

**Charging in the private sector**

Please keep these instructions for future reference.



Charging in the private sector

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1. Introduction

Thank you for choosing a SSL Energie GmbH product. The P-CHARGE Wallbox was specifically designed for the charging of electric vehicles in the private sector. A reliable charging infrastructure is available to you with a variety of optional features and performance capabilities. The sustainable mobility of tomorrow begins with the P-CHARGE Wallbox. The P-CHARGE EWS-Box is the heart of system. This communication module undertakes all control- and signaling functions required, in accordance with IEC 61851-1, Mode 3, for the connection of an electric vehicle (EV) to an Electric Vehicle Supply Equipment (EVSE). Parameters for a self-sufficient or for a systems-integrated operation can be configured via a web platform. Variants with provision for optimized charging offer additional functionality. Working in conjunction with the SmartPvCharge or another embedded system, the electric vehicle can be charged using surplus PV energy only, if so required.

PLEASE NOTE

The P-CHARGE Wallbox is delivered pre-assembled and ready for connection. Once connected to the supply grid, including her fault current- and line protection with an energy meter if required, the P-CHARGE Wallbox is ready for charging.

2. Safety and legal information

2.1 WARNING NOTIFICATION CONCEPT

This instruction manual contains guidelines for the protection of human safety and for the prevention of material damage. These must be carefully observed. Safety guidelines are marked with a warning triangle. The warning triangle is not added to guidelines relating to the prevention of material damage. The following warning symbols are added according to the specific level of danger.



DANGER: indicates that failure to conform with the appropriate safety measures **will** lead to death or to serious injury.



WARNING! indicates that failure to conform with the appropriate safety measures **can** lead to death or to serious injury.



PLEASE NOTE: indicates that failure to conform with the appropriate safety measures **can** lead to minor personal injury.



PLEASE NOTE: indicates, with no symbol, that failure to conform with the appropriate safety measures can lead to material damage.

PLEASE NOTE: indicates that failure to conform with the corresponding guidelines can lead to an unwanted result or state.

If a situation presents several levels of danger, the warning notice is applied at the highest level in each case. If a warning notice with warning triangle serves to alert readers to the risk of personal injury then the warning may also contain an additional warning against material damage.

2.2 QUALIFIED ELECTRICAL TECHNICIAN

The mounting and startup of the P-CHARGE Wallbox must be executed by a qualified electrical technician and in full compliance with this documentation. According to DIN VDE 0105-100:2009-10 3.2.3 the term Qualified Electrical Engineer/Technician refers to a person who, due to his/her specialist training, knowledge and experience as well as familiarity with the current, valid norms, has the capacity to assess the task assigned to him/her and is able to recognize potential hazards.

2.3 PERSON INSTRUCTED IN ELECTRICS

The operation of the P-CHARGE Wallbox must be driven by a person who is fully conversant with the electrics of the system and in full compliance with this documentation. According to DIN VDE 0105-100:2009-10 3.2.4 the term "person who is conversant with the electrics of the system" refers to a person who, has received instruction from a qualified electrical technician relating to tasks assigned to him/her, as well as to the potential hazards of non-compliant behavior and who has learned about the safety equipment and protective measures required.

2.4 TRADEMARK PROTECTION

P-CHARGE® is a registered trade mark of the company SSL Energie GmbH. The remaining denotations in this manual may be trademarks, the use of which by third parties for their own purpose may injure the rights of the proprietor.

2.5 DISCLAIMER

Although the contents in this instruction have been carefully prepared, SSL Energie accepts no liability for the validity, accuracy, completeness or quality of the published information. Data provided in the installation manual is checked regularly for accuracy and is updated as required. Corrections are included in subsequent versions of the document.

2.6 SAFETY INFORMATION



DANGER

Danger of electric voltage

A voltage-free state must be established prior to the start of work at electric plants and at the P-CHARGE Wallbox in order to avoid accidents resulting from contact with live parts. Please note the 5 safety rules in accordance with DIN VDE 0105-100:2009-10 6.2.



WARNING!

Line- and personal protection

The safety device integrated into the P-CHARGE Wallbox serves to protect the unit and is designed for use with this device only. A separate line and personal protection device must be installed on the customer side for each charging point. To this end an RCD $I_{\Delta n} \leq 30\text{mA}$ (with 1-phase devices an RCD with min. Type A and with 3-phase devices an RCD with min. Type B) and a upstream circuit-breaker must be active. The circuit breaker must present at least trip characteristic B and should be laid to comply with the respective Wallbox variant.



WARNING!

Danger of asphyxiation

Charging gassing batteries in an interior space can lead to asphyxiation. According to the IEC 61851-1 the customer installed ventilation system must be controllable via the Wallbox. Monitoring of the customer-installed, mandatory ventilation system cannot be performed by the P-CHARGE Wallbox and its integrated P-CHARGE EWS-Box.

PLEASE NOTE

The selectivity of the building installation must be taken into account when installing line protection and the residual current device in the upstream power distribution.

WARNING!

Revocation of manufacturer's warranty due to impermissible changes to the device

Changes to the devices are not permitted. Non-conformance to this regulation will result in revocation of manufacturer's warranty.

WARNING!

Damage to the communication module

Installation and maintenance operations in direct conjunction with the P-CHARGE EWS-Box must always be carried out using ESD equipment. Electrical discharging can damage internal module components.

2.7 INTENDED USE



WARNING!

The tethered plug connection between the electric vehicle and the P-CHARGE Wallbox must not be extended by introducing an additional charging connector and coupler or by adding a second charging cable. The use of adapter plugs to connect the vehicle to the charging socket is also prohibited.



WARNING!

The P-CHARGE Wallbox may be utilized exclusively for purposes outlined in the corresponding technical documentation. Fail-safe operation of the P-CHARGE Wallbox is wholly dependent upon the correct storage, assembly, mounting, installation, startup, operation and maintenance of the device and, of course, correct transportation. The corresponding guidelines in the documentation must be observed.

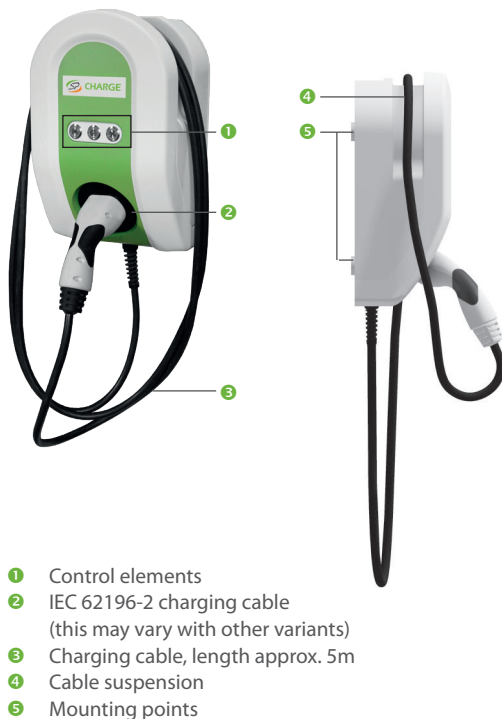
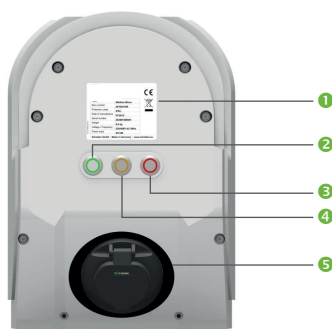


Image 1: Exterior view Wallbox
(Variant Wallbox with IEC 62196-2 Type2 charging cable)



Picture 2: Control elements of the Wallbox
(Variant Wallbox with IEC 62196-2 Type2 charging socket)

3. Scope of delivery

3.1 CHECKLIST PACKAGING UNIT

At delivery please check the contents of the package to ensure all parts have been included. The following items must be included in the delivery of the P-CHARGE Wallbox.

• P-CHARGE Wallbox	1x
• Pan Head screws 6x50mm TX30 A2	4x
• Expansion plugs S8 grey 8x40mm	4x
• Sealing washer with EPDM coating 8.4x16 A2	4x
• Self-tapping screw TX 3,5 x 16 center with collar; Stainless steel black	2x
• Drilling template 1:1	1x
• Instruction manual	1x
• Schematic circuit diagram	1x

4. General

4.1 OVERVIEW AND STRUCTURE OF THE WALLBOX

Overview of components visible from the exterior of the P-CHARGE Wallbox (Image 1)

4.2 CONTROL ELEMENTS

Explanation of individual control elements e.g. buttons on the Wallbox (Image 2)

Button	Name	Function
Button 1	Start button	Start the charging process
Button 2	Stop button	End the charging process
Button 3	Optimized charging ¹	Start the charging process "Optimized charging"

Table 1: Explanation of control elements

* "OPTIMIZED CHARGING":

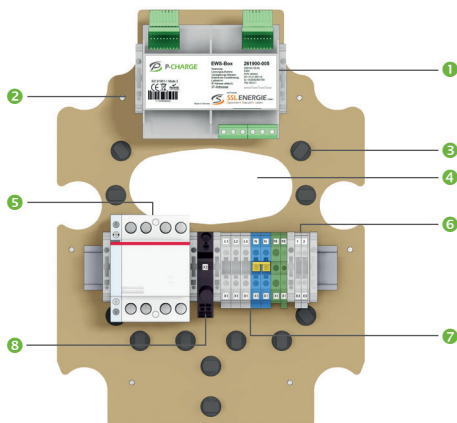
By selecting the function "Optimized Charging", the charging process can be controlled in accordance with predefined parameters. When operating in conjunction with SmartPvCharge or another embedded system, it is possible to charge electric vehicles using surplus PV energy only. Similarly, any charging- or fleet management system or indeed any other system can be implemented via LAN or serial interface. SSL Energie is happy to make available the relevant protocol for such implementations.

