

Installation- and user manual wallbe Pro – 3,7kW to 22kW English



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2.0 General information

The company behind wallbe.de:

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 with limited mental, physical or sensor abilities as well as people who lack the necessary experience or knowledge (including children).
- 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 sub distribution 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.

4.0 Technical details: wallbe Pro

Technical details

Model	wallbe Pro 3,7kW	wallbe Pro 4,6kW	wallbe Pro 7,4kW	wallbe Pro 11kW	wallbe Pro 22kW
Dimensions in mm (h x w x d)	350x350x170	350x350x170	350x350x170	350x350x170	350x350x170
Weight	Ca. 12 kg	Ca. 12 kg	Ca. 12 kg	Ca. 12 kg	Ca. 12 kg
Temp. rating	-25 to +70°C	-25 to +70°C	-25 to +70°C	-25 to +70°C	-25 to +70°C
IP-Class	IP54	IP54	IP54	IP54	IP54
Chargepoint	230V/1P/20A Standard: Type 2 socket or cable Type 2 or Type 1 Optional: Schuko socket	230V/1P/20A Standard: Type 2 socket or cable Type 2 or Type 1 Optional: Schuko socket	230V/1P/32A Standard: Type 2 socket or cable Type 2 or Type 1 Optional: Schuko socket	400V/3P/20A Standard: Type 2 socket or cable Type 2 or Type 1 Optional: Schuko socket	400V/3P/32A Standard: Type 2 socket or cable Type 2 or Type 1 Optional: Schuko socket
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	1. RCM module: DC detection <6mA 2. Lock & Release module 3. Contactor welding detection	1. RCM module: DC detection <6mA 2. Lock & Release module 3. Contactor welding detection	1. RCM module: DC detection <6mA 2. Lock & Release module 3. Contactor welding detection	1. RCM module: DC detection <6mA 2. Lock & Release module 3. Contactor welding detection	1. RCM module: DC detection <6mA 2. Lock & Release module 3. 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
Authorization	Standard: ON/OFF Button Optional: Keyswitch RFID External apProval	Standard: ON/OFF Button Optional: Keyswitch RFID External apProval	Standard: ON/OFF Button Optional: Keyswitch RFID External apProval	Standard: ON/OFF Button Optional: Keyswitch RFID External apProval	Standard: ON/OFF Button Optional: Keyswitch RFID External apProval
Case lockable	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)
Energymeter	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)	Yes (optional)
Protocols	Modbus	Modbus	Modbus	Modbus	Modbus
Interfaces	RS485 Ethernet RJ45	RS485 Ethernet RJ45	RS485 Ethernet RJ45	RS485 Ethernet RJ45	RS485 Ethernet RJ45

5.0 Technical details: electrical connection - conditions

Electrical connection-conditions

Model	wallbe Pro 3,7kW	wallbe Pro 4,6kW	wallbe Pro 7,4kW	wallbe Pro 11kW	wallbe Pro 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

1. **Be aware** that you have to install an adequate LS-switch (see table) in the electrical sub distribution!
2. **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.
3. We strongly advise you to follow local norms and regulations.

If you have any further questions please contact us! Phone: +49-5252-989440

5.1 Technical details: electrical connection – supply line

Electrical connection: 3,7kW to 22kW

Supply line (Input terminal X1)	wallbe Pro 3,7kW	wallbe Pro 4,6kW	wallbe Pro 7,4kW	Supply line (Input terminal X1)	wallbe Pro 11kW	wallbe Pro 22kW
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

6.0 Installation

6.1.1 Wall mounting

8. Hold the cable holder at the desired installation position and mark the four screwholes. (Distance between screwholes: **255mm x 255mm**).
9. Use an 8mm drill to screw the mounting holes into the wall. Use an 8mm dowel for each of the screw holes.
10. Remove the Protection film from the adhesive tapes on your aluminum mounting frames and place them horizontally onto your **wallbe Pro**. Please make sure that that the **mounting frame holes** and **wallbe Pro mounting holes** are on top of each other.
11. Mount your wallbe Pro, including the mounting frames and cable holder, onto the wall.
12. Connect the supply line according to your **wallbe Pro model**. **Please follow the instructions in chapter “5.1 Supply line connection”**.
13. Remove the Protection film from your **wallbe Pro cover**
14. Mount the wallbe Pro cover on your charging station using the holes on the mounting frames.

