Please, read this manual carefully before use!



Charging station for electric vehicle

KS X32/1 KS X16/3 KS X32/3



SAFETY INFORMATION



The equipment must be installed by a qualified electrician! Equipment without the appropriate installer documents is not covered by the warranty. In the event of a defect, a completed warranty card must be provided along with proof of purchase and a completed table at the end of the manual.



Thank you for your purchase of **Könner & Söhnen®** products. This manual contains a brief description of safety, use and debugging. More information can be found on the official manufacturer's website in the support section: **konner-sohnen.com/manuals**

You can also go to the support section and download the manual by scanning the QR code, or on the website of the official importer of Könner & Söhnen products: **www.konner-sohnen.com**



Please, read this manual carefully before use!

Manufacturer reserves the right to make alterations into the generators, which may not be reflected in this manual. Pictures and photos of the product may vary from its actual appearance. At the end of this manual, You may find contact information which you are free to use in case of any issues occurrence.

All data, specified in this operation manual is the most up to date for the moment of its publishing. The current list of service centers you can find at the website of official importer: **www.konner-sohnen.com**



INSTALLATION

- The charging station for electric vehicles must be installed on a solid, non-combustible surface.
- The charging station for electric vehicles cannot be installed in places where explosive gas is present.
- Never store flammable or explosive substances near the charging station.
- The charging station for electric vehicles should be installed in an area free of conductive dust and gases or vapors that can destroy metal coatings and insulation. The charging station must be protected from rain, moisture and direct sunlight.
- The charging station for electric vehicles should be installed in an area free from strong vibrations that could damage its components.
- The charging station should be installed in an upright position for adequate ventilation and heat dissipation.
- The installation site must be above ground level, and, where necessary, a water outlet, such as a drain gutter or similar, must be installed to prevent moisture from entering the station.
- Electrical installation work must be carried out by a qualified electrician according to all applicable standards and regulations. An installation permit must be obtained if required by law.
- Before performing electrical installation, ensure that the power supply is completely disconnected to prevent the risk of electric shock.
- The PE (ground) terminal of the charging station must be securely connected to ground.
- The supply cable of the charging station must be secured to prevent it from being damaged.
- Do not leave metal objects inside the charging station that could cause a short circuit and fire or failure of the station components.
- The supply cable of the charging station must be securely connected to the input terminal to prevent overheating and damage to the station.
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OPERATION

- Users of the charging station must be familiar with the safety precautions and regulations and adhere to them.
- Never use the charging station in an emergency, such as fire, smoke, flooding, etc.

• Never use the charging station if the charging plug, charging cable, or station itself shows signs of physical damage, is heavily soiled, flooded, or has been exposed to flammable, corrosive chemicals, etc.

- During charging, switch off the electric vehicle and set the parking brake.
- Do not modify the device.
- Before using the charging station, check the cable and plug for damage and soiling.
- When disconnecting the charging cable from the electric vehicle, always pull by the plug, not the cable.
- Do not charge your electric vehicle in the rain or thunderstorm.

MAINTENANCE

- Before each use, inspect the charging station for possible damage.
- Regular functional checks of the charging station, including safety features, must be carried out by a duly authorized and qualified electrician within the time limits stipulated by applicable legislation.

CHARGING MODE



The charging mode of KS X series product is Mode 3.

Mode 3 — is a method for the connection of an EV to an AC EV supply equipment permanently connected to an AC supply network, with the CP (Control Pilot) function for the transmission of the approved charging parameters to the electric vehicle.

CHARGING CONNECTION

The charging stations comply with EN IEC 61851-1:2019.

Connection of the electric vehicle to the power grid with the electric vehicle's charging cable and connector permanently connected to the charging station.

CHARGING INTERFACE

• The KS X charging plug conforms to IEC 62196-2, Type 2 plug (with charging cable).





LCD-SCREEN

The AC charging station for electric vehicles is equipped with a 4.3" LCD display.