¹ This functionality is only possible with an active server operation

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Type	SP-CHARGE
Item number	261020-504
	261020-704
	261020-804
	261020-703
	261020-803
Year of manufacture	2017
Serial number	20500100259
Manufacturer	SSL Energie GmbH
Support / Hotline	0049 8072 37 67 - 298
E-Mail	info@ssl-energie.de
Website	www.ssl-energie.de

Image 3: Rating plate
(variant specific Rating plate)



- 1 EWS Box
- 2 Fastening points plug-in card to housing rear panel
- 3 Cable laying
- 4 Cable in-wall entry
- 5 Charging contactor
- 6 Terminal clamps ventilation provided by customer
- 7 Main connection terminals
- 8 Device protection EWS (Microfuse, Rated current 6, 3A, Rated voltage 250V, Glass tube fuse in accordance with EN 60127-2-3)

Picture 4: Electrical components - Example, technical changes reserved
electrical carrier plate Wallbox with charging cable IEC 62196-2 Type2
(up to 32A)

4.3 RATING PLATE

The following information can be taken from the rating plate (*Image 3*). Access the rating plate by removing the cover. Instructions on how to remove the cover can be found in Chapter 5.2.1.

4.4 ELECTRICAL COMPONENTS

4.4.1 MOUNTING THE WALLBOX CARRIER PLATE

The following image presents an overview of the electro-technical components implemented on the carrier plate. Access the carrier plate and its components by removing the cover and opening the housing (*Image 4*).

4.4.2 OPTIONAL CHARGING CABLES / CHARGING SOCKETS

The P-CHARGE Wallbox is available in a variety of designs. Choose between charging cable Type 1, charging cable Type 2 and charging socket Type 2.

CHARGING CABLE IEC 62196-2 TYPE 1

- Charging current: up to 20A
- 4-pole: P+N+PE+CP
- Output power: up to 4.6 kW



CHARGING CABLE IEC 62196-2 TYPE 2

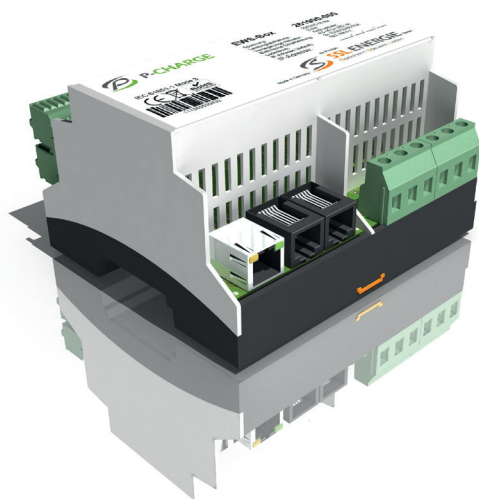
- Charging current: max. 32A
- 7-pole: 3P+N+PE+CP+PP
- Output power: up to 22 kW



CHARGING SOCKET IEC 62196-2 TYPE 2

- Charging current: max. 32A
- 7-pole: 3P+N+PE+CP+PP
- Output power: up to 22 kW





4.4.3 COMMUNICATION VIA EWS BOX

The communication between the P-CHARGE Wallbox and the electric vehicle takes place via the integrated P-CHARGE EWS Box.

The EWS Box communication module undertakes all control- and signaling functions necessary, in accordance with IEC 61851-1, Mode 3, for the connection of an electric vehicle (EV) to an Electric Vehicle Supply Equipment (EVSE). Parameters for a self-sufficient or for a systems-integrated operation can be configured via HTML pages.

4.4.3.1 TECHNICAL DATA

Nominal voltage	230 V
Nominal frequency	50 Hz
Power input	3.5 W (max.)
Locking actuator	2x 12V / 3A
Electrical power	AC-15 2x300VA
Ambient temperature (during operation)	-25 to 70°C
Relative air humidity	< 93%
Overvoltage category	II
Protection class	IP20
Housing	6TE DIN Bearing rail 35mm

4.4.3.2 TERMINAL CLAMPS AND CONNECTIONS

Terminal connections and the connection diagram of the EWS Box are shown below for incidental maintenance operations.



WARNING!

Cabling and wiring

Cabling and wiring within the P-CHARGE Wallbox must be carried out exclusively by trained professional personnel.

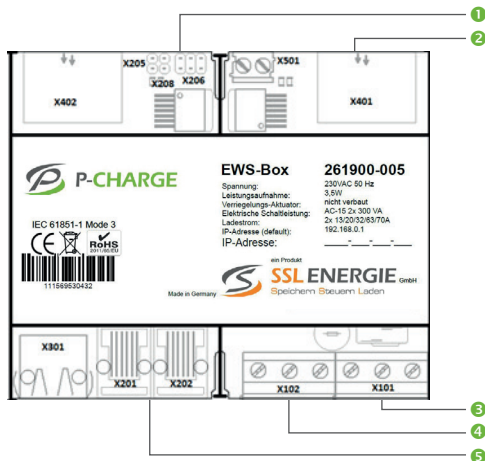


WARNING!

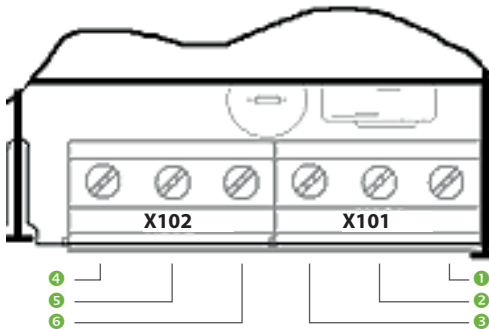
Electrostatic discharge (ESD)

When working on the EWS-Box or on other electrical components within the Wallbox, the appropriate ESD safety measures must be taken to avoid damage to electrical parts.

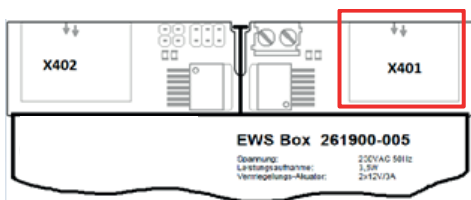
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- ① Configuration bridges (Jumper)
- ② Connection EV1
- ③ Mains terminal 230V AC (L1)
- ④ Contactor terminal
- ⑤ Interfaces RS232 / RJ45



- ① Grounding conductor (PE)
- ② Neutral conductor (N)
- ③ Phase (L1)
- ④ Contactor fan/blower
- ⑤ Contactor EV2
- ⑥ Contactor EV1



The most relevant terminal denotations are outlined once again and in more detail in the following. Wires should be labeled to avoid erroneous reconnection following a required shutdown or in the event that plugs i.e. screw terminals or jacks become loose at the EWS Box.

MAINS TERMINAL AND CONTACTOR TERMINAL



DANGER

Particular care and attention is needed when connecting wiring to the mains terminals as this task exposes the engineer to dangerous levels of voltage. For this reason, many installation tasks at the mains terminals must be carried out exclusively by qualified personnel and must be performed under voltage-free conditions only. The standards must be observed in accordance with DIN/VDE regulations.

X101 - MAINS TERMINAL (POWER SUPPLY TERMINAL): Connectivity to the grid is effected across the mains terminal (L1/N/PE) for the EWS Box, for the contactor circuits and for the ventilation circuitry.

X102 – CONTACTOR TERMINAL: The wiring of contactor coils is effected via the EWS Box. Care is to be taken that for each electric vehicle (EV), a nominal charge of max. 300VA (AC-15) can be activated. The blower connection activates a contactor / relay which serves both electric vehicles in equal measure.

WARNING!

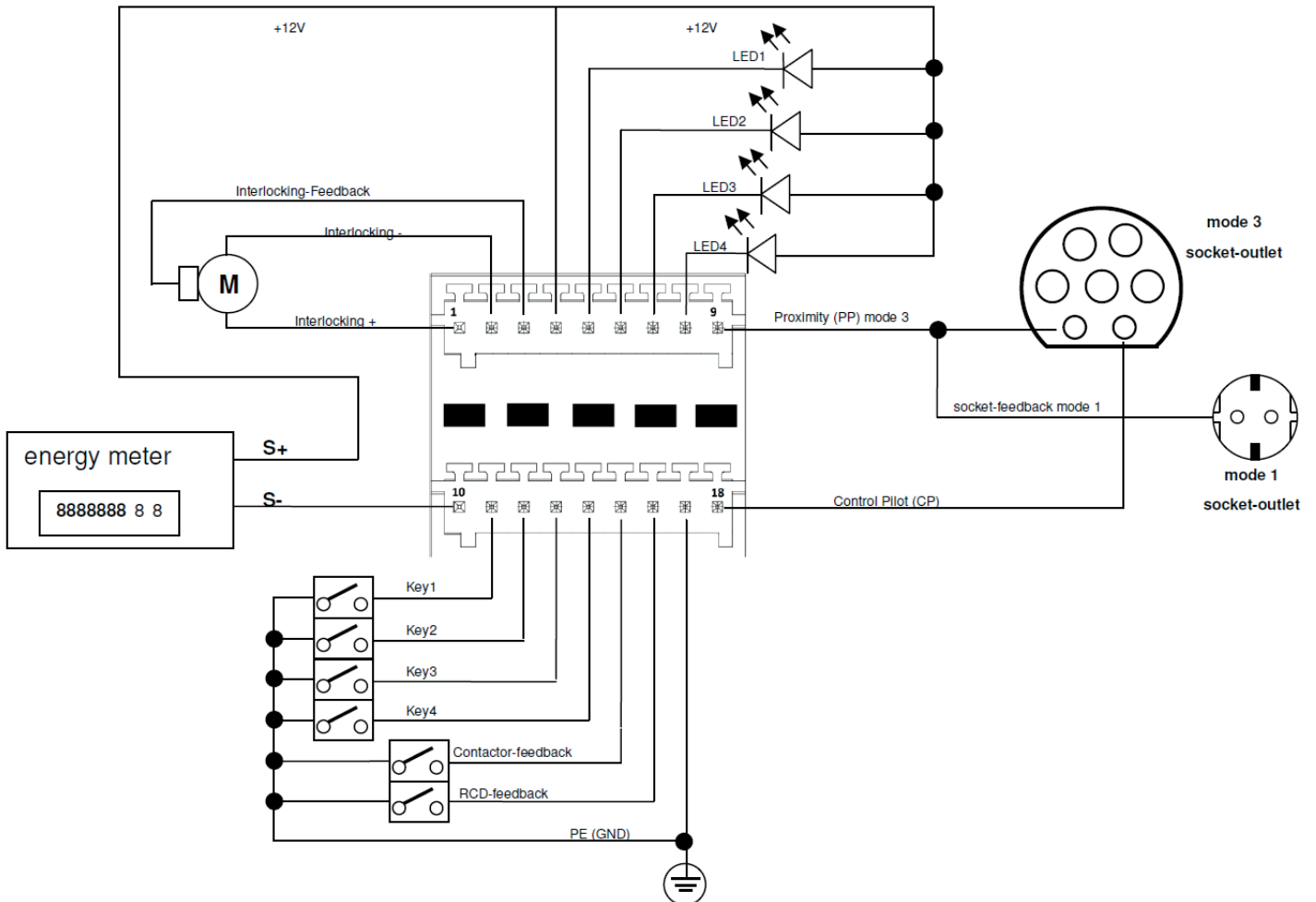
The connections in the X102 contactor terminal are designed solely for the activation of charging contactors and/or blower contactors and should never be used for the transmission of power to an EV!

