

Installation- and usermanual wallbe Eco 2.0 – 3,7kW to 22kW English



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2.0 General information

The company behind wallbe:

wallbe GmbH is a specialist for intelligent charging solutions (e.g. for parking structures with RFID, OCPP, energy logging). Data transfer via LAN or GSM and matching connections into existing IT-systems as well as solutions for charging infrastructure for electric vehicles in connection with load management systems and renewable energy (e.g. solar, wind, or biogas) are a key competence of wallbe.

A competent team consisting of electrical engineers and master electricians as well as high quality components and solid German craftsmanship are the foundation for long living, high quality products. Constant innovations which are having an impact on the market ensure that wallbe is always one step ahead of its competitors.



Standardized quality

We are self-evidently working according to the DIN-Norm. High quality components as well as a strict material and production monitoring ensure that only flawless products leave our company.

Our competence

- Intelligent AC and DC charging solutions
- Charging solutions for employees
- Charging solutions for electric vehicle fleets and Car-sharing
- Billing and payment systems






3.0 Safety instructions and rEcommendations

The installation, connection and initial start-up must be performed by trained personnel with corresponding abilities.

Area of installation/ application

- **Be aware** that you have to choose an installation site where the requirements regarding the protection class of this device are met.
- **Be aware** that you have to choose an installation site where the device is not exposed to temperatures above its temperature rating.

	<p>Danger! <i>Immediate risk of fatal injury!</i></p> <p>Warning! <i>Immediate risk of possible fatal injury and/ or heavy, irreversible injury!</i></p>
	<p>Caution! Follow the guidelines at all times to avoid injury and damage of property.</p> <p>Attention! Follow the guidelines at all times to avoid damage of property.</p>
	<p>Warning ! <i>Don't try to repair or open the device yourself.</i> <i>Risk of electric shock might be possible!</i></p>

The installation, connection and initial start-up must be performed by trained personnel with corresponding abilities.

3.1 Safety instructions and rEcommendations

Children and people with limited abilities to handle devices are at risk.

- This device is not suited to be operated by people, including children, whose mental, physical or sensor abilities are limited as well as people who lack the necessary experience or knowledge.
- This device is only to be opened by trained and instructed personnel. While in use, the device has to be locked with a padlock by the owner.
- It is necessary that corresponding line circuit breakers and PRCDs are integrated in the subdistribution box to ensure that the circuit is safely disrupted in case of malfunction.
- Periodical inspections have to be performed to maintain the guarantee and warranty.

Disposal

To avoid transport damages, the device is delivered with packaging material. Those packaging materials are raw materials and can be re-used or recycled.

Please dispose this device in an Ecologically responsible way by handing it over to a local collection depot for old devices.

The installation, connection and initial start-up must be performed by trained personnel with corresponding abilities.