Model	KS X32/1	KS X16/3	KS X32/3
Number of phases	1	3	3
Rated voltage, V	230	400	400
Rated current, A	32	16	32
Rated power, kW	7	11	22
MCB built-in	inside the wallbox		
Charging cable length, m	5 5 5		
Recommended power supply cable (copper), mm ²	3x4 3x6	5x4 5x6	5x4 5x6
Input terminals	L1/N/PE L1/L2/L3/N/PE		
Charging connector type	Type 2	Type 2	Type 2
Dimensions (LxWxH), mm	410x260x164	410x260x164	410x260x164
Weight, kg	12	12	12
Protection class	IP54	IP54	IP54

*Note: Miniature circuit breaker (MCB) tripping time is ≤10 ms (at short-circuit current up to 1500 A).

FUNCTIONAL DESCRIPTION

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Function	Description
Charging mode	Mode 3
Local control	"Plug-and-charge" or "swipe card-controlled"
Remote	smart phone APP control
Display screen	4.3-inch LCD screen (display charging current, voltage, energy, charging time, state & fault information, etc.)
Indicator lights	4 LED lights, indicate 4 statuses include power, connect, charging and fault
Communication interface	Ethernet (RJ-45 interface), WiFi (2.4GHz)
Communication protocol	OCPP 1.6J
Built-in protection	Emergency stop button, overtemperature/overvoltage/undervoltage/ overcurrent protection
Residual current device (RCD)	Built-in Type B (AC 30mA + DC 6mA)

INSTALLATION LOCATION: Indoor or outdoor, good ventilation, no flammable, explosive gases. CHARGING CABLE: 5m (Standard configuration). MOUNTING: Wall-mounted.

SPACE REQUIREMENT:

Space requirement: When the charging station is fixed on the wall, the minimum space requirements are shown in Fig. 1.

It is suggested that the charging station should be installed in a place with good ventilation, no direct sunlight and shelter from wind and rain. In order to ensure good ventilation condition, you should mount the charging station vertically and leave enough space.



Fig. 1

TOOLS FOR INSTALLATION

	Multimeter	Check the electrical connection and measure the voltage
and the sea	Electric Impact drill	Drill fixing holes in the wall
200	Wrench	Fastening bolt
20	Diagonal plier	Cut the cable
Contraction of the second	Wire stripper	Peeling cables
	Crimping plier	Pressed cable terminal
1	Cross screwdriver	Fastening screw

INSTALLATION STEPS:

STEP 1. INSTALL THE WALL MOUNT. As the Fig. 2 shown, drill 4 mounting holes of 10 mm diameter and 55 mm depth at the appropriate height, spaced 130mm×70mm apart, and fix the mounting bracket to the wall with wall plugs.

STEP 2. THE BODY OF THE CHARGING STATION. As the Fig. 3 shown, fix the bracket to the body of the charging station with 4 screws (M5×8).







STEP 3. WIRING. As shown in Fig. 4, strip off each wire of the supply cable with a wire stripper, then insert the copper wire into the crimp area of the ring terminal and crimp it with a crimping tool.

Suggestions on cable size selection as below:



Product	KS P116EN	KS P132EN	KS P316EN	KS P332EN
Rated current	16A	32A	16A	32A
Input terminals	L1/N/PE	L1/N/PE	L1/L2/L3/N/PE	L1/L2/L3/N/PE
Suggestion cable size	Copper, 3x4 mm ²	Copper, 3x6 mm ²	Copper, 5x4 mm ²	Copper, 5x6 mm ²

As shown in Fig. 5, open the terminal cover, pass the prepared supply cable through the dedicated opening, and connect each wire to the input terminals as labeled



Reset the terminal cover after wiring the input power cable.



When connecting the charging station to the router via Ethernet, pass the network cable with an RJ-45 plug through the supply cable opening and plug it into the dedicated network interface socket.

STEP 4. MOUNTING THE CHARGING STATION ON THE WALL. As shown in Fig. 6, attach the charging station to the wall and then fix the two parts of the attachment together with screws on the left and right to complete the mounting process.

4G LTE Module

Nano SIM-card socket





INSTALLATION OF 4G CHARGING STATION

If you purchase a 4G version charging station, insert the 4G NANO SIM card to the SIM card socket before wiring. The installation steps are as follows:

a). Ensure the charging station is disconnected from the AC power source.

b). Use the screws to open the back cover of the charging station to access the LTE module (see Fig. 7).

c). Insert the 4G NANO SIM card into the SIM card slot. Replace the back cover of the charging station and lock it in place with the screws.