EV CONNECTION: The EWS Box generally has the capacity to provide an independent supply of power to 2 electric vehicles (EV) simultaneously. EV 1 is connected to X401 and EV 2 to X402. The two connections are identical for both EVs. In the P-CHARGE Wallbox the slot X401 is used for charging control.

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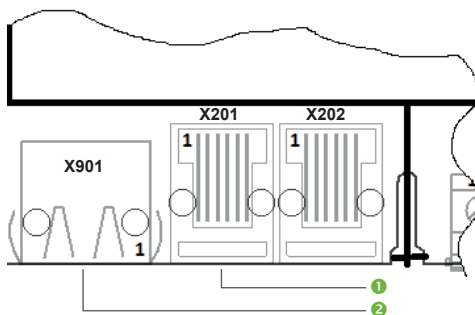
CONNECTION DIAGRAM FOR A POWER DISTRIBUTION UNIT (X401):

(The connection diagram for the power distribution unit is identical for the X402 slot). All plug connections are shown in the connection diagram. The following table defines the occupied slots on the power distribution unit. The connection diagram varies according to P-CHARGE Wallbox variant.



Sample picture, Circuit diagram

PIN no.	Function - Connection point	Cable color	Utilization with following item no.s.:
1	Locking device +	red	261020-703
2	Locking device -	black	261020-803
3	Locking response	blue	
4	+12V	red	All
5	LED1	grey	All
6	LED2	pink	All
7	LED3	light blue	All
8	LED4		not assigned
9	Proximity (PP)	white	All
10	Active energy meter S0-		not assigned
11	Button 1	green	All
12	Button 2	brown	All
13	Button 3	black	All
14	Button 4		not assigned
15	Charging contactor response	orange	All
16	RCCB response		not assigned
17	PE (GND)	dark blue	All
18	Control Pilot (CP)	red	All

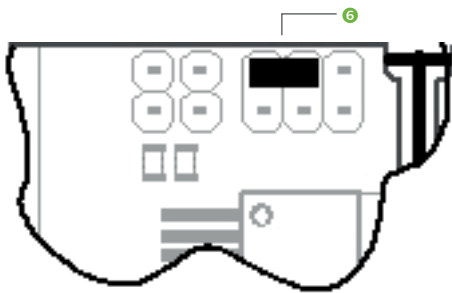
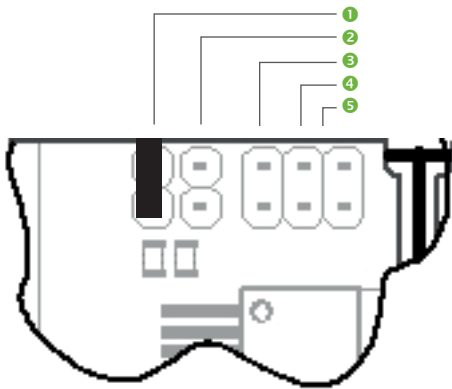


- ① RS 232
- ② Ethernet

COMMUNICATION INTERFACES: The integrated communication interfaces facilitate the control of access authorization, the local management of configuration settings and the integration of the module into an existing management system. The wires must have compatible contact plugs, each with a retaining clip to prevent unintentional detachment of the connection. The wires must not protrude from the sides of the clamps.

X201 - PC CONFIGURATION: This connection allows for the entry of system-relevant settings and for the transmission of permanent status queries.

X901 - ETHERNET: The internet connection supports data transfer as per 10/100BASE-T and is allocated a MAC Address prior to transmission. The IP address is preset (192.168.0.1) and can be changed via the configuration settings (no DHCP).



- 1 IP reset
- 2 PC-COM
- 3 Charging current 20A
- 4 Charging current 32A
- 5 Charging current 63A
- 6 Charging current 13A

CONFIGURATION VIA CONFIGURATION SWITCH (JUMPER):

The communication module has a number of switches which can be configured by the user to limit the maximal charging power, to reset an IP or to change the PC-COM on the communication interface X201. Jumpers must be set prior to startup of the module in order to be recognized. The module can be assigned a specific output capacity prior to startup and can therefore be deployed in any number of predefined areas. Pins carrying a higher voltage are removed prior to outbound delivery to comply with the predefined maximal output, so as to avoid configuration errors on the part of the customer which could result in damage to a vehicle at the charging point.

CHARGING CURRENT: A specific output capacity can be allocated to the EWS Box. This can be effected using the jumper, which must be connected at start-up of the module in order for the hardware to be recognized.

IP-RESET: On removal of the jumper during operation, the current IP address resets to the default configuration: 192.168.0.1.

PC-COM Connection of the jumper forces local administration across the PC interface X201. Software updates can be implemented on the EWS Box using this procedure.

WARNING!

The communication module is not able to balance the current-carrying capacity against the configured bridge. The user must therefore ensure that the system is able to fulfil all necessary prerequisites. The task of the mode bridge is to compare the capacity of a connected cable with the potential of the respective system.

4.5 TECHNICAL DATA WALLBOX (INDEPENDENT OF THE VARIANT)

COLOR SCHEMES

- Body RAL 9003
- Front RAL 9003 and RAL 6018
- Custom color schemes on request

DIMENSIONS / WEIGHT

- W / H / D: approx. 278x403x171 mm (without charging cable and plug)
- Depth with charging cable: approx. 236 mm
- Weight (variant specific): approx. 4.8 kg (min.), approx. 7.2 kg (max.)

INSTALLATION AND ASSEMBLY

- Wall mounting
- Recommended installation height: approx. 1250 mm
- On-wall and in-wall cable routing
 - On-wall from above
 - In-wall from rear
- Suitable for interior and exterior locations
- Terminal clamps: max. diameter 5x6mm² (Cu)

ELECTROTECHNICAL DATA

- Nominal power configurable: 6A, 10A, 13A, 16A, 20A, 25A, 32A
- Mains frequency: 50Hz
- Nominal voltage: 230/400V AC
- Terminal clamps: 6mm² (L1,L2,L3,N and PE)
- Protection class: IP54
- Overvoltage category: III
- Impact resistance: IK10
- Possible integration of customer-installed ventilation system
- Fault current and surge protection (customer side)
- Charging mode in accordance with IEC 61851-1 (Mode 3)
- Ethernet connection (RJ45)
- Operating status via LED in the buttons

ENVIRONMENTAL CONDITIONS

- Operational temperature: -25°C to +65°C
- Ambient air pressure: 860hPa to 1060hPa
- Ambient air humidity: 5% to 95%

4.6 TECHNICAL DATA WALLBOX (INDEPENDENT OF THE EQUIPMENT)

Item no.	Charging current up to 20A	Charging current up to 32A	Charging capacity up to 4.6 kW	Charging capacity up to 13.9 kW	Charging capacity up to 22 kW
261020-504	X		X		



Item no.	Charging current up to 20A	Charging current up to 32A	Charging capacity up to 4.6 kW	Charging capacity up to 13.9 kW	Charging capacity up to 22 kW
261020-704	X			X	
261020-804		X			X



Item no.	Charging current up to 20A	Charging current up to 32A	Charging capacity up to 4.6 kW	Charging capacity up to 13.9 kW	Charging capacity up to 22 kW
261020-703	X			X	
261020-803		X			X

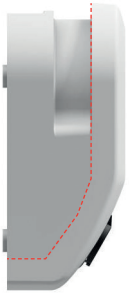


5. Installation

5.1 REQUIRED INSTALLATION MATERIAL

We recommend that you use the following tools to ensure a correct and compliant installation of the Wallbox:

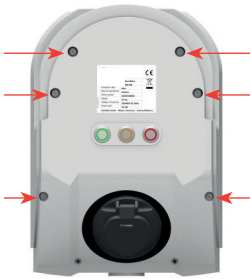
- Screwdriver TX 30
- Screwdriver TX 25 (at least 10cm length)
- Screwdriver TX 20



Picture 5: Removal of facing 1



Picture 6: Removal of facing 2



Picture 7: Position of the housing screws

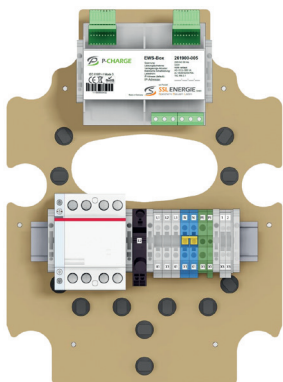


Image 8: Position of carrier plate and mounting rack - Example, technical changes reserved

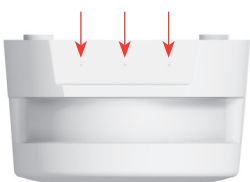


Image 9: Overview of position of designated on-wall entry points

5.2 PREPARING FOR THE INSTALLATION

5.2.1 PREPARING THE WALLBOX

Please start by removing the Wallbox cover. The Wallbox cover to be removed is outlined in *Image 5* with a red dotted line. To do this take hold of the cover at the underside of the Wallbox and pull forward and upwards, see *Image 5*. The front panel can be pulled away from the underside of the Wallbox where it is fixed closed with two plastic catches. Once released, the housing cover can now be lifted upwards and away (see *Image 6*).