4.0 Technical details: wallbe Eco 2.0

Technical details

Model	wallbe Eco 2.0 3,7kW	wallbe Eco 2.0 4,6kW	wallbe Eco 2.0 7,4kW	wallbe Eco 2.0 11kW	wallbe Eco 2.0 22kW
Dimensions in mm	170x250x130	170x250x130	170x250x130	170x250x130	170x250x130
Weight	Ca. 3kg* *(Depends on cable/version)	Ca. 3kg* *(Depends on cable/version)	Ca. 3kg* *(Depends on cable/version)	Ca. 4kg* *(Depends on cable/version)	Ca. 4kg* *(Depends on cable/version)
Temp. rating	-20 to +55°C	-20 to +55°C	-20 to +55°C	-20 to +55°C	-20 to +55°C
IP-Class	IP65	IP65	IP65	IP65	IP65
Chargepoint	230V/1P/20A Cable Type 2 or Type 1 Or Type 2 socket	230V/1P/20A Cable Type 2 or Type 1 Or Type 2 socket	230V/1P/32A Cable Type 2 or Type 1 Or Type 2 socket	400V/3P/20A Cable Type 2 Or Type 2 socket	400V/3P/32A Cable Type 2
Compliance	Mode 3 IEC61851	Mode 3 IEC61851	Mode 3 IEC61851	Mode 3 IEC61851	Mode 3 IEC61851
Load contactor	2pol. 25A	2pol. 25A	2pol.40A	4pol. 25A	4pol. 40A
Control fuse	1pol.B6	1pol.B6	1pol.B6	1pol.B6	1pol.B6
Integrated safety measures	RCM module: DC detection <6mA Lock & Release module Contactor welding detection	RCM module: DC detection <6mA Lock & Release module Contactor welding detection	RCM module: DC detection <6mA Lock & Release module Contactor welding detection	RCM module: DC detection <6mA Lock & Release module Contactor welding detection	RCM module: DC detection <6mA Lock & Release module Contactor welding detection
RCD	Mandatory in switch board: RCD Type A 0,03A/25A	Mandatory in switch board: RCD Type A 0,03A/25A	Mandatory in switch board: RCD Type A 0,03A/40A	Mandatory in switch board: RCD Type A 0,03A/25A	Mandatory in switch board: RCD Type A 0,03A/40A
LS-switch	Not integrated	Not integrated	Not integrated	Not integrated	Not integrated
Authorisation	Standard: Key switch Optional: ON/OFF Button RFID External approval	Standard: Key switch Optional: ON/OFF Button RFID External approval	Standard: Key switch Optional: ON/OFF Button RFID External approval	Standard: Key switch Optional: ON/OFF Button RFID External approval	Standard: Key switch Optional: ON/OFF Button RFID External approval
Energymeter	Optional	No	No	No	No
Protocols	Modbus	Modbus	Modbus	Modbus	Modbus
Interfaces	RS485 Ethernet RJ45	RS485 Ethernet RJ45	RS485 Ethernet RJ45	RS485 Ethernet RJ45	RS485 Ethernet RJ45
Error-report	Error-LED	Error-LED	Error-LED	Error-LED	Error-LED

4.1 Technical details: Electrical connection-conditions

Electrical connection-conditions

Model	wallbe Eco 2.0 3,7kW	wallbe Eco 2.0 4,6kW	wallbe Eco 2.0 7,4kW	wallbe Eco 2.0 11kW	wallbe Eco 2.0 22kW
Input terminal	X1 L1/N/PE	X1 L1/N/PE	X1 L1/N/PE	X1 L1/L2/L3/N/PE	X1 L1/L2/L3/N/PE
Supply line	NYM-J 3x2,5mm ²	NYM-J 3x2,5mm ²	NYM-J 3x6mm ²	NYM-J 5x2,5mm ²	NYM-J 5x6mm ²
LS_switch/ preliminary fuse	1 pol. x C 16A	1 pol. x C 20A	1 pol. x C 32A	3 pol. x C 16A	3 pol. x C 32A
RCD in switch board	RCD Typ A A0,03A/25A	RCD Typ A A0,03A/25A	RCD Typ A A0,03A/40A	RCD Typ A A0,03A/25A	RCD Typ A A0,03A/40A

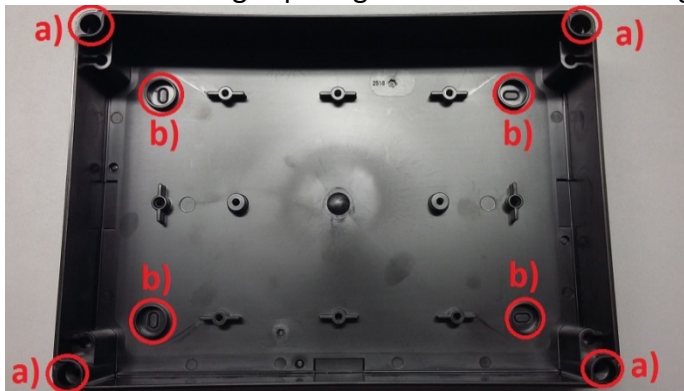
4. **Be aware** that you have to install an adequate LS-switch (see table) in the subdistribution!
5. **Be aware** that your wallbe Eco 2.0 is already equipped with a DC residual current detection >6mA. Therefore a cost intensive RCD Type A (EV) or Type B in the switch board is not necessary.
6. **We recommend** the integration of an overvoltage protection device in the switch board.
7. We strongly advise you to follow local norms and regulations.