POWER ON

After the charging station has been installed and connected, switch on the power supply. The "POWER" indicator light lights up and the charging station switches to standby state.

- 1. LED indicators
- 2. LCD screen
- 3. RFID reader
- 4. Emergency stop button
- 5. Charging connector
- 6. Empty connector socket

Power	Connect	Charging	Fault	Connotation	
(GREEN)	(GREEN)	(RED)	(YELLOW)		
ON	OFF	OFF	OFF	Standby State	
OFF	ON	OFF	OFF	Electric car is connected to the charging station	
OFF	Twinkle	OFF	OFF	Starting	
OFF	OFF	Twinkle	OFF	Charging	
OFF	OFF	OFF	Alternatel twinkle	Fault. Type of fault based on the flashing indicator	

The POWER LED flashes in all states to indicate that the charging station is communicating with the CMS (Charge Management System) via the network.

LCD SCREEN

#lcon	lcon	Connotation
1	No icon	Off-line or no network
2	((i	Connect to router via Wi-Fi
3	((j=	Exchange data with CMS via Wi-Fi
4	모	Connect to router via Ethernet
5	匣	Exchange data with CMS via Ethernet
6	S/N: 888888888888888888888888888888888888	The serial number of the charging station
7	Standby	Current state of the charging station
8	Connect successful	The charging plug is properly connected to the electric vehicle
9	Charging	Charging state
10	Charging finished	Finished, please follow the instructions on the screen
11	E-stop state	The emergency stop button is pressed
12	Failure to start	Failure to start, please follow the instructions on the screen
13	System failure	Fault state, please follow the instructions on the screen

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As shown in Fig. 7, the LCD screen displays 4 types picture in normal charging process. If the charging process fails or the equipment fails, the picture displayed on the LCD screen is shown in Fig. 8.



EMERGENCY STOP BUTTON

This button is used to stop charging in case of emergency. At any time, in case of any emergency (such as fire, smoke, abnormal noise, water inflow, etc.), on the premise of ensuring personal safety, please press this button, and stay away from the charging station.

CHARGING CONNECTOR & EMPTY SOCKET

AC EV charging station config a type 2 charging connector. When the charging station is in standby state, insert the charging plug into the empty slot in the station housing to protect the charging plug from damage.

IGURE PARAMETERS

Taking the configuration of charging station parameters by laptop as an example, it is introduced as follows (the method of setting parameters by mobile phone is similar and will not be repeated):

STEP 1. CONNECT TO WI-FI HOTSPOT. Enable the laptop's Wi-Fi module and turn on the charging station. Within two minutes of powering on, the charging station provides the Wi-Fi hotspot as the access point for parameter configuration.

Connect a Wi-Fi hotspot with a name is similar to "EVSE-12345678" in the "WiFi Network" of the laptop. No password is required to connect to the charging station.

STEP 2. LOGIN TO SETTING. Enter 192.168.4.1 in the address bar of Google Chrome or Microsoft Edge, you can access the EVSE CONFIGURATION shown in Fig. 9. Microsoft IE cannot access this IP address.

STEP 3. CONFIG YOUR EV CHARGING STATION. Enter the correct password to access the settings. Please contact your vendor for your access password and change it to a new password known only to you. Configure the settings as shown in Fig. 10. Enter your Wi-Fi username and password to connect the charging station to the hotspot.





After setting, click the "SAVE" button to save the settings, and click the "RESTART" button to restart charging station for settings take effect. After it takes effect, the charging station can access Internet via your Wi-Fi.

START CHARGING

a). Park your electric vehicle in a charging spot, switch it off and set the parking brake.

b). Remove the charging plug from the charging station socket.

c). As shown in Fig. 11, insert the charging plug into the charging socket of the electric car and observe the CONNECT LED of the charging station light up.

d). In "Plug and Charge" mode, the charging process starts automatically once the charging cable is plugged into the EV socket.

e). In "Swipe Card" or "Scan QR Code" mode, follow the instructions that appear on the display when the charging plug is connected to the EV socket. The charging process is initiated by swiping a personal card or scanning a QR code in the app (Fig. 12).



Connect successful





- \bullet To start charging using QR code, you need to download and install the WE E-Charge APP.
- \bullet Scan the QR code on the right to download the WE E-Charge APP for Android phone.
- Search WE E-Charge in APP Store to install iOS version APP.

