**

**Repair parts and/or replacement products may be either new or reconditioned at Ratio Electric B.V. discretion.**

**This limited Carry-In Warranty does not include service to repair damage from improper installation, improper connections with peripherals, external electrical fault, accident, disaster, misuse, vandalism, unauthorized alteration or repair, abuse or modifications to the product not approved in writing by Ratio Electric B.V.**

**Any evidence of an attempt to disassemble the Home Box will void this warranty.**

**Any service repair outside the scope of this limited warranty shall be at applicable rates and terms then in effect.**

## FCC INFORMATION

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This product has been designed to protect against Radio Frequency Interference (RFI). However there are some instances where high powered radio signals or nearby RF-producing equipment (such as digital phones, RF communications equipment, etc.) could affect operation.

If interference to your charge station is suspected, we suggest the following steps be taken before consulting your Service Representative for assistance:

1. Reorient or relocate nearby electrical appliances or equipment during charging.
2. Turn off nearby electrical appliances or equipment during charging.



**Caution:** Changes or modifications to this product by other than an authorized service facility may void FCC compliance.

## IMPORTANT SAFETY INSTRUCTIONS

Carefully read these instructions and the charging instructions in your vehicle owner's handbook before charging your electrical vehicle.

Take special note of all information marked with the following symbols:

**Note:** *This means pay particular attention. Notes contain helpful suggestions*



**Caution:** *This symbol means be careful. You are capable of doing something that might result in damage to equipment.*



**Warning:** *This symbol means danger. You are in a situation that could cause bodily injury. Before you work on any electrical equipment, be aware of the hazards involved with electrical circuitry and standard practices for preventing accidents.*

### Safety Guidelines

- ❖ Use this Home Box to charge electric vehicles equipped with a conductive charge port only. See the vehicle's owner's handbook to determine if the vehicle is equipped with a conductive charge port.
- ❖ Make certain the Home Box's supply cable is positioned so it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- ❖ There are no user serviceable parts inside. Refer to the Customer Support section in this manual for service information. Do not attempt to repair or service the Home Box yourself.
- ❖ Do not operate your Home Box if it or the supply cable or housing is visibly damaged. Switch off the MCB in the electrical cabinet and contact your Service Representative for service immediately. Refer to the Customer Support section in the manual for information on the Service Representative in your area.

## SAFETY INFORMATION



**Warning:** When using electric products, basic precautions should always be followed, including the following:

- Read all the safety warnings and instructions before using the product. Failure to follow the warnings and the instructions may result in electric shock, fire and / or serious injury.
- This device should be supervised when used around children.
- Do not put fingers into the electric vehicle connector.
- Do not use this product if the flexible power cord or EV cable are frayed, have broken insulation, or any other signs of damage.
- Do not use this product if the enclosure or the EV connector are broken, cracked, open, or show any other indication of damage



**Warning:** If, at any time, you think the equipment is unsafe, switch off the MCB in your electrical cabinet and immediately contact Customer Support for service. Do not use your Home Box until the problem is identified and corrected.



**Caution:** Children should not be allowed to use this Home Box. Do not allow children to play in or around the Home Box. Close supervision of children is necessary when the Home Box is used.



**Caution:** Do not open the enclosure.

**Note:** This Home Box is designed according the IEC61851 Mode 3 standard.

**Note:** This product must be grounded/protective earthed. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment grounding conductor and a grounding plug.



**Warning:** Improper connection of the equipment-grounding conductor is able to result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded.

## SPECIFICATIONS

Charging System	IEC 61851 Mode 3
Car connector	IEC 62196 Type 1 and type 2
Power input	single-phase or 3 phase, 230V-400V, 16 A and 32A
Power output	3.7kW, 7.4kW, 11kW, 22kW
Dimensions	400mm x 250 mm x 105mm
Housing	PC/ABS
Weight	4 kg (incl. cable)
Environment	IP54, rain-tight
Operating Temperature	-25°C to +40°C

Marking CE

## MAINTENANCE

The Home Box requires no maintenance other than occasional cleaning.



