

wallbe® Charging station

LEO

Wallbox



# INSTRUCTION MANUAL

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## 1 GENERAL INFORMATION

### 1.1 Introduction

Thank you for choosing one of our products. The charging stations of wallbe® offer convenient, safe and standard compliant charging according to the standard IEC 61851-1, charging mode 3.

Before putting the charging station into operation, read the instruction manual carefully and follow the instructions.

Ensure that all persons working on or using this charging system have read the operating manual, follow the regulations and instructions for working without risk.

Keep the equipment documentation at a location where it is always accessible to the operators of the charging system.

Ensure that no unauthorized persons can access the charging system.

### 1.2 Intended use

The charging system is intended for use in private and semiprivate areas, e.g. private properties, corporate parking areas, or depots.

Do not use the charging system where explosive or combustible substances (e.g. gases, liquids, or dusts) are stored or are present.

The charging system is intended exclusively for charging electric vehicles.

- Charging in accordance with type 3 of IEC 61851-1
- Plug-and-socket connectors in accordance with IEC 62196
- The charging system is intended for use only in TT, TN-C, and TN-C-S networks. The charging system must not be operated in IT networks.

The charging system is not suitable for charging vehicles with outgassing batteries (e.g. lead-acid batteries).

The charging system is operated as an individual station without a superordinate control system. The charging system is intended exclusively for stationary installation.

The charging system may only be operated and used

by persons who have read the operating manual.

The electrical installation, start-up, and maintenance of the charging system may only be performed by qualified electricians who have been correspondingly authorized by the operator.

The qualified electricians must have read and understood the equipment documentation and must comply with its instructions.

#### Requirements regarding the qualification of electricians:

- Knowledge of and compliance with the 5 safety rules for working with electrical installations:
  - isolate.
  - secure against reactivation.
  - check absence of voltage.
  - ground and short-circuit.
  - cover or block off live parts in the vicinity.
 Reactivation is carried out in reverse order.
- If further trades are required for assembly, the necessary activities may only be carried out by trained specialists.
- No liability will be accepted for damage during transport if the product is transported in anything other than the original packaging.
- At all times, observe the local safety regulations for the country in which you operate the device.
- Knowledge of the general and special safety regulations and accident prevention regulations.
- Knowledge of the relevant electrotechnical regulations e.g. checks associated with commissioning and the requirements for operating facilities, rooms, and special types of equipment - power supply for electric vehicles.
- Ability to recognize risks and to avoid potential hazards.

When installing and handling the charging system, the user, the operator, and the electrician must comply with the national regulations on safety and accident prevention.

## 2 SAFETY INSTRUCTIONS

Improper use and non-compliance with the operating manual may jeopardize:

- your life
- your health
- charging system and vehicle.

### Safety devices on the charging system

- must not be removed,
- must not be manipulated,
- must not be bypassed,
- before each use, it must be checked that the equipment (e.g. housing, connecting line, charging coupler) is undamaged,
- must be repaired or replaced as necessary, in order to preserve the functional properties.

Ensure that:

- safety identifications, e.g. yellow-colored marks,
- danger signs and
- safety lights

remain easily visible and retain their effectiveness.

- When operating the charging system, do not use any extension cables, cable reels, multisocket power strips, or travel adapters.
- Do not insert any objects into the charging coupler of the charging system.
- Protect the socket-outlets and plug-in connections against moisture and water or other liquids.
- Never immerse the charging system or the charging coupler in water or other liquids.
- Do not disconnect the charging coupler from the vehicle during charging.

wallbe® takes responsibility only of the charging system in its delivered condition and for any work performed by skilled wallbe® personnel.

### Notes for people with a pacemaker (PM) or implantable cardioverter defibrillator (ICD)

Charging systems from wallbe® that are operated as intended, comply with the European guideline on elec-

tromagnetic compatibility regarding radiated interference.