The installation, connection and initial start-up must be performed by trained personnel with corresponding abilities.

4.1 Technical details: electrical connection – supply line

Electrical connection: supply line

1. Please open your wallbe Eco 2.0 to connect the supply line.
2. To wall mount your wallbe Eco 2.0 please use:
 - c) Please use the holes **a)**, as seen in the picture below.
 - d) Alternatively use the pre-cut holes **b)***, as seen in the picture below.
 - a. Please **make sure** to use the included sealing caps if you are using the pre-cut holes (b) to maintain the protection class IP65. Not using the sealing caps might lead to water entering the internal switch cabinet.



3. Please connect your supply line according to your wallbe Eco 2.0 variant. Use the recommendations and instructions of chapter “4.1 Electrical connection- conditions and 4.1 Technical Details: electrical connection – supply line”
4. Please note: You are free to choose any of the pre-cut holes to install the supply line – use a screwdriver to remove the covers.

Electrical connection: 3,7kW to 22kW

Supply line (Input terminal X1)	wallbe Eco 2.0 3,7kW	wallbe Eco 2.0 4,6kW	wallbe Eco 2.0 7,4kW	Supply line (Input terminal X1)	wallbe Eco 2.0 11kW	wallbe Eco 2.0 11kW
brown or black	L1	L1	L1	brown	L1	L1
blue	N	N	N	black	L2	L2
green /yellow	PE	PE	PE	grey	L3	L3
				blue	N	N
				green /yellow	PE	PE

The installation, connection and initial start-up must be performed by trained personnel with corresponding abilities.

4.2 Technical details: electrical connection – charging cable

Electrical connection: charging cable

1. Please open your wallbe Eco 2.0 to connect the charging cable.
2. Please connect your charging cable according to your wallbe Eco 2.0 variant. Use the recommendations and instructions of chapter “4.2 Technical details: electrical connection – charging cable”
3. Please note: You are free to choose any of the pre-cut holes to install the supply line – use a screwdriver to remove the covers.

Charging cable installation: 3,7kW bis 7,4kW

Charging cable	wallbe Eco 2.0 3,7kW input terminals	wallbe Eco 2.0 4,6kW input terminal	wallbe Eco 2.0 7,4kW input terminal
blue	X2 : 1	X2 : 1	X2 : 1
brown	X2 : 2	X2 : 2	X2 : 2
green/yellow	X2 : 3	X2 : 3	X2 : 3
black/white or black/purple	X2 : 4	X2 : 4	X2 : 4

Charging cable installation: 11kW bis 22kW

Charging cable	wallbe Eco 2.0 11kW input terminal	wallbe Eco 2.0 22kW input terminal
brown	X2 : 1	K1 : 2
black	X2 : 2	K1 : 4
grey	X2 : 3	K1 : 6
blue	X2 : 4	K1 : 8
green/yellow	X2 : 5	X2 : PE

black/white or black/purple	X2 : 6	X2 : 9
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5.0 Usage of your wallbe Eco 2.0

5.1 Charging process: start and stop

Every wallbe Eco 2.0 comes with a customer individual lock & release mechanism. Please follow the instructions and recommendations according to your wallbe Eco 2.0 variant.

5.1.1 Authorisation via ON/OFF Button

1. Connect your wallbe Eco 2.0 charging cable to your vehicle.*
2. Press your wallbe Eco's ON/OFF button.
 - a. Your wallbe Eco 2.0 is ready and charging as long as the ON/OFF button glows.
 - b. Press the ON/OFF button again to stop the charging process.
3. Please remove the charging cable from your vehicle.**

*(You are free to authorise the charging process beforehand.)