**Warning:** Switch off your Home Box before cleaning the unit.



**Warning:** To reduce the risk of electrical shock or equipment damage, be cautious while cleaning the connectors and case.

Clean the Home Box using a soft cloth lightly moistened with mild detergent solution. Never use any type of abrasive pad, scouring powder, or flammable solvents such as alcohol or benzene.

## OPTIONS

**Key Switch** : If your Charging station is equipped with a key switch operation can be switched off. Turn the key to position “0”. To turn on put the key in position “1”. The key does not switch off the charger completely, but prevents unwanted use.

**KwH meter** : If your Charging station is equipped with a KwH meter it is possible to measure power usage. All our meters are MID certified.

**Tesla Button** : A button switch is built in the type 2 car plug. By pressing the charging cap of your Tesla Model S and Model X can be opened. Also the charging process can be stopped and the plug unlocked (only when the car is opened).

## INSTALLATION

1. The installation must be done by a qualified and licenced electrician according to the local legislation.
2. The electrical installation must be free of power during the entire installation period.
3. Since this Charging Unit uses circuits that reference to ground, no earthing must be done after connecting to power.
4. Wiring and protection:

Version	Wiring *	Mains Circuit Breaker (MCB)	Residual Current Device (RCD)
16A / 1 Phase	3G2,50mm <sup>2</sup>	20A B/C-Characteristic	30mA, Type A
16A / 3 Phase	5G2,50mm <sup>2</sup>	20A C-Characteristic	30mA, Type A
32A / 1 Phase	3G6,00mm <sup>2</sup>	40A B/C-Characteristic	30mA, Type A
32A / 3 Phase	5G6,00mm <sup>2</sup>	40A C-Characteristic	30mA, Type A

\* For cable length up to 25m

**PLEASE NOTE:** DC-versions include a DC residual-current-detection (>6mA).  
The type A RCD and the MCB must be placed in the electrical cabinet.

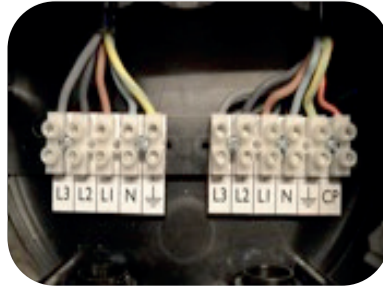
5. Open bottom cover of the Charge Station (5 screws – see picture). Carefully break out required cable opening for incoming power cable and charge cable. Use supplied M25 cable gland to fix power cable from the bottom. Use supplied grommet to fix power cable from the back. Use supplied M25 cable gland to fix charge cable.
6. Use 4 wood screws M4,5x35mm to mount Charging Station on the wall. The Charging Station should be installed between 0,80m and 1,20m from bottom to the ground.



- Connect in-coming power to the left terminal block.

Single Phase :  
 L1=Brown  
 N= Blue  
 Earth= Green/Yellow

3 Phase  
 L1=Brown  
 L2=Black  
 L3=Grey  
 N=Blue  
 Earth=Green/Yellow



- Close bottom cover and carefully slide metallized cover over the Charge Station.

## OPERATION

- Take the vehicle connector from its holder and plug into your car.
- The Ready / Charge LED with the last used Charge current lights up. By pressing the button you can chose the required charge current (16A versions: 10A, 14A or 16A, 32A versions :16A, 24A or 32A).
- Now the Charge station starts charging at the selected current.
- When charging is complete the Ready / Charge LED(s) will go out. Now you can take out connector from your car and put in holder.

**Note:** A lower charge current gives less heat loss, is better for your battery and gives a lower risk of overload of your electrical installation.

## FRONT PANEL DISPLAY

CHARGE CURRENT 16A versions		
	LED 10A Ready/Charge	LED 14A Ready/Charge
10A	●	
14A		●
16A	●	●

CHARGE CURRENT 32A versions		
	LED 16A Ready/Charge	LED 24A Ready/Charge
16A	●	
24A		●
32A	●	●