In the next step remove the 6 x screws which connect the body of the Wallbox to the carrier plate. Use a TX25 screwdriver (min. length 10 cm). Positioning of the screws is demonstrated in *Image 7*.

The Wallbox body can now be removed by pulling it towards you.

5.3 PREPARING FOR THE ON-WALL CONNECTION

Insofar as the electric supply line and/or the data line/s are surface mounted and routed into the Wallbox the Wallbox carrier plate must make provision for this. Lines enter the device at the top side of the Wallbox. There are three possible entry points into the carrier plate, which, itself, is fixed at its middle points via a small central hole.

In each case, please ensure that the protection class IP54 (protection on all sides against spray water and dust in damaging quantities) is safeguarded following mounting of the cable glands. Cable glands must be mounted as follows.

PROCEDURE FOR CREATING LINE ENTRY-POINTS

1. Define the position and number of entry-points.
2. Determine size of glands (M16, M20, M25 or M32)
3. Remove the carrier plate with the electric wiring. Using a TX 20 screwdriver loosen the 6 fastening screws which serve to connect the carrier plate to the housing rear panel, see *Image 8*.
4. Pre-drill aperture using a twist drill.
5. Create the entry-point (max. M32 centrally and M25 left and right) using a step drill.
6. Mount the desired glands (M16, M20, M25 or M32).
7. Now rejoin the base plate to the carrier plate by tightening the 3 screws loosened in step 3.



Picture 10: Wallbox dimensions, front view



Picture 11: Wallbox dimensions, front view charging socket



Picture 12: Wallbox dimensions, front view charging cable

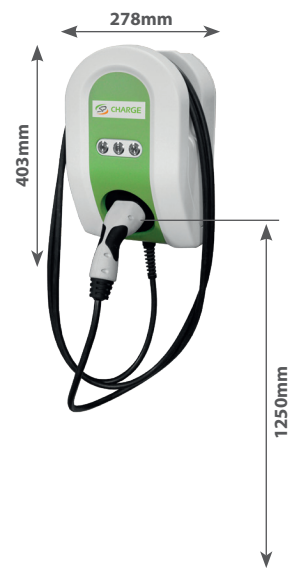


Image 13: Installation height

5.4 MOUNTING THE WALLBOX

Please determine the optimal location and position for the P-CHARGE Wallbox prior to mounting. Ensure you take the measurements of the Wallbox into account!

Height H	403mm
Width W	278mm
Depth with charging socket D ₁	171mm
Depth with charging cable D ₂	236mm

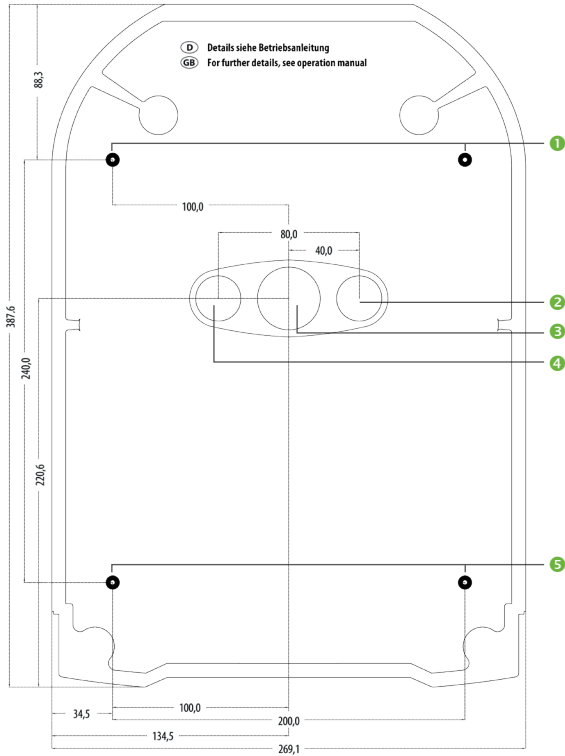
Mandatory height of centre of charging point c1250 mm above finished floor. See Image 13 (P-CHARGE Wallbox 261020-704, similarly other variants).

The exact position of supply lines with in-wall installations can be taken from Image 14 or from the drilling template included in delivery. The Wallbox should be mounted in a place and position which allows for optimal accessibility by the user. Please observe the standard cable length (approx. 5m) of the P-CHARGE Wallbox (EVSE) and the position of the charging bush on the electric vehicle (EV).

5.4.1 MOUNTING THE WALLBOX CARRIER PLATE

1. Align the drilling template perpendicular to the desired position and secure.
2. Mark the position of drill holes and remove the drilling template. Next drill holes - diameter 8mm. According to the screw anchor manufacturer the boreholes should be drilled to a depth of at least 55mm.
3. Laying supply lines
 - a) On-wall: Feed supply lines into the glands (only once rear wall has been mounted should the glands be secured)
 - b) In-wall: Feed supply lines through the rear wall. The lines must be fed through correctly at the required membrane spouts.
4. Secure the carrier plate of the Wallbox to the wall using pan head screws 6x50mm and sealing washers, tightening at TX20 A2 as is appropriate for the masonry.
5. Connect customer supply line to the designated main connection terminal X1.

Bohrschablone



Picture 14: P-CHARGE Wallbox drilling template

- 1 5 4x fastening points for wall mounting
- 2 Bushing - data cable
- 3 Bushing - power supply cable
- 4 Controller for customer-installed ventilation system



WARNING!

Such work must be carried out exclusively by qualified electrical technicians! A faulty neutral conductor can cause irrevocable damage to the device. Ensure appropriate dimensioning of the connection line. Dimensioning of the connection line is subject to installation type, line length, charging capacity (of Wallbox) etc. and can therefore not be predefined as a standard. The connection line must be secured well enough to ensure it does not come loose from the terminal clamps. The connection line length must be short enough to avoid potential contact with other live connections but long enough to incorporate the necessary safety devices.

6. A LAN connection can be established at the Ethernet port (X301) of the EWS-Box as an option. In the same way the ventilation of the building can also be connected to the EWS Box at the terminal clamp X3 (see schematic circuit diagram).



WARNING!

The connections in the X102 contactor terminal are designed solely for the activation of charging contactors and/or blower contactors and should never be used for the transmission of power to an EV!

7. Ensure that the supply lines are strain-relieved and that the insulation standards are adhered to. Additional fastening points are available to facilitate the running of lines through the Wallbox (via cable retainer).

5.4.2 ELECTRICAL CONNECTION OF THE WALLBOX

The electrical connection of the Wallbox must comply with a number of specifications, depending upon the variant and its respective connection capacity.

PLEASE NOTE

The following electrical installation data is offered by the company SSL Energie in the form of recommendation. The data must be supplemented or if necessary even reworked to correspond with respective country regulations and norms.

PLEASE NOTE

The technical connection conditions of the respective network operators are to be observed with regard to unbalanced load.

8. Loosely tighten the 6 fastening screws M5x20 using a TX25 screwdriver, see figure 7.
9. Align the housing once more and check its correct position; safeguard that the seal faces have sufficient contact.
10. Now tighten the 6 screws fully.
11. All that now remains to complete the installation, is to replace the front housing of the Wallbox. Fit the tongue at the upper side of the housing cover into the corresponding groove in the Wallbox housing and push the housing cover at the lower end of the Wallbox to the back.
12. Your Wallbox is now fully installed and can be used to charge electric vehicles.

5.4.2.1 RESIDUAL CURRENT CIRCUIT BREAKER (RCCB) TYPE B

If the load characteristic relating to potential DC residual currents > 6mA is not known then measures must be taken to assure protection in the event of residual current, e.g. through deployment of an RCD Type B, c.f. DIN VDE 0100-722 (VDE 0100-722):2012-10. To this end we recommend the implementation of a so-called "AC/DC" sensitive residual current circuit breaker (RCCB). This "Type B RCCB" is not included with the Wallbox and must be incorporated in the upstream house installation. SSL Energie hereby recommends the implementation of RCCB Type B ABB F204 B+40/0,03 or a comparable element.

5.4.2.2 CIRCUIT BREAKER

Appropriate fuse protection should be incorporated to correspond with the Wallbox variant to be installed. The following table taken from the DIN EN 60898-1 (VDE 0641-11 supplementary sheet 1) should help you select the correct MCB. The MCB must be aligned to conform with prevailing conditions at the installation site.

SSL Energie recommends the installation of the MCB ABB S203-C16N for charging points of up to 20A and the MCB ABB S203-C32N for charging points of up to 32A or comparable.

