P-CHARGE

Instruction Manual Updated 09/2016

P-CHARGE Wallbox Duo

Compact design for wall mounting for various areas of operation

Image: P-CHARGE Wallbox Duo RFID

Image: P-CHARGE Wallbox Duo push-buttons

Please keep these instructions for future reference.

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Compact design for wall mounting for various areas of operation

1. Introduction

Thank you for choosing a SSL Energie GmbH product. The P-CHARGE Wallbox Duo was specifically designed for the charging of electric vehicles in the private sector. A reliable charging infrastructure for electric vehicles is available to you with a variety of optional features and performance capabilities. The sustainable mobility of tomorrow begins with the P-CHARGE Wallbox Duo, with P-CHARGE EWS Box being the heart of system. The 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 a cable-linked supply unit (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. Systems such as charging or fleet-management systems, for example, can be implemented in a similar way.

2. Safety 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.

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

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

CAUTION: 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 installation and startup of the P-CHARGE Wallbox Duo 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 standards, 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 Duo 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 / person instructed in electrics" 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 been instructed 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 manual have been carefully prepared, Schletter accepts no liability for the validity, accuracy, completeness or quality of the published information. Data provided in the instruction 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 electrical plants and at the P-CHARGE Wallbox Duo 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

Circuitry and human protection facilities

The safety device integrated into the P-CHARGE Wallbox Duo serves to protect the unit and is designed for use with this device only. The required circuitry and human protection facilities are to be sufficiently dimensioned and provided by the installer.

WARNING

Danger of suffocation/asphyxiation

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

CAUTION

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.

CAUTION

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

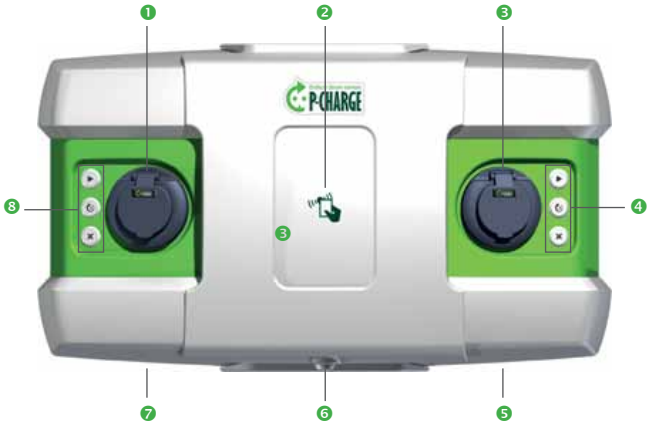
WARNING

The P-CHARGE Wallbox Duo may be utilized exclusively for purposes outlined in the corresponding technical documentation. Fail-safe operation of the P-CHARGE Wallbox Duo 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.

3. Scope of delivery

Please first check the physical condition of your delivered product and ensure that it is complete. Please do not throw the package as this may result in damage to your electronic device. The following items must be included in your delivery, for each P-CHARGE Wallbox Duo:

- P-CHARGE Wallbox Duo 1x
- Wafer-head screw M8x100mm TX40 6x
- Screw anchor S12 Ø12mm x 60 6x
- Sealing gaskets for wafer-head screw Ø 8mm EPDM 6x
- Drilling template for Wallbox Duo 1:1 1x
- Foam insert base plate 1x
- Foam inlay side protection 2x
- Operating instructions 1x
- Mounting instructions 1x
- Schematic circuit diagram 1x
- Box packaging 1x



1. Left charging socket
2. RFID card reader (according to variant)
3. Right charging socket
4. Control elements right charging socket
5. Filter fleece
6. Locking system
7. Filter fleece
8. Control elements left charging socket

1. RCBO left side
2. Rating plate
3. RCBO right side
4. Button 4
5. Button 6
6. Button 5
7. Meter right side
8. Control fuse
9. Meter left side
10. Button 2
11. Button 3
12. Button 1

4. General

4.1 OVERVIEW AND STRUCTURE OF THE WALLBOX DUO

Here is an image of the P-CHARGE Wallbox Duo with an explanation of the individual components. To open the housing cover, insert key into the push cylinder of the locking system and turn this to the left or to the right. The system is unlocked when the cylinder slides forwards. The housing cover can then be pulled forwards at the lower end and lifted off. To close the Wallbox, replace the housing cover from above, turn the key in the lock to the vertical position and push in the locking cylinder.