TERMINATING CHARGING

a). The charging station automatically stops charging when the electric vehicle is fully charged.

b). For Plug and Charge, you can manually stop charging as follows: Press the electric vehicle release button to stop charging the electric vehicle (requires electric vehicle support) or unplug the charging cable from the EV socket. When the "Charging" indicator goes off, the charging process is terminated.

c). For "Swipe Card" mode, swipe the card again and observe the Charging indicator go off, indicating that the charging process has stopped.

d). For "Scan QR Code" mode, press the stop charging button in your app, and charging will stop.

e). When charging has stopped, disconnect the charging plug from the electric car and put it back in the empty socket of the charging station.

ABNORMALLY STOP CHARGING

a). Emergency stop: At any time, in case of any emergency (such as fire, smoke, abnormal noise, water inflow, etc.), on the premise of ensuring personal safety, please press the red "Emergency Stop" button on the charging station to stop the charging process.

- **b).** Forced fault stop: A fault stop initiated by the onboard charger of vehicle.
- c). Automatic fault stop: A fault stop initiated by the charging station.

POSSIBLE FAILURES AND SOLUTIONS

The charging station is automatically protected in the event of the fault. The fault information and handling methods are as follows.

Fault information	Fault code	Handling method
Both the LED and the display do not light up	-	 Check if the station is connected to the power supply; Check if the safety cutout has tripped, turn it on after clearing the fault; Check the power cable connection and troubleshoot if found.
The LED is on, but the display is not	-	 May be no fault, the LCD will turn off automatically when the charging station is standby, and will light up when charging; LCD connection cable is loose or LCD is damaged.
Fault LED flashes: 1×slow, 1×fast	Fault code 11: CP voltage anomaly (Control Pilot voltage anomaly)	Check the charging plug and the electric vehicle charging socketDisconnect and reconnect the charging plug.
Fault LED flashes: 1×slow, 2×fast	Fault code 12: Emergency stop	 The emergency stop button has been pressed. Turn the emergency stop button clockwise to reset.
Fault LED flashes: 1×slow, 3×fast	Fault code 13: Undervoltage	 Check the supply cable connection. Check whether the input voltage is abnormal.

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Fault information	Fault code	Handling method
Fault LED flashes: 1×slow, 4×fast	Fault code 14: Overvoltage	 Check the supply cable connection. Check whether the input voltage is abnormal.
Fault LED flashes: 1×slow, 5×fast	Fault code 15: Over-temperature protection	• Check whether the charging station is covered or installed in a high temperature environment.
Fault LED flashes: 1×slow, 6×fast	Fault code 16: Metering fault	• Power off and restart the device
Fault LED flashes: 1×slow, 7×fast	Fault code 17: Protection from accidental contact or insulation fault	• Check the charging plug and charging cable for damage or moisture
Fault LED flashes: 1×slow, 8×fast	Fault code 18: Reduced power	• Check the charging plug and charging cable for damage or moisture.
Fault LED flashes: 1×slow, 9×fast	Fault code 19: Output overcurrent	 Check if the charging plug is properly connected. Check if the On-Board Charger (OBC) of the electric vehicle is working properly
Fault LED flashes: 2×slow, 1×fast	Fault code 21: Electric vehicle's response time is exceeded	Battery of EV is full. Or the charging connector is not properly connected.Disconnect and reconnect the charging plug.
Fault LED flashes: 2×slow, 2×fast	Fault code 22: EV not supported	• This electric vehicle does not meet IEC standards and cannot be charged.
Fault LED flashes: 2×slow, 3×fast	Fault code 23: Relay sticking	• The unit is damaged and needs to be repaired.
Fault LED flashes: 2×slow, 4×fast	Fault code 24: RCD fault	• The unit is damaged and needs to be repaired.
Fault LED flashes: 2×slow, 5×fast	Fault code 25: Ground fault	• Charging station is not grounded; input power cable needs to be checked.

MAINTENANCE

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Make sure to maintain the equipment regularly according to the working environment to ensure its long-term and stable operation.

a). The electrical part of the equipment must be maintained only by properly trained and qualified personnel subject to the applicable standards and inspection schedules.

b). Check whether the equipment is well grounded and safe.

c). Check whether there are potential safety hazards around the charging pile, such as whether there are high temperature, corrosion or inflammable and explosive articles close to the charging station.

d). Check the station's power terminal contacts for overheating.