Should people with a pacemaker (PM) or implantable cardioverter defibrillator (ICD) wish to conduct activities on charging systems and their devices in the intended manner, wallbe® is not in a position to make any statement regarding the suitability of such medical devices. wallbe® is not able to assess the pacemakers or concerned implantable cardioverter defibrillators with regard to their susceptibility to electromagnetic radiation. This is something that only the manufacturers of the pacemaker or implantable cardioverter defibrillator can do.

wallbe® therefore recommends only allowing the people in question to work on its charging systems after consultation with the manufacturer of the pacemaker/defibrillator and the relevant insurance company. Ensure at all times that no health or safety risks are involved.

**Note:** People with a pacemaker or defibrillator may not work on or stand near the charging systems and their devices, e.g. to perform maintenance operations or rectify any faults.

### Working on the charging system without risk

Before plugging the charging coupler into the vehicle

- The connecting line of the charging system must be completely unwound.
- Check whether the housing of the charging system, the connecting line, the charging coupler, and the connectors are undamaged.
- Take hold of the plug-in connection of the charging system only on the charging coupler and not on the charging cable.
- Ensure that no-one can trip e.g. over the charging cable.

### During the charging process

- Keep unauthorized persons away from the charging system.
- When the charging system is connected, you must not clean or wash the vehicle with a high pressure cleaner because the plug-in connection is not sealed against pressurized water.

**In case of malfunctions or failure of the charging system**

- Disconnect the charging system from the power supply by switching off the respective circuit breaker in the building. Leave a sign with the name of the person authorized to switch on the circuit breaker.
- Call in a qualified electrician immediately.

**Electrical devices**

- The housing of the charging system must always be kept closed.

**3 DESCRIPTION OF THE CHARGING STATION**

The following figure shows the wallbe® LEO charging station. Depending on the variant ordered, the optical appearance differs from the figure.



Figure 1: Overview of wallbe® LEO

- A** Pushbutton/LED combination
- B** Nameplate

## 4 CHARGING A VEHICLE

### 4.1 Starting the charging process

1. Completely unwind the charging cable from the Wallbox.
2. Remove the cover from the coupler of the charging cable.
3. Plug the charging cable into the vehicle.

As soon as you have plugged the charging cable into the vehicle, the Wallbox switches to „ready“ and the LED lights up green. After approx. 12 min in the ready mode without being connected to a vehicle, the Wallbox changes into the standby mode and the LED goes out.

Wake up option 1:

- When the charging cable is plugged into the vehicle while the Wallbox is in the standby mode, it automatically switches to the ready mode. The LED lights up green.

Wake up option 2:

- When the button is pressed (without connected vehicle), the Wallbox changes from the standby mode to the ready mode. The LED lights up green and the charging cable can now be plugged into the vehicle.

**Note:** If an external blocking device is used, when the vehicle is connected, it checks whether there is an external block (e.g. by means of a key switch or similar). As long as the external device has not enabled the Wallbox, the LED lights up yellow and no charging takes place. After the external device has enabled the Wallbox, the LED lights up green.

When you have plugged in the charging cable, charging of the vehicle can start. The LED blinks green during charging. When the vehicle has stopped charging, the Wallbox terminates the charging process. The LED lights up green. These two operating statuses may be repeated a number of times during a complete charging cycle.

### 4.4 Ending the charging process

The charging process cannot be stopped with the button (Fig. 1). There are three ways of stopping the charging process:

- Stop the charging process with the vehicle's operating controls. Instructions on this are given in the vehicle's operating manual.

- Disconnect the Wallbox from the power supply by disengaging the building's circuit breakers.
- If the Wallbox has an external blocking device, you can use it to stop the charging process.

## 5 CLEANING

Do not use any aggressive cleaners (e.g. benzine solvents, acetone, ethanol, spirit glass cleaner) to clean the Wallbox and especially the plastic panel. These can attack/damage the surface.

Permissible cleaners are mild detergent solutions (rinsing solution, neutral cleaner) and a soft, moistened cloth.

## 6 INSPECTION AND MAINTENANCE

The legislator requires that the charging station and the associated sub-distribution system be checked once a year for their function and safety.

The inspection and maintenance of the charging station may only be carried out by the manufacturer or by specialist partners certified by wallbe®.