Step no.	Size to be defined	Influencing parameters	Framework conditions to be identified	Selection guide
1	Required cross-section	Wiring method	Intended operating current across line I_b Wiring method No. loaded conductors	DIN VDE 298-4 (VDE 0298-4), Table 3
2		Ambient temperature Correction factor for admissible current-carrying capacity/ampacity I_z	Ambient temperature varying from 30°C	DIN VDE 0298-4 (VDE 0298-4), Table 17 for PVC-isolated copper conductors
3		Grouping Correction factor for admissible current-carrying capacity	Number of laid wires No. of wiring methods	DIN VDE 0298-4 (VDE 0298-4), Tables 21 to 23
4		Line voltage drop	Generally 3% nominal voltage of operating current Line length	DIN VDE 0100-520 Suppl. 2 (VDE 0100-520 Suppl. 2), Tables 2 and 3
5		Shut down condition in event of fault	Line length MCB characteristic (B,C,D) defined via Step 8	DIN VDE 0100-520 Suppl. 2 (VDE 0100-520 Suppl. 2), Table 4:
6	Rated current I_n of the circuit breaker	Protection in event of overload	Admissible current-carrying capacity/ampacity of the line	DIN VDE 0100-430 (VDE 0100-430) section 5
7	Rated current with temperature derogating from 30°C in distributor	Ambient temperature in the distributor	Ambient temperature varying from 30°C in distributor	Manufacturer's data sheets

8	MCB characteristic (B, C, D)	Inrush currents	Expected starting- and inrush currents of the equipment	6.6 of this instruction manual, in accordance with DIN EN 60898-1 (VDE 0641-11), Table 2
9	Rated breaking capacity	Prospective short-circuit currents	Short-circuit current that can occur in the plant, in Germany TAB (technical connection conditions) stipulates at least 6kA.	DIN VDE 0100-430 (VDE 0100-430), section 6 DIN EN 60898-1 (VDE 0641-11), 5.3.4
10	Selectivity	Protective elements connected in sequence	I^2t -characteristic for MCB and pre-activated protective element for prospective short-circuit current.	Section 8 of this instruction manual
11	Power limitation class	Selectivity specifications	In Germany TAB (technical connection conditions) stipulates Power Limitation Class 3	DIN VDE 0100-430 (VDE 0100-430), 6.3 and 6.7 of this instruction manual

Source: DIN EN 60898-1 supplementary sheet 1

5.4.2.3 CABLE SPECIFICATIONS CONNECTION LINE

The connection line must be laid in accordance with the local and national guidelines for the dimensioning of wiring, from which specifications for the minimum cross section of a conductor can be taken. Influencing criteria for the dimensioning of lines includes:

- Wiring method, Selection guide in accordance with DIN VDE 298-4 (VDE 0298-4), Table 3
- Ambient temperature; selection guide according to DIN VDE 0298-4 (VDE 0298-4) Table 17 for PVC isolated copper conductors
- Grouping, selection guide in accordance with DIN VDE 0298-4 (VDE 0298-4), Tables 21 to 23
- Voltage drop on the line, selection guide in accordance with DIN VDE 0100-520 Suppl. 2 (VDE 0100-520 Suppl.), Tables 2 and 3
- Wiring material, copper (Cu) or aluminium (Al)
- Line length
- Planned power to be transmitted

When dimensioning the connection line the DIN VDE 0100 Section 520 maybe a helpful source of reference for determining the cross section of the conductor. According to the following extract from the DIN VDE 0100-520 Suppl. 2 (VDE 0100-520 Suppl. 2):2010-10 the following values apply in the event of a voltage drop of 3% for determining the cross section of the conductor, depending upon the line length and maximum permissible operating current.

Operating current A	Max. permissible cable and line length l _{max} in m Conductor diameter in mm ²										
	1.5	2.5	4	6	10	16	25	35	70	95	120
6	92	150									
10	55	90	141								
16	34	56	88	132							
20	28	45	70	106							
25		36	56	85	142						
35			40	60	101	160					

Source: DIN VDE 0100-520 Suppl. 2 (VDE 0100-520 Suppl. 2):2010-10: Table 2:

The following values apply with conductor temperatures of 30°C Three-phase circuits with nominal plant voltage of 400V 50Hz. In 1-phase alternating current circuits, the lengths must be multiplied by a factor of 0.5. In other line voltage drops, the cable lengths must be multiplied by the respective factors published in the following table.

Line voltage drop	Factor
1%	0.33
1.50%	0.5
4%	1.33
5%	1.67
8%	2.67
10%	3.33

Source: DIN VDE 0100-520 Suppl. 2 (VDE 0100-520 Suppl. 2):2010-10: Table 3:

WARNING!

Please note that the precursory guidelines relating to conductor cross-sections are solely indications taken from the designated DIN standards. The actual conductor cross section may be influenced by a number of factors relating to the respective installation and may therefore vary from the recommendation offered here.

5.4.3 MOUNTING THE WALLBOX HOUSING

The Wallbox rear panel is now securely fixed on the wall. Only the Wallbox housing remains to be fitted. The next steps outline how this is to be done:

1. Take the front housing in both hands and position parallel to the rear panel.
2. Next, push the front housing onto the rear panel already installed.

WARNING!

Ensure that individual strands of wire e.g. for the buttons, are safely laid within the interior of the Wallbox and are not caught between parts to be screwed together.

WARNING!

Take care not to damage the seals on the inner side of the housing when doing so.

3. Loosely tighten the 6 fastening screws M5x20 using a TX25 screwdriver, see figure 7.
4. Align the housing once more and check its correct position; safeguard that the seal faces have sufficient contact.
5. Now tighten the 6 screws fully. Torque: 8 Nm
6. Now replace the front housing of the Wallbox to complete the installation. Fit the tongue at the upper side of the housing cover into the corresponding groove in the Wallbox housing and push the housing cover at the lower end of the Wallbox to the back.
7. Your Wallbox is now fully installed and can be used to charge electric vehicles.

6. Operational Startup

Once installation is complete the Wallbox can be started up. Engage the fuses in your building distribution cabinet. The Wallbox will now be switched to operation mode. Initialization of the Wallbox can take approx. 3-5 mins as the integrated buffer of the EWS-Box must be charged first. This is used to control the charging process but only applies with P-CHARGE Wallbox variants 261020-703, 261020-803) During this phase the LED buttons flash. Charging from the buffer is initiated if the Wallbox is separated from the grid supply e.g. in the event of a power outage. The buffer is not suitable for the charging of electric vehicles, but is used solely to take control of and unlock the Wallbox charging socket in the event of an electrical outage.

PLEASE NOTE

The P-CHARGE Wallbox is **delivered ready to connect**. The following chapter relating to system startup applies only if a roll-back or reconfiguration of software settings is required, if software updates are to be installed or if charging processes are to be monitored online.

6.1 CONFIGURATION OF THE EWS-BOX

6.1.1 CONFIGURATION OF THE LAN-CONNECTION

To set up the EWS Box with firmware, a new LAN connection must be generated. Access the configuration settings by pressing the "Start" button on your operating system. Next select the folder Network and Sharing Center in the Control Panel. Select the button "LAN connection" to configure a new LAN connection.

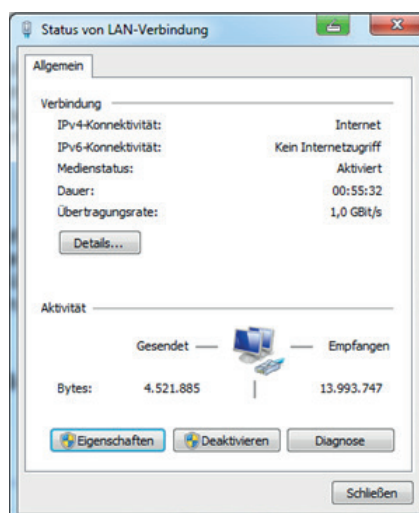


Image 15:
Establish new LAN
connection

The configuration window (left) then opens. Press the button "Characteristics".

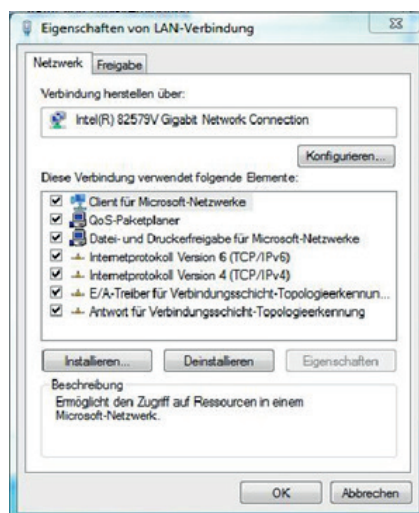


Image 16:
Characteristics of
LAN connections

In the next pop-up window double-click to select the menu item "Internet protocol Version 4 (TCP/IPv4)"

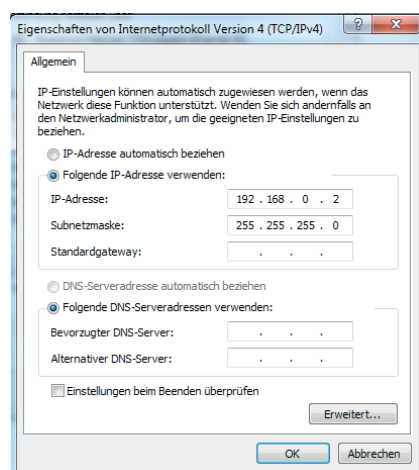


Image 17:
Characteristics of the
Internet protocol Version 4

In this window you must now change the default IP address „192.168.0.2“, enter the subnet mask „255.255.255.0“ and confirm all with „OK“. Please ensure, when deploying several EWS boxes (networked to one server) that each has a fixed IP address.

