

Qoltec[®]



USER MANUAL

Charger for electric vehicles (EVs) and hybrids

Model: 53180, 53181

Introduction

Thank you for your trust and for purchasing our product. We have taken great care in its design and are confident that it will meet your expectations. This manual contains important information regarding the safety and operation of the device. Should you have any questions after reading this manual, please contact NTEC sp. z o.o.

Installation requirements and safety guidelines for the EV charger

Note: Installation must be carried out in accordance with the local electrical regulations in force in the country of installation and by a suitably qualified person.

Before installing the charger, it is essential to check the condition of the existing electrical installation. For the charger to operate safely, reliably and in accordance with its specifications, the electrical installation must be properly prepared.

Before commissioning the installation, the installer should verify the effectiveness of the electric shock protection, the continuity of the protective conductor, the earthing parameters and the correct operation of the safety devices.

The manufacturer accepts no liability for the consequences of incorrect installation.

Installation requirements

1. The installation and connection of the charger must be carried out by a qualified electrician. Incorrect installation may result in damage to the device or pose a risk to life. 2. The EV charger should be connected to a separate, dedicated electrical circuit. It must not be connected to a circuit shared with other high-power appliances.

3. In the event of an unstable mains supply, surge protection is essential – failure to provide this may result in damage to the charger. It is recommended that surge protection devices (SPDs) be fitted to the power supply system, particularly in areas prone to mains instability, lightning strikes or frequent voltage spikes.

4. Do not use extension leads, multi-socket adaptors, adaptors or uncertified adaptors. The charger should only be connected to an installation that complies with local regulations and the device's specifications.
5. Check the terminals in the distribution board, the cable connections and the condition of the contacts, and ensure there is no play or signs of overheating.
6. Take into account the risk of voltage drops – if the cable run is too long or the cable cross-section is incorrectly selected, these can cause slower charging, interruptions to the charging session, device errors and excessive heating of the installation.
7. Before installation, verify the parameters of the supply network – in particular, that the voltage complies with the charger's requirements, the number of phases, the correct phase sequence and presence of phases, and voltage stability under load; in three-phase installations, additional consideration must be given to the risk of phase imbalance, the loss of one of the phases, and the occurrence of excessively low or high voltage on individual phases.
8. The charger must not be installed in areas at risk of flooding, on damaged or unstable surfaces (walls or posts), near heat sources, or in places where the cable or plug may be exposed to mechanical damage.

The manufacturer/supplier accepts no liability for any malfunction of the device resulting from:

1. the poor condition of the electrical installation,
2. the absence of the required safety measures,
3. incorrect earthing,
4. voltage fluctuations outside the permissible range,
5. installation not in accordance with the instructions and local standards.

Safety during use

1. Protect the device from rain and moisture – use only in covered areas; do not immerse the control module in water.
2. Do not tread on, pull, bend or tie the cable, and do not use the device if the cable is damaged.
3. Do not drop the control module or place heavy objects on it.

4. Do not use the device near sources of high heat or outside the operating temperature range of -30°C to +55°C.
5. Do not place the device in a car or in a closed, unventilated space whilst charging.
6. The device may only be used in an installation fitted with a residual current device (RCD).
7. Do not insert your fingers or any objects into the charging socket.
8. Do not use extension leads or additional adaptors.
9. The device is intended solely for charging electric vehicles.
10. In the event of a fault, do not attempt to repair the device yourself – contact your retailer or a service centre.

Device initialisation procedure (standby mode)

1. Connect the device's power plug to an AC mains supply whilst the device is not connected to a vehicle (the EV charging socket is not connected).
2. Once power is supplied, the control system initialises and the LCD display activates.

Parameters displayed in initial mode:

Once initialisation is complete, the device enters standby (Idle) mode and displays the following operational data:

Ambient temperature – current reading from the temperature sensor,

Input voltage (AC) – current supply voltage value,

Output current – initial value: 0.0 A,

Instantaneous power – initial value: 0.0 kW,

Energy consumption – initial value: 0.00 kWh,

Charging/delay time (Timer) – initial value: 00:00:00.