4.2 CONTROL ELEMENTS

This is a short description of the user elements and of the buttons at the Wallbox.

Button	Name	Function
Button 1	Start button left charging socket	Start the charging process at left charging socket
Button 3	Optimized charging[1] left charging socket	Start the charging process "Optimized charging"*
Button 2	Stop button left charging socket	End the charging process at left charging socket
Button 4	Start button right charging socket	Start the charging process at right charging socket
Button 6	Optimized charging[1] right charging socket	Start the charging process "Optimized charging"*
Button 5	Stop button right charging socket	End the charging process at right charging socket

[1] Only with server operation

*„OPTIMIZED CHARGING"

The function "Optimized charging" means that the charging procedure is controlled according to the previously defined parameters and is saved to a server by the user. These parameters may, for example, apply to the use of economical, night-time energy or time-apportioned / prioritized fleet management. This functionality is only available if the Wallbox is connected to a server.

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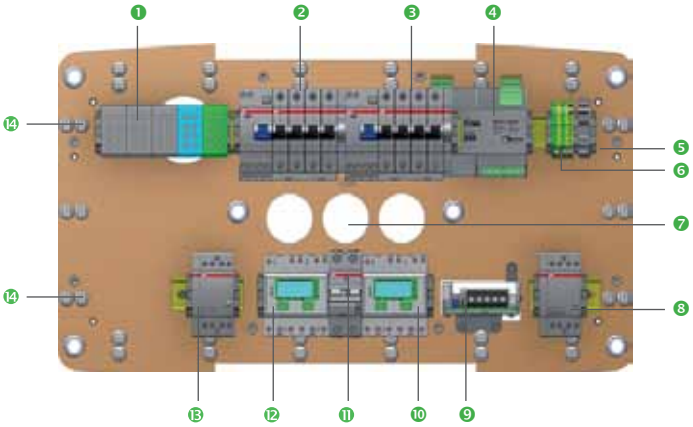
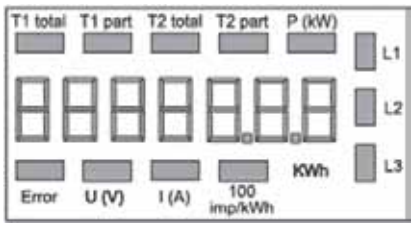


1. Main connection terminals
2. RCCB left charging socket
3. RCBO right charging socket
4. EWS-Box P
5. Ventilator terminals
6. PE terminals
7. Cable entry 3 x M50
8. Contactor right charging socket
9. Power supply unit
10. Digital meter right charging socket
11. Control fuse
12. Digital meter left charging socket
13. Contactor left charging socket
14. Clips for cable laying



Digital meter

Picture similar to original product

4.3 ELECTRICAL COMPONENTS

The following image of the carrier plate presents an overview of the electronic components implemented. You will get this view, if you remove the cover of the Wallbox, loosen the 8 screws from the housing and work the housing off to the front. The housing cover hangs securely on the strain relief devices and thus protects the cabling of the Wallbox.

DIGITAL METER

Integrated digital meters present various options for the control of the energy consumption of the Wallbox. As well as electrical energy consumed in kWh, the current values for voltage, current and output are displayed both in individual phases and as an overall total. Navigation through the meter menu is with the arrow keys and on the front of the meter.

Here is an explanation of the meter functionality and of the individual displays.