** (In some cases you have to unlock the charging cable on your vehicle using the EVs remote control.)

5.1.2 Authorisation via Key switch

1. Connect your wallbe Eco 2.0 charging cable to your vehicle.*
2. Please activate your wallbe Eco's key switch using the provided keys.
 - a. Position 1 enables the charging process.**
 - b. Position 0 stops the charging process.
3. Please remove the charging cable from your vehicle.***

*(You are free to authorise the charging process beforehand.)

** (You are free to remove the key during the charging process, enabling a permanent authorisation of your wallbe.)

*** (In some cases you have to unlock the charging cable on your vehicle using the EVs remote control.)

5.1.3 Authorisation via RFID*

1. Connect your wallbe Eco 2.0 charging cable to your vehicle.
2. Please hold your RFID-Card in front of your RFID-Cardreader.
 - a. You are now authorized to use the charger and the charging process should start immediately if you have already connected your charging cable.
3. Please use your EVs remote control to stop the charging process.
4. Please remove the charging cable from your vehicle.
5. As soon as the charging process has been terminated, you need to authorize once again to use your wallbe Eco 2.0.

*(You can find the manual to program or remove RFID-Cards in your wallbe Eco 2.0 package – Available in English and German.)

6.0 Error cases

6.1 Error causes

Error case 1: The charging process doesn't start.

1. Please check your RCD and LS-switch in the switch board.
 - b. The RCD and LS-switch might have tripped due to safety reasons.
2. Please check if your car is signalling an error. (e.g. charging not possible.)
 - c. In some cases EVs interrupt the charging process due to anomalies caused by the power supply. Please contact an electrician to check your subdistribution and power supply.
3. Please check your charging cable
 - d. Is your charging cable properly connected?
 - i. In some cases the locking mechanism is blocked if the cable is not properly connected.
4. Please make sure that you have authorised the charging process properly.
 - b. Please follow the instructions in the manual.

Error case 2: The charging process gets interrupted while charging

1. Please check your RCD and LS-switch in the switch board.
 - a. The RCD and LS-switch might have tripped due to safety reasons.
2. Please check if your car is signalling an error. (e.g. charging not possible.)
 - a. In some cases EVs interrupt the charging process due to anomalies caused by the power supply. Please contact an electrician to check your subdistribution and power supply.

Error case 3: You are not able to remove the charging cable from your car.

1. Please unlock the charging cable by using your EVs remote control or directly in the EV.
 - b. In some cases the locking mechanism remains active to prevent removal by unauthorised people.

Error case 4: Error-LED

It is possible that the Error-LED has been activated by one of the above mentioned errors. The Error-LED is placed right next to the ON/OFF button or key-switch.



Your safety matters!

Please feel free to contact our support if you are not able to solve a problem by yourself.

E-Mail: inquiry@wallbe.de

Tel.: 05252/989440

7.0 wallbe warranty and support

Support

Please feel free to contact our support via phone, E-Mail or Fax:

Tel: +49 (0) 5252-989440 / Fax: +49 (0) 5252-975666

Mail: inquiry@wallbe.de

Warranty

Our wallbe charging stations come with a 2 year manufacturer warranty.

Every single wallbe is shipped with a warranty card in two duplicates, where one is intended for the end customer and the other one for the manufacturer. Please make sure that you fill all the fields with the necessary information on the warranty card and submit the warranty card via E-Mail, mail or Fax. This warranty card reassures us that the installation was successful and that you have received the charging station in perfect condition. Please contact us as soon as possible via phone, E-mail or Fax if you receive a faulty/ damaged product or if your electrician is unable to install the charging station due to faults/ damage of the product. We kindly ask you to provide pictures if you receive a physically/ optically damaged product to ensure the fastest possible replacement/ warranty procedure.

Downloadlink – manuals

Website: www.wallbe.de/manuals/

Password: wallbe



Please note: Return or replacement only if safety seal is unbroken!