As a result of the inspection you will receive a protocol, which you should keep in a safe place.

Please also note chapter 9, Warranty.



### 7 TROUBLESHOOTING TABLE

Please note that as a user you may only carry out the troubleshooting measures listed in the following table yourself. All other troubleshooting measures may only be carried out by qualified personnel.

Problem	Solution
Wallbox does not react	If the Wallbox does not react after the charging cable has been plugged in or after pressing the button (Fig. 1), please check the building's power supply (circuit breakers, residual current circuit breaker).
LED lights up yellow	If an external blocking device is used, when the vehicle is connected, it checks whether there is an external block (e.g. by means of a key switch or similar). As long as the external device has not enabled the Wallbox, the LED lights up yellow and no charging takes place. Switch off the external blocking device. After the external device has enabled the Wallbox, the LED lights up green.
LED blinks alternately yellow/red:	Residual current circuit breaker in the Wallbox has been triggered. <ul style="list-style-type: none"> <li>Make a visual inspection of the Wallbox, the charging cable, and the vehicle.</li> <li>To reset the residual current circuit breaker, press the button (Fig. 1) for longer than 3 seconds. The LED flashes green.</li> </ul> After approx. 4 seconds, the Wallbox is ready for operation and the LED lights up green.
LED blinks yellow (blink sequence 50 % on / 50 % off)	Possible cause of the fault: overheating. <ul style="list-style-type: none"> <li>You do not need to intervene.</li> </ul> After a self-test and elimination of the malfunction, the LED lights up green.
LED blinks yellow (blink sequence 90 % on / 10 % off)	Possible cause of the fault: supply voltage is too high or too low. <ul style="list-style-type: none"> <li>You do not need to intervene.</li> </ul> After a self-test and elimination of the malfunction, the LED lights up green.
LED blinks yellow (blink sequence 10 % on / 90 % off)	Faulty communication with the vehicle or the maximum preset current has been exceeded. <ul style="list-style-type: none"> <li>Check that the charging cable is correctly plugged into the vehicle.</li> </ul> After a self-test and elimination of the malfunction, the LED lights up green.
LED lights up continuously red:	Internal malfunction of the Wallbox. <ul style="list-style-type: none"> <li>Disconnect the charging cable from the vehicle.</li> <li>Disconnect the Wallbox from the power supply by switching off the respective circuit breakers of the building.</li> </ul> Wait approx. 1 minute and then reengage the circuit breakers. After a self-test and elimination of the malfunction, the LED lights up green. <ul style="list-style-type: none"> <li>Reconnect the charging cable to the vehicle.</li> </ul>

### 8 SUPPORT

If the above malfunctions continue, please contact our support by e-mail. We will be happy to help you: [support@wallbe.de](mailto:support@wallbe.de)

## 9 WARRANTY

### 9.1 Warranty card

Each wallbe® charging station is shipped with a warranty card in duplicate, one for the operator and one for the manufacturer.

Please send us the completely filled out and signed warranty card by post, e-mail or fax if the charging station was delivered in perfect condition and the installation was successful. The completely filled out warranty card is required in the case of a warranty claim.

Should the charging station show visible defects during delivery/assembly, please inform us immediately by telephone or e-mail. If you notice any physical or optical damage when the charging station arrives, please send us pictures of the damaged charging station. This will ensure a quickest possible guarantee processing.

### 9.2 Warranty conditions

The legal guarantee for this charging station is valid for a period of two years.

In addition, this wallbe® product is guaranteed by the manufacturer against defects in materials and workmanship for a period of four years. The warranty period begins with the purchase of the device from wallbe GmbH or from a wallbe® dealer.

The warranty for a period of four years will be granted under the following conditions:

4. The prerequisite for the warranty is the installation and annual maintenance (incl. maintenance protocol) of the wallbe® product by a certified wallbe® specialist partner.
5. It is at the discretion of wallbe® whether the warranty is fulfilled by repair or by replacement of the device or the defective part. Further claims are excluded.
6. Warranty repairs may only be carried out by wallbe GmbH. For repairs carried out by other dealers, there is no claim for reimbursement of costs within the scope of the warranty.
7. If the device is to be operated in a country other than the country for which it was originally developed and produced, changes may have to be made to the device in order to adapt it to the technical and / or safety standards of this other country.