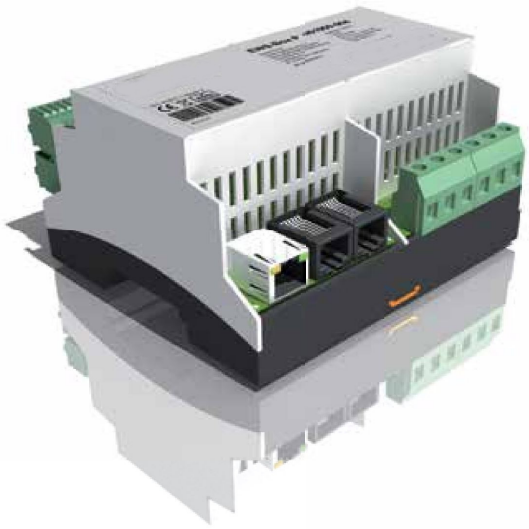
T1TOTAL:	Shows total energy consumption for Tariff 1
T1PART:	Shows partial energy consumption for Tariff 1; this value can be reset
T2TOTAL:	Shows total energy consumption for Tariff 2
T2PART:	Shows partial energy consumption for Tariff 2; this value can be reset
P(KW):	Shows current output per phase or of all phases together
U(V):	Shows voltage per phase
I(A):	Shows current per phase
100 IMP/KWH:	Pulsation according to output
KWH:	Consumption is displayed in kWh units
L1 / L2 / L3:	With P-, U-, I- or error message the relative phase is displayed
ERROR:	With missing phases or incorrect current direction. The corresponding phase is additionally displayed.

4.4 SOCKET EQUIPMENT

In its basic design, the P-CHARGE Wallbox is fitted with 2 x IEC 62196-2 Type 2 charging sockets. These sockets enable charging of an electric vehicle in accordance with IEC 61851-1 Mode 3. The Wallbox communicates with the vehicle via signal contacts PP and CP. Each charging outlet has a separate RCBO, active energy meter and contactor. The charging cable is locked into the charging socket (via locking mechanism) at the start of the charging process to secure the cable against unauthorized disconnection. The locking device is deactivated as soon as the plug is removed from the vehicle (loss of pilot signal) and the charging socket is switched to power-off.

CHARGING SOCKET IEC 62196-2 TYPE2

- Charging current: 16A
- Number of poles: 3P+N+PE+PP+CP
- Output power: 11kW



4.5 COMMUNICATION VIA EWS BOX

The communication of the Wallbox Duo with the electric vehicle takes place via the integrated EWS Box P. The EWS Box P 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 a cable-linked supply unit (EVSE). Parameters for a self-sufficient or for a systems-integrated operation can be configured via HTML pages. The RFID cards can be activated or blocked on this HTML page. For more information, please refer to the Schletter GmbH website, especially to the links specified under 10. Links for support.

4.6. TECHNICAL DATA (INDEPENDENT OF VARIANT)

COLOR SCHEMES

- Body RAL 9003
- Housing coating RAL 9003
- Front housing / facing RAL 6018
- Custom color schemes on request

DIMENSIONS / WEIGHT

- W / H / D: approx. 700 x 335 x 170 mm
- Weight (variant specific): approx. 17 kg

INSTALLATION AND ASSEMBLY

- Wall mounting
- Recommended installation height: 1300 mm (above top ground surface)
- On-wall and in-wall cable routing
- Suitable for interior and exterior locations

ELECTROTECHNICAL DATA

- Nominal power configurable: 10A, 13A, 16A, 20A, 32A
- Mains frequency: 50 Hz
- Nominal voltage: 230/400V AC
- Terminal clamps: 10mm² (L1, L2, L3, N, PE)
- Overvoltage category III
- Possible integration of customer-installed ventilation system
- Charging mode in accordance with IEC 61851-1 (Mode 3)
- Ethernet connection (RJ45)
- Charging capacity per charging outlet: 11kW (max. 2 x 11kW possible)
- Fault current protection with over-current release — RCBO Type A, C Characteristic, Rated residual current IΔn 30 mA
- Installation contactor — Rated operating voltage 440V, Rated operational current 24A
- Energy meter pulse counter with S0 interface — Alternating current 3 x 65 A, 1000 impulse/kWh, Accuracy class 1/B
- Power supply/control voltage — Output voltage 12V / nominal power 36W