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EWS-Box Administration

Password: [Login](#)

[Charging outlet](#) [Details](#) [Settings](#) [Installation](#)

Charging outlet 1

RFID card:

RFID user:

kWh last session: 8,50 kWh

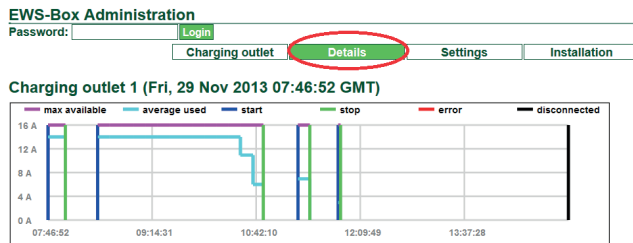
kWh total: 108,65 kWh

Status: not in use

Please connect vehicle

recorded 0,00 kWh charged in 0:00 min, currently 0,00 kW

Picture 18: EWS Box start page



Picture 19: EWS Box charging details

EWS-Box Administration

Password: [Login](#)

[Charging outlet](#) [Details](#) [Settings](#) [Installation](#)

Set time:

Time: [04] [12] 2013 [09] [16] :30 [current](#) [save](#)

RFID-card maintenance:

manual entry (group/card):

Approved group IDs:

Group:

[+ manual](#) [- manual](#)

[+ by card](#) [- by card](#)

Approved card IDs:

Group/Card:

[+ manual](#) [- manual](#)

[+ by card](#) [- by card](#)

Blocked card IDs:

Group/Card:

[+ manual](#) [- manual](#)

[+ by card](#) [- by card](#)

Write RFID card:

Card number: User name: [write](#)

User data:

User password:

Language:

Time zone:

Own IP address: 192.168.221.242

Own port: 8008

Gateway:

Network mask: 192.168.221.1

Server IP address: 255.255.255.0

Server Port: 192.168.221.10

8007 [save](#)

Picture 20: EWS Box settings

- 1 Set date and time
- 2 Network settings for server connection

6.1.2 CONFIGURATION VIA EWS FIRMWARE (HTML)

Once the default IP address (192.168.0.1) has been entered in the navigation bar of your internet browser, the start page is called up. When operational, the respective status of the charging point is displayed. A password is not required for login at factory setting. A password can be generated under the menu item Installation.

CHARGING POINT: The charging process can be initiated or terminated by clicking on the "Start" or "Stop" buttons. This option is only available, however, if a vehicle is connected to the Wallbox. Data on this menu page relating to the charged kWh/ time can only be obtained in conjunction with an additionally installed active energy meter. An example of this type of connection is given in Chapter 5.4.2.4 where an "S0 active energy meter" is represented.

6.1.3 DETAILS

In the header "Details" you can look up more precise information relating to previous, or still active charging processes. These details represent information relating to the start of the charging process, to the end of the charging process and to the removal of the plug. The EWS-Box also displays the maximum available charging current. This charging current equates to the maximum current (A) as is defined in Chapter 6.15. Also indicated here is the specific power source from which the electric vehicle is to be charged.

WARNING!

The maximum charging current at which a vehicle can be charged is dependent upon the individual vehicle itself. Data relating to the maximum charging current for your vehicle can be requested from your vehicle manufacturer.

6.1.4 SETTINGS

Under Settings, details can be stored such as date, time and user data. Several EWS Boxes can be administered on the network by entering user data and the corresponding server settings on the customer-side. The menu item RFID card administration is not relevant in the context of the Wallbox as this is an authorization-free variant of the P-CHARGE product series and therefore does not require external activation.

In the following table, parameters are defined that can be set via the configuration pages of the EWS-Box. The parameters in the heading "Settings" mainly serve to connect the Wallbox to a customer server.

EWS-Box Administration

Password:

Software information:

Firmware: M169300084E

Serial number: 051369560151

Max current (Jumper): 20 A

RFID firmware:

current RFID number:

current RFID user:

current RFID state:

Powerbackup: ready

108654

0

Import / Export:

Import configuration:

Export configuration:

Firmwareupdate:

System parameters:

Admin password:

Charging ports: 1

Active energy meter: 1000 Pulse/kWh

Active energy meter 2: 1000 Pulse/kWh

System mode: Ethernet

RFID: not installed

IO: automatic

Locking: motorized/pulse locking device

Ventilation: not installed

Port 1 mode: Mode3

Port 2 mode: Mode3

Mode cable: plug-in

Maximum current (A): 16

Maximum current 2 (A): 20

Voltage (V): 230

Voltage 2 (V): 230

Powerfail: automatic restart

RFID-Pin:

User name:

Street:

Location:

Telephone:

Customer number:

User data	
User password	For logging on to the website and for changing the following settings (not configured in delivery mode)
Language	User language of website
Time zone	Current time-zone
Own IP address	IP address of the Wallbox (for server and website)
Own port	Source port of the Wallbox for the server connection
Gateway	Network settings for the server connection
Network mask	Network settings for the server connection
Server IP address	Server address of target server
Server Port	Server address of target server

6.1.5 INSTALLATION

In the header "Installation" you can call up software information. Via this header you can also upgrade Firmware or import/export previous installation settings. Similarly, max. charging power previously defined via the "Jumper" (c.f. Chapter 4.4.3.2 (pg. 14)) can be limited further, manually.

SOFTWARE INFORMATION:

Parameters	Function
Firmware	Here you can look up the current firmware of the EWS-Box.
Serial number	Serial number of the EWS Box
Max. current (Jumper)	The max. current determined by the jumper c.f. Chapter 4.4.3.2 is displayed here. The charging current in the current configuration cannot exceed that which is defined here. To achieve a higher charging capacity the jumper must be modified in accordance with Chapter 4.4.3.2.
RFID-Firmware	Not used
Current RFID number	Not used
Current RFID user	Not used
Current RFID status	Not used
PowerBackup	Here you can see if a power backup circuit board is installed. In an idle state this circuit board collects sufficient energy to activate the locking device. This function applies only to variants of the Wallbox with item no.s: 261020-701, 261020-703, 261020-801, 261020-803

IMPORT / EXPORT

WARNING!

Take care not to damage the seals on the inner side of the housing when doing so.

IMPORT CONFIGURATION

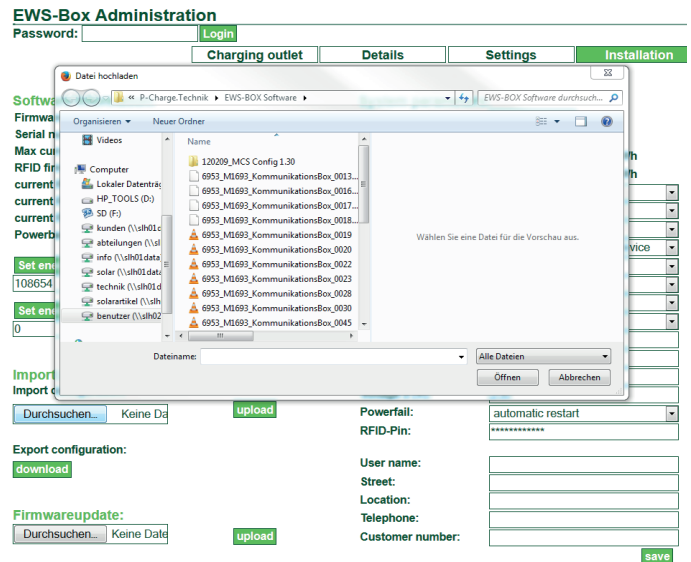
EWS-Box Administration

Password: <input type="password"/>		<input type="button" value="Login"/>	
<input type="button" value="Charging outlet"/>		<input type="button" value="Details"/>	<input type="button" value="Settings"/>
<input type="button" value="Installation"/>			

Software information:		System parameters:	
Firmware:	M169300084E	Admin password:	<input type="password"/>
Serial number:	051369560151	Charging ports:	<input type="text" value="1"/>
Max current (jumper):	20 A	Active energy meter:	<input type="text" value="1000"/> Pulse/kWh
RFID firmware:		Active energy meter 2:	<input type="text" value="1000"/> Pulse/kWh
current RFID number:		System mode:	<input type="text" value="Ethernet"/>
current RFID user:		RFID:	<input type="text" value="not installed"/>
current RFID state:		IO:	<input type="text" value="automatic"/>
Powerbackup:	ready	Locking:	<input type="text" value="motorized/pulse locking device"/>
<input type="button" value="Set energy meter 1 (Wh)"/>		Ventilation:	<input type="text" value="not installed"/>
<input type="text" value="108654"/>		Port 1 mode:	<input type="text" value="Mode3"/>
<input type="button" value="Set energy meter 2 (Wh)"/>		Port 2 mode:	<input type="text" value="Mode3"/>
<input type="text" value="0"/>		Mode cable:	<input type="text" value="plug-in"/>
Import / Export:		Maximum current (A):	<input type="text" value="16"/>
Import configuration:		Maximum current 2 (A):	<input type="text" value="20"/>
<input type="button" value="Durchsuchen..."/>	Keine Datei	Voltage (V):	<input type="text" value="230"/>
		Voltage 2 (V):	<input type="text" value="230"/>
		Powerfail:	<input type="text" value="automatic restart"/>
		RFID-Pin:	<input type="text" value="*****"/>
Export configuration:		User name:	<input type="text"/>
<input type="button" value="download"/>		Street:	<input type="text"/>
		Location:	<input type="text"/>
		Telephone:	<input type="text"/>
Firmwareupdate:		Customer number:	<input type="text"/>
<input type="button" value="Durchsuchen..."/>	Keine Datei		<input type="button" value="save"/>

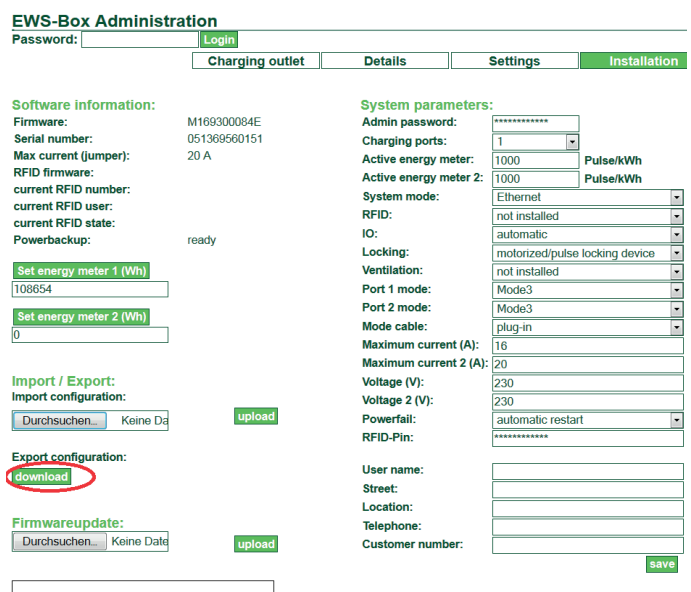
By selecting the button "Search..." you can import previously generated configurations.