Device operating status:

The lower part of the display shows the status 'Idle' (standby mode), which means there is no active charging process.

The LED indicator integrated into the function button signals that the device is ready.

This status indicates that the device has initialised correctly and is ready to start the charging process once the electric vehicle is connected.

Functions

1. Temperature monitoring

The temperature sensor monitors the charger's operating temperature in real time. If the temperature exceeds the safe limit, the charger will immediately stop operating. Once the temperature returns to normal, the charger will automatically resume operation.

2. Automatic error correction

A smart chip automatically corrects common charging errors to ensure stable operation of the product.

3. Safety

The product has undergone appropriate testing to ensure the highest safety standards whilst charging, for both you and your car.

4. Durable casing

5. Current adjustment (depending on the model)

6. The 'Smart Life' app and Tuya

7. 5m cable

Charging instructions

1. Ensure that the electrical installation is fitted with a Type B residual current device.
2. Connect the charger to a power source.
3. Set the desired current.
4. Connect the charging cable to the vehicle.
5. When finished, disconnect the device from the vehicle first, then from the socket.

Note: Please note the order: first set the current, then connect the device to the vehicle!

How do I start charging?

1. Insert the plug firmly into the mains socket.
2. In configuration mode, when the 'Charging Current' parameter is active, you can adjust it using the function button. Press the function button on the charger to switch the charging current mode.

Select the charging current:

The 16A unit supports four current modes: 8A, 10A, 13A and 16A (model 53180)

The 32A unit supports 8 current modes: 6A/ 8A/10A/13A/16A/20A/24A/32A (model 53181)

Once you have selected a value, hold down the function button for 3 seconds to confirm the setting; the device will return to the home screen.

3. Gently pull the cap and fully insert the charging plug into the vehicle's socket
Make sure the charging plug is fully inserted until you hear a click.
4. The device will start charging.

NOTE:

- You cannot adjust the current during charging.
- You must disconnect the connector from the vehicle before changing the settings.
- The selected current value will be displayed on the SET CURRENT screen.

Function selection

Press and hold the function button (indicator) for 3 seconds to enter the Function Select menu.

Available options:

time setting (Time reservation),

change charging current (Change current),

ground protection,

not grounded protection.

Press the function button to start adjusting the selected setting.

Setting a delayed charge (schedule)

If you wish to set a delayed charge (scheduled charge), press the function button again and hold it down for 3 seconds to enter the settings menu.

Then press the function button and select 'TIME RESERVATION'; press the function button again to set the delayed charging time within the range of 1 to 12 hours.

Once you have made your selection, hold down the function button for 3 seconds to confirm the setting; the device will return to the home screen.

The home screen will display a countdown until the scheduled charging begins.

Start of charging, LED indicators

Once you have finished configuring the device's operating parameters, connect the charging connector to the electric vehicle to begin power transfer.

Operating status indicators:

The status appears on the LCD display, at the bottom of the screen:

'Charging' – indicating that the charging process is active.

The LED indicator integrated into the function button:

- is lit (active mode),
- flashes periodically whilst charging is in progress (energy transfer).

Control via the app

The charger is compatible with the Tuya and Smart Life apps.

To use the app for control, the control box and your phone must be connected to the same Wi-Fi network.

Set-up steps:

1. Download the Smart Life app.
2. Make sure a 2.4 GHz Wi-Fi network is available.
3. Turn on Bluetooth on your phone.
4. Open the app and tap 'Add Device'.

5. Select 'Energy → EV Charger (BLE + Wi-Fi)'.
6. Find the selected device.
7. Pair the device to enable control.

The process of adding a device

The setup process enables the EV charger to be integrated with the mobile app via Bluetooth and 2.4 GHz Wi-Fi, allowing you to monitor and control the device remotely.

1. Switch on Wi-Fi and Bluetooth on your phone.

Figure 1 in the appendix

2. Launch the mobile app (e.g. Smart Life) and select the 'Add Device' option.

Figure 2 in the appendix

3. Select the 'Energy' category and the 'EV Charger' device.

Figure 3 in the appendix

4. Reset the device – press and hold the RESET button for 5 seconds until the indicator starts flashing.
5. Select the 2.4 GHz Wi-Fi network and enter the password.