ENVIRONMENTAL CONDITIONS

- Ambient temperature: -25°C to +40°C
- Type of protection IP54
- Ambient air humidity: 5% to 95 %
- Ambient air pressure: 860 hPa to 1060 hPa

4.7. TECHNICAL DATA (INDEPENDENT OF EQUIPMENT)

Item no.	Variant		Schuko	IEC 62196-2 Type 2 (16A)	IEC 62196-2 Type 2 (32A)
261010-000	RFID card	e-car basic	0	2	0
261010-300		e-car mixed	1	1	0
261010-400		e-car premium	1	0	1

Item no.	Variant		Schuko	IEC 62196-2 Type 2 (16A)	IEC 62196-2 Type 2 (32A)
261010-001	Buttons	e-car basic	0	2	0
261010-301		e-car mixed	1	1	0
261010-401		e-car premium	1	0	1

Image 1

Image 2

Image 3

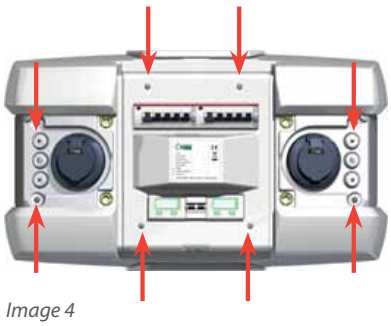


Image 4

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 Duo:

- Hexagon socket wrench size 4
- Screwdriver with 6-Lobe bit TX40
- Flat-head slot screwdriver
- Masonry drill Ø10.0mm (depending on wall structure)

5.2 PREPARING FOR THE INSTALLATION

A few preparatory steps must be taken prior to commencing the installation.

5.3 REMOVAL OF PACKAGING

Please do not cut packaging to a depth of more than 2mm when unpacking the product to avoid damage to the surface of the Wallbox. Remove both foam inlay side protections by pulling them upwards. Lift the Wallbox Duo together with its rear mounting panel out of the (cardboard) box. The rear mounting panel is neither connected to the base plate nor to the housing. Please do not remove the device simply by its housing as this may result in damage to cabling, particularly to cable strings leading to the charging sockets.

5.4 PREPARING THE WALLBOX DUO

Open the front cover to the Wallbox by turning the key in the lock located on the underside either to the right or to the left (both directions are possible) *(image 1)*. The push-in cylinder is released outwards from its casing and the system is unlocked. The front cover can now be removed by lifting it upwards *(image 2)*.

Now remove the two green charging point hoods. Using both hands, work the bevelled ends on the inner side upwards and fold the hood backwards to remove *(image 3)*.

You now need to open the 8 housing screws using an hexagon socket wrench size 4 *(image 4)*.

Please keep the 8 screws and their respective washer seals safe as they will be required to close the Wallbox correctly once the installation is complete.

A protective strip of red rubber on the underside of the Wallbox protects the plastic housing from scratch damage during installation. Please do not remove this until the Wallbox has been mounted. The protective strip is not visible on the images.

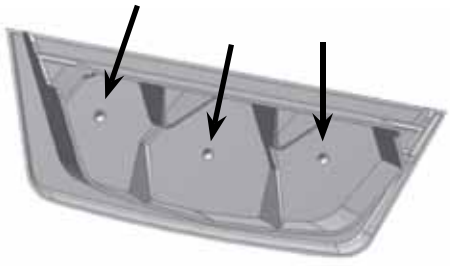
You can now lift off the housing. A strain relief device to each side connects it with the base plate of the electrical components. The strain relief devices should not be removed. Lift the base plate together with the housing cover away from the Wallbox rear mounting panel. The Wallbox is now lying in 2 parts before you: the plastic Wallbox rear mounting panel and the base plate with the housing.