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An options window now opens in which you can select from a list of previously exported configurations. The selected configuration can subsequently be imported and uploaded.

EXPORT CONFIGURATION



By selecting the button "Download" set configurations can be backed up externally - to a PC etc.

FIRMWARE UPDATE

EWS-Box Administration

Password:

Software information:

Firmware: M169300084E

Serial number: 051369560151

Max current (jumper): 20 A

RFID firmware:

current RFID number:

current RFID user:

current RFID state:

Powerbackup: ready

Import / Export:

Import configuration:

Export configuration:

Firmwareupdate:

System parameters:

Admin password:

Charging ports:

Active energy meter: Pulse/kWh

Active energy meter 2: Pulse/kWh

System mode:

RFID:

IO:

Locking:

Ventilation:

Port 1 mode:

Port 2 mode:

Mode cable:

Maximum current (A):

Maximum current 2 (A):

Voltage (V):

Voltage 2 (V):

Powerfail:

RFID-Pin:

User name:

Street:

Location:

Telephone:

Customer number:

By selecting the button "*Search...*" you can load new firmware onto your EWS-Box thus ensuring that your Wallbox is always running the latest software technology. You can find the latest respective firmware version in the Downloads area of the SSL Energie GmbH website at www.SSL-Energie.eu/ews-box

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EWS-Box Administration

Password:

Software information:

Firmware: M169300084E

Serial number: 051369560151

Max current (jumper): 20 A

RFID firmware:

current RFID number:

current RFID user:

current RFID state:

Powerbackup: ready

108654

0

Import / Export:

Import configuration:

Export configuration:

Firmwareupdate:

System parameters:

Admin password:

Charging ports:

Active energy meter: Pulse/kWh

Active energy meter 2: Pulse/kWh

System mode:

RFID:

IO:

Locking:

Ventilation:

Port 1 mode:

Port 2 mode:

Mode cable:

Maximum current (A):

Maximum current 2 (A):

Voltage (V):

Voltage 2 (V):

Powerfail:

RFID-Pin:

User name:

Street:

Location:

Telephone:

Customer number:

In this options window you can select the latest version of firmware on your computer and by confirming the selection with "Open" the firmware is saved to the HTML-page.

EWS-Box Administration

Password:

Software information:

Firmware: M169300084E

Serial number: 051369560151

Max current (jumper): 20 A

RFID firmware:

current RFID number:

current RFID user:

current RFID state:

Powerbackup: ready

108654

0

Import / Export:

Import configuration:

Export configuration:

Firmwareupdate:

System parameters:

Admin password:

Charging ports:

Active energy meter: Pulse/kWh

Active energy meter 2: Pulse/kWh

System mode:

RFID:

IO:

Locking:

Ventilation:

Port 1 mode:

Port 2 mode:

Mode cable:

Maximum current (A):

Maximum current 2 (A):

Voltage (V):

Voltage 2 (V):

Powerfail:

RFID-Pin:

User name:

Street:

Location:

Telephone:

Customer number:

Simply confirm your selected firmware version by pressing the button "upload". The Wallbox will now be uploaded to your EWS-Box. Once the upload is complete you must wait approx. 10 seconds for the HTML page of your browser to reload then you can activate the latest firmware.

SYSTEM PARAMETERS: System parameters can be set using the options on the right. These can only be modified if you are already logged on as Admin.

Parameters	Function/Explanation
Admin password	For logging on to the website and for changing the following settings (not configured in delivery mode)
Charging ports	Not relevant as only one charging socket available.
Active energy meter	Not installed in Wallbox
Active power meter 2	Not installed in Wallbox
System mode	Ethernet/RS232
RFID	Not installed in Wallbox
I/O	Buttons and LEDs are controlled manually / automatically via the server
Locking	Integrated Mode 3 locking system, only relevant for Wallbox Item no.s 261020-703, 261020-803.
Ventilation	Ventilation can be supported, designated plug terminals present (X3, see schematic circuit diagram). Connection on customer side required
Port 1 Mode	Mode 1 (Schuko) or Mode 3 (PWM)
Port 2 Mode	Mode 1 (Schuko) or Mode 3 (PWM)
Mode cable	Modular: to be configured for item no.: 261020-703, 261020-803 Integrated: to be configured for item no.: 261020-504, 61020-704, 261020-804
Maximum current (A)	If unequal 0: Limitation of electricity supply (if smaller than jumper setting) with integrated cable: manual resistance value. The charging current set via the jumper (c.f. Chapter 4.4.3.2) can be limited further here.
Maximum current 2 (A)	Not relevant for Wallbox
Voltage (V)	Applied voltage at charging port 1, single phased charging (230V), three-phase charging (400V)
Voltage 2 (V)	Not relevant for Wallbox
Powerfail	Following a power outage to the box the charging process will either be restarted automatically or will require a manual restart.
RFID Pin	Not relevant for Wallbox
User name	Installation information provided by the customer
Street	Installation information provided by the customer
City	Installation information provided by the customer
Telephone	Installation information provided by the customer
Customer number	Installation information provided by the customer

Once these parameters are set the Wallbox configuration is complete and is available for the charging of electric vehicles.

a) charging socket



b) fixed cable



7. Handling

7.1 WALLBOX FOR PRIVATE USE

The Wallbox is designed for private use, meaning it requires no authorization to initiate the start or end of a charging process.

START CHARGING PROCESS:

To start a charging session, plug the cable for the electric vehicle into the appropriate charging socket of the Wallbox (a). For the Wallbox variant with fixed charging cable (b), plug the cable into the appropriate charging socket of the electric vehicle.

The Start button (*button 1*) begins to flash green. Now press the start button to activate the charging process. The button is backlit in green for the duration of the charging process.

TERMINATE CHARGING PROCESS:

To end the vehicle charging session, press the Stop button (*button 2*). Charging is complete, the Start button is no longer lit and you can remove the charging plug from the socket (a) or the charging cable plug (b) from the vehicle.

7.2 WALLBOX IN "OPTIMIZED CHARGING" MODE

As outlined in 4.2/ Control elements, for this variant, you require connection to a server. If you have a web-capable computer, you can establish a connection between server and EWS-Box via LAN cable. Next set up the necessary HTML page required for this, as explained in Chapter 6.1.

START CHARGING PROCESS:

To start a charging session, plug the cable for the electric vehicle into the appropriate charging socket of the Wallbox (a). For the Wallbox variant with fixed charging cable (b), plug the cable into the appropriate charging socket of the electric vehicle.

The "Optimised Charging" process is selected by pressing *Button 3*. Press *Button 1* now to start charging your vehicle in optimized charging mode. Depending on the parameters chosen for server connection, the charging session may not begin immediately but only then when these parameters have been fulfilled. The buttons are backlit in orange and green for the duration of the charging process.

Terminate charging process:

To end the vehicle charging session, press the Stop button (*button 2*). Charging is complete, the Start button is no longer lit and you can remove the charging plug from the socket (a) or the charging cable plug (b) from the vehicle.

8. Maintenance

8.1 SERVICE NOTES

The Wallbox is designed to require minimal maintenance. It can be cleaned with common detergents as necessary. Please avoid the use of scrubbing powders or detergents with abrasive particles.

Repeated audit tests should be carried out on the P-CHARGE Wallbox in accordance with BGV A3 or the respective country norms and regulations. The following audit test intervals apply in accordance with the following extract from the BGB A3.

Facility/equipment	Test intervals	Type of functionality audit	Inspector
Electrical plants and stationary equipment in "industrial premises, rooms and plants of a particular type" (DIN VDE 0100 Group 700)	1 year	for an orderly condition	Qualified electrical technician
Fault current, alternating current and error voltage switches in stationary plants	6 months	for error-free functionality when operating the test facility	User

Source: BGV A3 Accident prevention regulation – Table 1A

We recommend that a complete functionality audit of the P-CHARGE Wallbox be carried out every 6 months to ensure the best possible performance of the device.



WARNING!

Maintenance works

Please note that these tasks should be carried out by trained, technical personnel only.

8.2 TROUBLESHOOTING

In the event of an error, Button 3 is permanently backlit in red until the error is corrected.

- **POWER FAILURE:** In the event of power failure, the Wallbox automatically shuts down. Once power is reestablished, the Wallbox will restart by restoring the status saved at the point of outage. The power backup board in the EWS Box must, however, now be recharged. This can take approx. 2-3 minutes. The Wallbox is then fully functional. The control elements of the Wallbox are backlit while the power backup board is charging.