Figure 4 in the appendix

6. Add the device – the connection will be completed with a success message.

Figure 5 in the appendix

7. Once added, you can control the charger via the app (status, charging mode, settings).

Figure 6 in the appendix

Functionality after pairing:

Once correctly integrated, the device allows remote access to the following functions:

- monitoring of operating status (Idle / Charging / Fault),

- real-time reading of electrical parameters,
- changing charging modes,
- configuration of parameters (current, schedule),
- management of the charging process via a mobile app.

Technical specifications

Model		53180	53181
Input	Number of phases	One	One
	Frequency	50Hz/60Hz	
Charging current adjustment		6A/8A/10A/13A/16A	13A/16A/20A/24A/32A
Plug		Schuko 16A	CEE 32A
Output	Current	16A max	32A max
	Power	3.5 kW	7 kW
	Voltage	230V	230V–400V
Conditions	Operating temperature	-30°C to +55°C	
	Humidity	5%–95%	
Connector		Type 2 (EU)	
Charging interface		IEC 62196-2	
Display		2.8” LCD	
Cable length		5m	
Application		Electric vehicles (EVs) Plug-in hybrids (PHEVs)	
Protection	Overvoltage/undervoltage protection, Temperature protection Overcurrent protection, earth leakage protection Earth protection Housing complies with UL94V-0 (flame retardancy) TPU-insulated cable: abrasion-resistant flexible and durable suitable for outdoor use		
	Ingress protection rating	Control module: IP67 Plug: IP54	

Maintenance

1. Keep the charger clean by using a soft, dry cloth to remove dust and dirt. Do not use chemicals.
2. Regularly check the power cables and connectors for damage, such as chafing, cracks or loose connections.
3. Ensure that the ventilation openings are clean and unobstructed to ensure adequate cooling.
4. Avoid contact with water or other liquids to prevent electrical damage.

Disposal

This product is subject to the regulations on the disposal of electrical and electronic equipment (WEEE). Take it to an e-waste collection point that ensures safe recycling in accordance with GPSR standards. Check where your nearest e-waste collection points are located. If you have any questions regarding disposal, please contact the manufacturer or an authorised service centre.

Warranty and servicing information

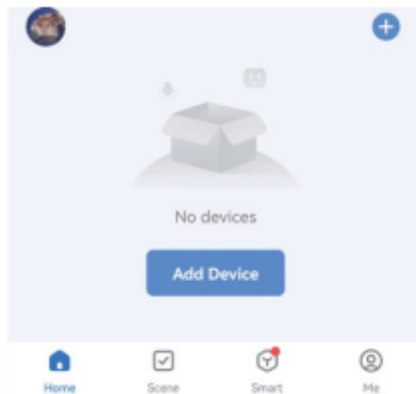
The product is covered by a 24-month manufacturer's warranty, effective from the date of purchase. The warranty covers all material and manufacturing defects. Please contact our after-sales service in the event of any problems with the device to ensure prompt and professional assistance. The warranty does not cover damage resulting from misuse, drops, mechanical damage, unauthorised repairs or attempts to dismantle the device.

Attachment

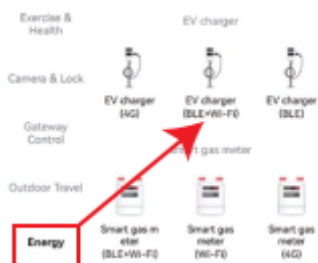
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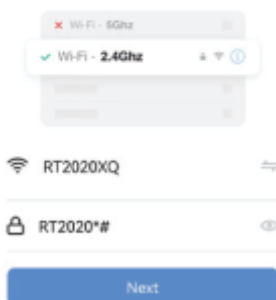
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4

Select 2.4 GHz Wi-Fi Network and enter password.

If your Wi-Fi is 5GHz, please set it to be 2.4GHz. [Common router setting method](#)



5



6