5.5 PREPARING FOR THE ON-WALL CONNECTION

Insofar as the electric supply line and/or the data line/s are surface mounted (on-wall) and routed into the Wallbox, the housing rear panel must make provision for this. Lines may enter the device at the top side as well as at the lower side of the two cable entry hoods at the housing rear panel. At each hood, there are three possible entry points; their middle points are marked with a hole.

In each case, imperatively ensure that the protection class IP54 (protected against harmful dust amount / protection against splashing water from any direction) is safeguarded following mounting and installation of the cable entry glands, i.e. appropriate cable entries must be used. Cable glands must be mounted in accordance with the manufacturer's specifications (seals, tightening torque etc.).

Besides, when setting the drill holes please consider that (transverse) forces on the rear panel should be avoided wherever possible; otherwise the adhesive bond between the rear panel and the cable entry hood might be damaged.



PROCEDURE FOR CREATING CABLE ENTRY-POINTS

1. Define the position and number of entry-points
2. Determine the exact size of the glands to be installed
3. Place the cable entry hood flatly onto a horizontal worktop.
   Please avoid damage to the surface of the cable entry hood (remove dirt/dust; apply protective foil if necessary)
4. Pre-drill the middle points from the inside using a twist drill (see image) with a diameter of approx. 3-5 mm
5. Enlarge the bore diameter from the outside (visible side) to the required diameter, using a stepless quick-helix drill.
6. Repeat steps 4-5 for further cable entries/bushings.
7. Mount the cable glands.

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Image 5

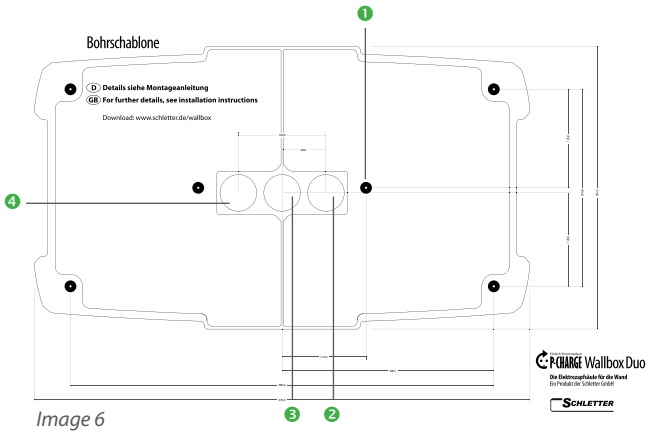

Image 6

1. 6x drilled holes
2. Bushing - data cable
3. Bushing - power supply cable
4. Activation of customer-installed ventilation system

5.6 MOUNTING THE WALLBOX

The desired location and position of the Wallbox should be determined prior to installation. Please take the measurements of the Wallbox Duo into account!

Height	335 mm
Width	700 mm
Depth	170 mm

We recommend that the charging points be located at a height of approx. 1300mm above ground level, see *image 5*.

Please be aware of the Wallbox in-wall supply line when positioning the drilling template. The left bushing is for the customer-installed ventilation system, the middle bushing for the voltage supply line to the Wallbox and the right bushing for a data cable to the EWS Box, see *image 6*.

The Wallbox should be mounted in a position which allows for optimal accessibility by the user. Please ensure that you take into account the position of the charging sockets on the electric vehicle and that the charging cables are of appropriate length.

5.6.1 MOUNTING THE WALLBOX REAR PANEL

1. Position the enclosed drilling template horizontally in the desired Wallbox location and secure the drilling template (with tape if necessary) to the wall. Mark the 6 drill holes with a pencil, see *image 6*.
2. Remove the drilling template and drill 6 holes using a drill bit with a diameter of 10.0mm. Ensure that the holes are drilled to a sufficient depth to receive the wall-plugs/dowels.
3. Fit each of the 6 M8x100 wafer-head screws with a sealing rubber washer. Position the cable bushing openings at the rubber seals in such a way as to facilitate the feed-through of your connecting cables *(image 6)*.