- **ERROR: INVALID CONFIGURATION:** In this case please log into the HTML page as Administrator and configure your EWS Box under menu item "Installations", according to your required parameters. Under menu item "Maximum current (A)" enter the applicable Current Value for your system and save this to the settings.
- **ERROR: VENTILATION NOT SUPPORTED:** Here the ventilation system you use is not supported by the EWS Box. In such case, please change the ventilation system. It could, however, be the case that the respective ventilation system is not yet activated in the settings on the HTML page. Log in to the HTML page as Administrator and change the setting "System parameter - Ventilation" under menu item "Installations". Otherwise check connection of the ventilator contactor in the contactor terminal X102.
- **ERROR: LOCKING/UNLOCKING MECHANISM:** In this case, please check the connection to the socket actuator. The plug may have been incorrectly inserted in the bushing/port or the connection of the locking device to the EWS Box pins may not be correct. In that case, please contact your service partner. This error may only occur with variant Wallbox with charging socket.
- **ERROR: ACTIVATE CONTACTOR:** Here there is a faulty contact in the EWS Box in the contactor terminal X102 for contactor EV 1. It may be necessary to disconnect and reconnect these. It might also be possible that the charging contactor feedback signal to the X401 for EV 1 is failing due to an incorrect connection / contact at the Pins 15.
- **ERROR: CURRENT VALUE CABLE / INTERRUPTED CHARGE - CABLE:** Either a cable which is incompatible with this charging station has been used with an incorrect resistance code or the cable is defect. Replace the charging cable with a correct / functioning cable.
- **IN THE EVENT OF OTHER ERRORS:** In each case, please restart the Wallbox by switching off the RCCB at the main switch in the building distribution box and on again after approx. 30 seconds.

PLEASE NOTE

The exact positions on the EWS-Box can be referenced in Chapter 4.4.3.2. This information is available in electronic format - please refer to Chapter 8.3 for links to the documentation.

8.3 LINKS FOR ADDITIONAL SUPPORT

The following linked documentation may provide you with an electronic supplement to the information you have relating to the Wallbox.

EWS-Box operating instructions:

<https://www.ssl-energie.de/service/downloads>

EWS Box Quick guide to operations / HTML configuration:

<https://www.ssl-energie.de/service/downloads>

EWS Box Quick guide to operations - DE:

<https://www.ssl-energie.de/service/downloads>

EWS Box Quick guide to operations - EN:

<https://www.ssl-energie.de/service/downloads>

FAQ's relating to P-CHARGE:

<https://www.ssl-energie.de/service/downloads>

9. Conformity

9.1 ASSOCIATED GUIDELINES AND STANDARDS

IEC 61851-1:2010 and / or EN 61851-1:2011 - Part1: *General requirements*

IEC 61851-22 and / or EN 61851-22:2002: *AC charging stations for electric vehicles*

IEC 61439-5:2010 EN 61439-5:2011 - Part 5: *Switchgear and controlgear assemblies for power distribution in public networks*

IEC 61439-7:2011 and / or EN 61439-7:2011 – Part 7 (Draft): *Switchgear and controlgear assemblies for specific installations at public sites such as marinas, camping sites, market squares and similar applications and for charging stations for electrical vehicles*

IEC 61000-6-3:2006 and / or EN 61000-6-3: *Generic standards - interference emission for the living area, business and industrial areas and for the small-scale enterprise*

IEC 61000-4-3:2006 and / or EN 61000-4-3: *Audit- and measurement procedures - Testing of immunity to high-frequency electromagnetic fields*

IEC 61000-4-2:2009 and / or EN 61000-4-2: *Audit- and measurement procedures - Testing of immunity to the discharge of static electricity*

IEC 61000-2-2:2002 and / or EN 61000-2-2: *Environmental conditions, compatibility level with low frequency, conducted disturbance and the transmission of signals in public, low voltage networks*

IEC 61000-4-11:1994 and / or EN 61000-4-11: *Audit- and measurement procedures - Testing of immunity to the voltage drops, short interruptions and voltage fluctuations*


IEC 60950-1:2005 and / or EN 60950-1: *Information technology equipment - Security - Part 1 General requirements*


IEC 60950-22:2005 and / or EN 60950-22: *Information technology equipment - Security - Part 22 Equipment for the exterior area*


VDE 0100-722 – Part 7-722: *Construction of low-voltage electrical installations - Part 7-722: Requirements for special installations or locations*

VDE-AR-N 4102: *Outdoor connection cabinets connected to the low voltage distribution network of the general power supply - Technical requirements for the connection of stationary switch and control cabinets, meter connection columns, telecommunication systems and electric vehicle charging stations*

9.2 DECLARATION OF CONFORMITY


P-CHARGE


SSL ENERGIE
Speichern Steuern Laden



Konformitätserklärung
(Originalsprachversion)

Hersteller:	SSL Energie GmbH Donaupark 13 93309 Kelheim Deutschland		
Produktbezeichnung:	SmartPvCharge		
Varianten:	261902-000 261902-002	261902-001 261902-003	261902-004

Das genannte Produkt stimmt mit den Vorschriften folgender Europäischer Richtlinien überein:

Elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen 2006/95/EG

Elektromagnetische Verträglichkeit 2004/108/EG

RoHS-Richtlinie 2011/65/EG

Europäische Messgeräte-Richtlinie (MID) 2004/22/EG


Wir bestätigen die Konformität des oben genannten Produktes mit folgenden Normen:

EN 61000-6-1:2007	Elektromagnetische Verträglichkeit (EMV)- Störfestigkeit für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe
EN 61000-6-3:2007	Elektromagnetische Verträglichkeit (EMV)- Störaussendung für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe
EN 60950-1:2001	Electrical Safety (LVD) Class II
EN 61204-3:2001	Low voltage power supplies, d.c. Output-part: Electromagnetic compatibility (EMC)
EN 61000-6-3:2001	Generic Emissions Standard
EN 61000-6-2:2005	Generic Immunity Standard
EN 55024:1998	/ A1:2001 +A2:2003 ITE Immunity
EN 50470-1: 2006	Electricity metering equipment (a.c.)
EN 50470-3: 2006	Static meters for active energy (class indexes A, B and C)

Diese Erklärung bescheinigt die Übereinstimmung mit den genannten Richtlinien und Normen, ist jedoch keine Beschaffenheits- oder Haltbarkeitsgarantie nach §443 BGB.
Die Sicherheitshinweise der mitgelieferten Produktdokumentation sind zu beachten

Ort: SSL Energie GmbH - Donaupark 13, 93309 Kelheim

Datum: 01.03.2016



(Unterschrift)
Andreas Schwarzmeier (Geschäftsführer)

SSL Energie GmbH Donaupark 13, 93309 Kelheim, Geschäftsführer: Andreas Schwarzmeier
 Sitz und Gerichtsstand Kelheim, HRB 14958 AG Regensburg
 VAT Reg.Nr. DE301295500 / Steuer-Nr. 132/137/80527



10. Disposal

This electrical device for the charging of electrically driven vehicles. The P-CHARGE Wallbox is labeled in accordance with the EU guidelines 2002/96/CE relating to old electrical and electronic devices (WEEE).

Disposal must be effected in accordance with the valid environmental directives for the disposal of waste materials. Before the device is disposed of it should be rendered inoperable.

Electrical and electronic devices must not be disposed of with the general household waste. They must be collected separately, disassembled in electrical recycling plants where all reusable parts are put back into circulation. Please ensure that the device is correctly recycled to avoid negative repercussions on the environment and human health which could result from non-compliant disposal.

For further information relating to the disposal and recycling of products, SSL Energie GmbH would like to recommend you make contact with your community services - (Environmental Office, municipal authorities etc.) or with a local waste disposal organisation - or even with your direct supplier.

CORRECT DISPOSAL OF THE PACKAGING

The P-CHARGE Wallbox requires appropriate packaging materials to safeguard the device during transportation, although the company SSL Energie makes every effort to keep this to a minimum. Furthermore, we chose to select only environmentally compatible and reusable packaging materials. SSL Energie would therefore like to request that you too ensure an environmentally correct method of disposing of your packaging materials.





Instruction Manual Updated 08/2016

Notes





12. Contact data

ADDRESS OF THE MANUFACTURER:

SSL Energie GmbH
Donaupark 13
93309 Kelheim

ADDRESS OF THE SERVICE PARTNER:

(Please enter contact details for the service partner here)

SERIAL NUMBER:

(Please refer to the rating plate on your charging station and enter the serial no. here)

Installation of the product and connection to the grid must be carried out exclusively by qualified personnel. The product requires regular maintenance in accordance with the service information included on delivery. We recommend that maintenance of the product be carried out by appropriately trained experts. We accept no liability for damage of any kind not covered by the General Terms and Conditions; particularly for damage caused by vandalism, lightning/overvoltage, nor for consequential costs for automobiles / vehicles nor according to technical connection regulations. In the event of a warranty claim, the company SSL Energie GmbH shall bear the costs required for transport, travel, labour and materials only; excluded are the additional and potentially substantial costs incurred for transfer of the object to a location other than the target site. In the event of a warranty claim, the product must be returned to the company SSL Energie GmbH for fault diagnosis and supplementary performance if required. The General Terms and Conditions of Sale and Supply of SSL Energie GmbH (AGB) shall apply here. These can be referenced on the internet under <http://www.ssl-energie.de>. Clause 10 of the AGB is not applicable in this case.

A product of SSL Energie GmbH | Münchener Straße 1 | 83527 Haag i. OB | www.ssl-energie.de
Subject to technical modifications and printing errors. Status as of 08/2016