6.2 Installation of the wallbe Pro charging pillar

6.2.1 Installation using the pre-built foundation incl. stainless steel mounting plate

6. Dig a hole of at least **80 x 100 x 55 cm** (Length x Width x Depth) for the pre-built foundation
7. Guide the electrical supply line through the empty conduits in the pre-built foundation.
8. Place the pre-built foundation at the desired position within the beforehand digged hole and use the excavated soil to keep it in place.
9. Mount your **wallbe Pro charging pillar** onto the stainless steel mounting plate using the included screws.
- 10. Connect the supply line according to your wallbe Pro model. Please follow the instructions in chapter "5.1 Supply line connection".**

7.0 Usage of your wallbe Pro

Every wallbe Pro comes with a custom authorization mechanism.

Please follow the instructions and recommendations according to your wallbe Pro model.

7.1.1 Authorization via ON/OFF button

1. Connect the tethered charging cable of your wallbe Pro to your EV.
If you own a wallbe Pro with a Type 2 socket, connect your charging cable to the wallbe Pro and then to your EV.
2. Press your wallbe Pro's ON/OFF button.
 - a. Your wallbe Pro is ready and charging as long as the ON/OFF button glows.
 - b. Press the ON/OFF button again to terminate the charging Process.
3. Please remove the charging cable from your vehicle.**

*(You are free to authorize the charging Process beforehand.)

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

7.1.2 Authorization via key switch

1. Connect the tethered charging cable of your wallbe Pro to your EV.
If you own a wallbe Pro with a Type 2 socket, connect your charging cable to the wallbe Pro and then to your EV
2. Please activate your wallbe Pro's keyswitch using the Provided keys.
 - a. Position 1 enables the charging Process using the Type 2 socket
 - b. Position 2 enables the charging Process using the Schuko-socket.
 - c. Position 0 terminates the charging Process.

Please remove the charging cable from your vehicle.**

*(You are free to authorize the charging Process beforehand.)

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

Hint: You are free to remove the key during the charging Process, enabling a permanent authorization of your wallbe.

7.1.3 Authorization via RFID*

1. Connect the tethered charging cable of your wallbe Pro to your EV.
If you own a wallbe Pro with a Type 2 socket, connect your charging cable to the wallbe Pro and then to your EV.
3. Hold your RFID-card in front of the RFID-card reader.
 - a. You are now authorized to use the charger and the charging Process should start immediately if you have already connected your charging cable.
4. Please remove the charging cable from your vehicle to terminate the charging Process.**
5. As soon as the charging Process is terminated, you need to re-authorize to start another charging Process.

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

8.0 Error cases

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

1. Please check your RCD and LS-switch in the switch board.
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.):
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:
Is your charging cable Properly connected? 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:
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.
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.):
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/wallbe Pro.

2. **wallbe Pro – Tethered cable:** In some cases the locking mechanism remains active to prevent removal by unauthorized personnel. Please unlock the charging cable by using your EVs remote control or directly in the EV.
3. **wallbe Pro – Type 2 socket:** If the charging cable remains locked at the charging station after the charging Process has been terminated it is likely that:
 - a. **A power blackout has occurred.**
 - b. **The RCD has tripped.**
 - c. **The LS-switch/ preliminary fuse has tripped.**

Please check the RCD, LS-switch/ preliminary fuse or if a power blackout has occurred.

Hint: wallbe charging stations with Modbus RS485 interface come with a “Lock and Release” Module that unlocks the charging cable connector from the charging station in case of power blackouts or tripped LS-Switches and RCDs.

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.: +49 (0) 5252/989440

9.0 Charging cable

Safety note

Danger: Never unplug the vehicle connector in any case with violence. Dangerous arcs can lead to death or serious injuries. Depending on the charging station and the electric vehicle the termination of the charging Process and the duration of unlocking may vary.

- Never charge with a damaged charging cable or vehicle-inlet.
- Never charge with dirty or wet contacts.
- Only connect the charging cable to vehicle-inlets that are Protected against water, humidity and other liquids.
- Some electric vehicles allow the start of the vehicle while the charging cable is still connected. Please make sure that your charging cable isn't connected to your car to avoid damage or injury.
- Never use the charging cable with an extension or adaptor.
- Never touch a melting or smoking charging cable. Terminate the charging Process and let the charging cable cool down.
- Please make sure that children have no access to the charging cable. The charging cable should only be operated by people with a valid drivers license.

9.1.1 Storage

Store the charging cable with the Protective cap on it at a dry and clean place. Alternatively you can store the vehicle connector in the parking position of your wallbe Pro if you have ordered it with a tethered charging cable.

9.1.2 Cleaning

1. Never clean a connected charging cable.
2. Never clean the charging cable and its contacts with a wet tissue.
3. Never clean the charging cable using aggressive detergents, water- or steam jet cleaners.
4. Never submerge the charging cable into liquids of any kind.

10.0 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!