FROM HERE ON, THE WALL-MOUNTING SHOULD BE PERFORMED BY AT LEAST TWO PEOPLE.

4. Laying the supply lines
   a. on-wall: Feed supply lines into the glands (only once rear panel has been mounted should the glands be secured)
   b. in-wall: Feed the connecting cables through the rear panel
5. One person should now hold the rear panel while the second person fits the base plate with the housing onto it. Position the rear panel with its base plate on the prepared wall (drilled holes) and insert each of the 6 M8x100 wafer-head screws into its designated drill hole. The position of the holes in the wall for the wafer-head screws should correspond to the positions of the holes drilled in the template.
6. Tighten the screws lightly with a 6-Lobe screwdriver TX40.
7. Re-align the Wallbox Duo and fully tighten the screws appropriately.
8. Connect the Wallbox voltage supply cable to the designated main connection terminal at X1. Check that the terminals are secure.

PLEASE NOTE: This task should be performed by qualified personnel only! The control fuse must be installed only once the mounting work has been completed! A missing neutral conductor can cause irrevocable damage to the device!

9. You also have the option to connect your data cable to an Ethernet connection on the EWS Box at slots X301 or X201, to enable connection of the Wallbox with a server / PC.
10. In the same way the customer-installed ventilation can also be connected to the EWS Box at contactor terminal X102.
11. Ensure that the cables are strain-relieved.

5.6.2 MOUNTING THE WALLBOX HOUSING

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

1. Take the housing in both hands and position parallel to the rear panel.
2. Next, push the housing from the front up and over the rear panel. Position the housing carefully to ensure that the slots fit around the respective cable bushings of the electrical components. Take care not to damage the seals on the inner side of the housing when doing so.
3. Lightly re-tighten the 8 screws *(image 4)* with sealing washers into the pre-bored holes.
4. Align the housing once more and check that the washer seals are correctly positioned for optimum contact.
5. Now tighten the 8 screws fully.
6. Replace the green front housings / facing. Hook the bevelled outer edges of the facings into the Wallbox housing and position across the charging sockets. Then push the facings into place.
7. Position the front cover from above onto the Wallbox and push down into the housing.
8. To close the Wallbox completely, push the sliding lock cylinder back into the casing.
9. Remove the red protective rubber strip from the underside of the housing.
10. Your Wallbox Duo 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. To open the Wallbox as explained in Chapter 5.4, image 1, lift off the housing cover and remove it. Then activate the control fuse F0, as explained in Chapter 4.2, and the RCCBs F1 and F2, see Chapter 4.2. The Wallbox will now be switched to operation mode. Initialization of the Wallbox can take some minutes as the integrated buffer of the EWS Box must be charged first in order to then control the charging process. During this phase the LED buttons flash. You can now put the housing cover back onto the Wallbox. Place the cover from above onto the designated catch and push it downwards. To close the Wallbox completely, push the sliding lock cylinder back into the locking mechanism. In order to complete the operational startup, the Wallbox has to be connected to a computer/laptop via Ethernet and the EWS Box has to be configured properly. For more detailed information on these EWS Box configuration settings, please refer to the Links for support stated in Chapter 10. Once these parameters are set, the Wallbox configuration is complete and is available for the charging of electric vehicles.

7. Operating the charging process

The Wallbox can be activated in a number of different ways, e.g. by RFID card reader, by authorization-free or by optimized charging process. In the following section, the process is outlined from a user perspective.

7.1 RFID (RADIO FREQUENCY IDENTIFICATION)

You can reference details as to the layout of the HTML page in the *„P-CHARGE EWS Box Quick guide to operations“* in *Chapter 2/ Configuration of the LAN connection.*

To activate your RFID card, please refer again to the *„P-CHARGE EWS Box Quick guide to operations“* under *Chapter 3 / Settings.*

To block or cancel lost RFID cards, log in to the HTML page you created and tag these in the *"blocked cards"* field as indicated in the *„P-CHARGE EWS Box Quick guide to operations“, Chapter 3 / Settings*.