Such changes are not due to defects in materials or workmanship and are not covered by this warranty. The costs for such changes and for damages to the device caused by the changes will not be reimbursed.

8. Excluded from the guarantee are:

- The cost of regular inspections, maintenance, repair or replacement of parts due to normal wear and tear;
- Transport and travel costs as well as costs incurred for the installation and dismantling of the device;
- Damage caused by misuse and improper use of the device, and incorrect installation;
- Damage caused by lightning, water, fire, force majeure, war, wrong mains voltage, insufficient ventilation or other reasons beyond the control of wallbe®.

9. This warranty is product-related and can be claimed within the warranty period by any person who has legally purchased the product.

10. The Buyer's statutory rights in respect of material defects to which he is entitled under the purchase contract are not restricted by this warranty.

Further information can be obtained by calling +49 (0)5252 98892-00

### 9.3 Warranty case

When submitting a warranty claim, you will be required to provide:

- The correctly and completely filled out warranty card,
- maintenance protocols,
- the original invoice or the sales receipt issued by the dealer, or any other corresponding confirmation,
- the device serial number.

It is at the discretion of wallbe GmbH whether the warranty obligations are fulfilled by repair or by replacement of the device or the defective part. Further claims are excluded.

For further information please contact the following number:

Tel.: +49 (0)5252 98892-00

Or visit our website:

Web: [www.wallbe.de](http://www.wallbe.de)



**10 DISPOSAL**

Please note that this product must not be disposed of with household waste. The product must be disposed of at a designated collection and return point for the disposal and recycling of electrical and electronic equipment. Observe all applicable national and local legislation. Further information can be obtained from your local authorities.

For safety reasons, the charging station may only be dismantled by a qualified electrician or a wallbe<sup>®</sup> specialist partner. Ask your contact person whether he will take charge of the disposal for you.

## 11 TECHNICAL DATA

<b>POWER CLASS</b>	11 kW
<b>Construction type</b>	Wallbox or charging column
<b>Number of charging points</b>	1
<b>Charging capacity per charging point</b>	11 kW
<b>Voltage</b>	230/400 V
<b>Amperage</b>	16 A
<b>Phases</b>	3-phases
<b>Authorization</b>	Plug & Charge
<b>Charging socket</b>	No
<b>Charging cable</b>	Type 2, firmly attached, 5 m
<b>Dimensions wallbox (H x W x D)</b>	386 x 295 x 117 mm
<b>Weight wallbox</b>	8 kg
<b>Dimensions charging column (H x W x D)</b>	1370 x 250 x 180 mm
<b>Weight charging column</b>	11,5 kg
<b>Load contactor</b>	Relay
<b>Control fuse</b>	No
<b>Integrated fuses</b>	Residual current detection
<b>RCD (required in sub-distribution)</b>	FI Type A
<b>Circuit breaker (required in sub-distribution)</b>	max C 16A
<b>Housing lockable</b>	No
<b>Energy meter</b>	No
<b>Adjustable</b>	No
<b>Storage temperature</b>	-25 °C to +40 °C
<b>Operating temperature</b>	-25 °C bis 40 °C
<b>Protection class</b>	I
<b>Protection degree</b>	IP54
<b>Rated voltage U<sub>n</sub></b>	230V/400V 1/3 AC
<b>Nominal frequency</b>	50 Hz
<b>System according to type of earth connection</b>	TN

<b>Installation site</b>	private, semi-public
<b>EMC classification</b>	EN 61000-6-2, EN 61000-6-3

## 12 DIRECTIVES AND STANDARDS

The following guidelines and standards have been observed:

### Directives

- Low Voltage Directive 2014/35/EU

### Standards

- DIN EN IEC 61851-1
- DIN EN 61851-22



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