WARRANTY SERVICE TERMS

The international manufacturer warranty is 1 year. The warranty period starts from the date of purchase. In cases when warranty period is longer than 1 year according to local legislation please contact your local dealer. The Seller which sells the product is responsible for granting the warranty. Please contact the Seller for warranty. Within the warranty period, if the product fails because of defects in the production process, it will be exchanged on the same product or repaired.

All faults caused by the manufacturer during the warranty period will be eliminated free of charge. Warranty repair is carried out only if you have a fully completed warranty card, the Buyer's signature of acceptance of the warranty terms, as well as a document supporting the purchase (cash receipt, sales slip or invoice). In the absence thereof, as well as in the event of errors or corrections not authenticated by the seller's seal or illegible inscriptions in the warranty card or tear-off coupon, no warranty repair is carried out, no objections to quality are accepted and the warranty card is withdrawn by the service center as invalid. The device is accepted for repair clean and full.



The equipment must be installed by a qualified electrician! Equipment without the appropriate installer documents is not covered by the warranty. In the event of a defect, a completed warranty card must be provided along with proof of purchase and a completed table at the end of the manual.



Date of installation	
Organization	
Installer	
Stamp (if required in your region)	



EC Declaration of Conformity

Nr. 145

The following products have been tested by us with the listed standards and found in compliance with listed below directives and standards.

Manufacturer:	DIMAX INTERNATIONAL GmbH
Address:	Flinger Broich 203, 40235 Duesseldorf, Germany
Product:	Charging station for electric vehicle "Könner & Söhnen"
Type / Model:	KS X32/1, KS X16/3, KS X32/3

The statement is based on a single evaluation of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo. The manufacturer should ensure that all product in series production are in conformity with the product sample detailed in this report. The applicant should hold the whole technical report at disposal of the competent all the right.

Applied EC Dire	ectives: DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND
	OF THE COUNCIL OF 16 APRIL 2014 ON THE HARMONISATION
	OF THE LAWS OF THE MEMBER STATES RELATING TO THE
	MAKING AVAILABLE ON THE MARKET OF RADIO EQUIPMENT
	Directive 2011/65/EU (RoHS) as last amended by Directive (EU)
	2015/863 EC Regulation №1907\2006 - Registration,
	Evaluation, Authorisation and restriction of Chemicals (REACH)
Requirement	Standard
Health and Safety (Article 3.1a)	EN IEC 61851-1:2019, EN 62311:2020, EN 50364: 2018, EN 50665:2017

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EMC (Article 3.1b)	EN 301 489-1 V2.2.3, EN 30 EN IEC 61851-21-2:2021, EN EN IEC 61000-6-3:2021, EN EN 61000-3-12:2011, IEC 61	489-3 V2.1.1, EN 301 489-17 V3.2.4, IEC 61000-6-1:2019, EN IEC 61000-6-2:2019, EC 61000-6-4:2019, IEC 61000-3-12:2011, 000-3-11:2017, EN 61000-3-11:2000
Radio Aspects (Article 3.2)	EN 300 328 V2.2.2 EN 300 330 V2.1.1	

Notification body , responsible for 2014/53/EU Directive certificate issuing for models KS X32/1, KS X16/3, KS X32/3 is LGAI Technological Center, S.A. (APPLUS), Campus UAB- Ronda de la Font del Carme s/n 08193 Bellaterra (Barcelona), T: +34 93 567 20 00, www.applus.com. Notification body number is 0370



Issued Date: Place of issue: General director:

2023-02-02 Duesseldorf Fomin P. P. Fomin

DIMAX International GmbH Steuer-Nr.: 103 5722 2493 UScidNr:DE296177274

We DIMAX INTERNATIONAL GmbH hereby declare that specified above conforms covering European Parliament and Council Directives -2014/53/EU of the European Parliament and of the council of 16 april 2014 on the harmonisation of the laws of the member states relating to the making available on the market of radio equipment Directive 2011/65/EU (RoHS) as last amended by Directive (EU) 2015/863. The CE mark above can be used under the responsibility of manufacturer. After completion of an EC declaration of Conformity and compliance with all relevant EC directives.



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