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START CHARGING PROCESS:
STEP 1
To start a charging session, hold the RFID card up to the card reader for approx. 3 seconds.

STEP 2
Plug in your cable to the selected outlet. Note: You may plug in your cable prior to registering the RFID card.

STEP 3
The Start button, Button 1 or 4, begins to flash. Press the green flashing button to start the charging process. The button is backlit in green throughout the entire charging process.

TERMINATE CHARGING PROCESS:
STEP 1
To end a charging session, hold the RFID card up to the card reader again for approx. 3 seconds. This must be the same card as was used to initiate the charging session.

STEP 2
Then press the Stop button, Button 3 or 6, and the session will end. The plug may now be removed from the socket.

STEP 3
The socket is now free and available for a new charging session.

7.2 AUTHORIZATION-FREE VARIANT

PLEASE NOTE: With this variant, you are neither required to identify yourself nor to pay to activate / deactivate a charging session!
The charging session is started and terminated in the same way, i.e. by pressing the corresponding buttons.
Each user has free access to all charging sockets!

For notes on how to set this authorization-free variant, please refer to the *"P-CHARGE EWS Box Quick guide to operations"* under *Chapter 4 / Installation – System parameters*.

START CHARGING PROCESS:
STEP 1
To start a charging session, plug the cable for the electric vehicle into the appropriate charging socket.

STEP 2
The Start button, Button 1 or 4, begins to flash in green. Now press the start button to activate the charging process. The button is backlit in green throughout the entire charging process.

TERMINATE CHARGING PROCESS:
STEP 1
To end the vehicle charging session, press the Stop button, Button 3 or 6, and remove the plug for the electric vehicle from the charging socket.

STEP 2
The charging process is thus terminated and the socket is free and available for a new charging session.

7.3 OPTIMIZED CHARGING

As described in 3.2 / Control elements, you will need connection to a server for this variant. If you have a web-capable computer, you can establish a connection between server and EWS-Box via LAN cable. Afterwards configure the required HTML page as indicated in the "P-CHARGE EWS Box Quick guide to operations" under Chapter 2/ Configuration of the LAN connection.

START CHARGING PROCESS:

STEP 1

To start a charging session, plug the cable for the electric vehicle into the appropriate charging socket.

STEP 2

The "Optimized Charging" process is selected by pressing Button 2 or 5, respectively.
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 button is backlit in orange for the duration of the charging process.

TERMINATE CHARGING PROCESS:

STEP 1

The charging process is terminated automatically. This applies either when the battery of the electric vehicle is fully charged, or once the parameters in the server settings can no longer be met.

STEP 2

The cable plug can now be removed from the socket and the outlet becomes available for further charging sessions.

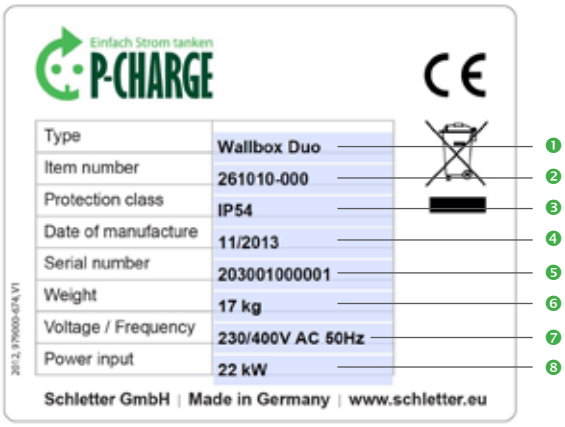

Image: Example of the rating plate

1. Wallbox type
2. Item number
3. Protection class
4. Date of manufacture
5. Serial number
6. Weight
7. Input voltage / Frequency
8. Power input

8. General information

8.1 RATING PLATE

The rating plate contains important information relating to the Wallbox. To see this rating plate, the cover flap of the Wallbox must be removed as described in "4.1 Overview and structure of the Wallbox Duo".

8.2 SERVICE NOTES

The Wallbox Duo 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. Calibrated (MID) digital meters are integrated into the P-CHARGE Wallbox Duo. These have a validity of 8 years and are approved for use by third parties for the calculation of electrical energy. Once this time has elapsed, either a new meter is to be installed, or the existing device must be audited by the calibration office / bureau of standards. Please ensure that the device is calibrated regularly to ensure a correct metering procedure.

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

Plant/Facility/ Equipment	Audit test intervals	Type of functionality audit	Inspector
Electrical plants and fixed electrical installations in "special installations or locations" (DIN VDE 0100 Group 700)	1 year	for an orderly condition	Qualified electrical technician
Residual current, differential current and earth leakage circuit breaker - 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 Duo be carried out every 6 months to ensure the best possible performance of the device. Please note that these tasks should be carried out by trained, technical personnel only.

8.3 TROUBLE-SHOOTING

In the event of an error, Button 3 resp. 6 is permanently backlit in red until the error is corrected.

- **POWER FAILURE:** In the event of power failure, the Wallbox Duo automatically shuts down. Once power is reestablished, the Wallbox Duo will restart by restoring the status saved at the point of outage. The power backup circuit 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 circuit board is charging.

- **LOSS OF CARD:** Anyone finding a lost card thus has authorization to use it at the corresponding charging pillar. So please advise your customers to be prudent. In the event of loss, your customer will require a new card. Lost cards, however, cannot be blocked on the HTML page.
- **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 this case, please contact your service partner.
- **ERROR: ACTIVATE CONTACTOR:** Here there is a faulty contact in the EWS Box in the contactor terminal X102 at contactor EV 1 or contactor EV 2. It may be necessary to disconnect and reconnect these. It might also be possible that the charging contactor feedback signal to the X401 connection for EV 1 and X402 for EV 2 are failing due to an incorrect connection / contact at the Pins 15.
- **ERROR: CHARGING INTERRUPTED (METER):** This error is displayed if, for example, the S0+ or S0 output of the meter has no or an incorrect contact. Please check your plug connection at the meter and also at Pins 4 or 10 at connections X401 / X402. Otherwise, please contact your service partner.
- **CHARGING CONNECTION RCD / OUTAGE RCD SWITCH:** Remove plug from the charging socket and re-insert the RCD. Plug the cable back into the socket.
- **ERROR: CURRENT VALUE CABLE / INTERRUPTED CHARGING 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 all RCCBs and the main switch and on again after approx. 30 seconds.

Please reference the exact positions at the EWS Box in the EWS-Box Quick guide to operations / HTML configuration which is available for download from the Schletter GmbH website; see corresponding link in *„10. Links for support“*.

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 residential, commercial and light-industrial environments*

IEC 61000-4-3:2006 and / or EN 61000-4-3: *Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-2:2009 and / or EN 61000-4-2: *Testing and measurement techniques. Electrostatic discharge immunity test*

IEC 61000-2-2:2002 and / or EN 61000-2-2: *Environment. Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems*

IEC 61000-4-11:1994 and / or EN 61000-4-11: *Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests*

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

IEC 60950-22:2005 and / or EN 60950-22: *Information technology equipment - Safety- Part 22: Equipment installed outdoors*

VDE 0100-722 – Part 7-722: 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*

10. Links for support

The following linked documentation may provide you with a supplement to the information you have relating to the Wallbox Duo:

EWS Box operating instructions:
www.ssl-energie.de/service/downloads/

configuration:
EWS Box Quick guide to operations / HTML
www.ssl-energie.de/service/dowloads/

EWS Box Quick guide to operations - DE
www.ssl-energie.de/service/downloads/

EWS Box Quick guide to operations - EN:
www.ssl-energie.de/service/downloads/

11. Service & Support

ADDRESS OF THE MANUFACTURER:

SSL Energie GmbH
Donaupark 13
93309 Kelheim
GERMANY
info@ssl-energie.de
Tel.: +49 8072 3767-0

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)