



Instruction Manual

of 2.2kW 10A IC-CPD Portable EV Charger



Rev. 20251027

Welcome to Your New 2.2kW IC-CPD Portable EV Charger

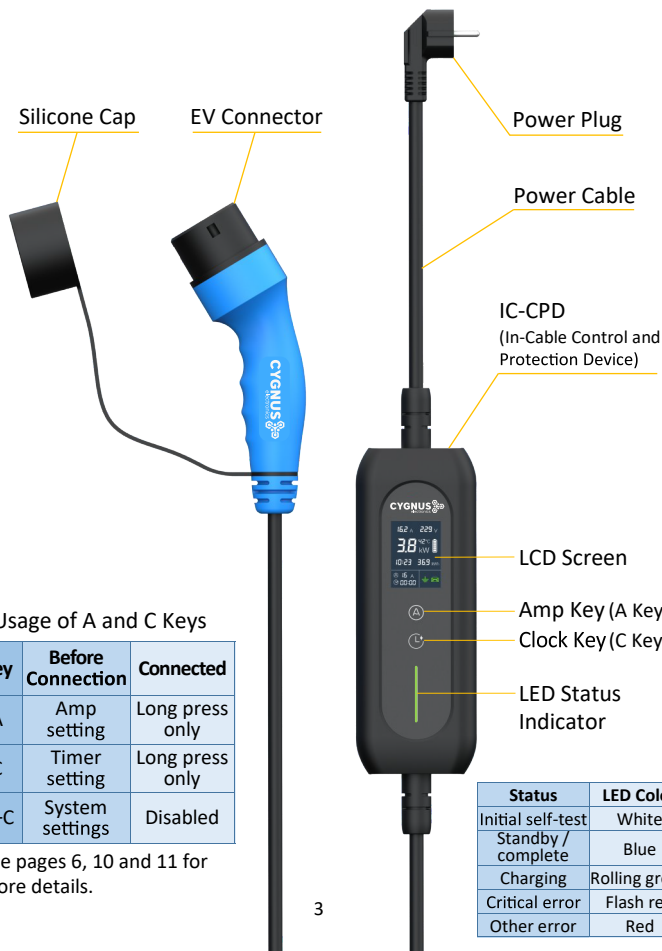
Before embarking on a seamless and efficient charging experience with our product, we invite you to read these essential safety guidelines. Our goal is to ensure your safety and the optimal performance of the charger.

- Intended Use:** This charger is designed for charging EVs with identifier C as per the EN 17186 standard. Please use it as directed in this manual and your EV's manual to mitigate risks like electric shocks or fires.
- Routine Check:** Prior to each use, inspect the charger for any damage. Do not use the charger if the charger is damaged or cracked, to ensure your safety.
- Safe Handling:** Avoid touching live connector terminals with bare hands or metal tools. Ensure your hands are dry when operating the charger.
- Careful Treatment:** Protect the charger from being crushed under car wheels, doors, hoods, or heavy objects. Handle it gently to prevent potential damage. Refrain from pulling, throwing, or dropping the charger.
- Dry Conditions:** Store and use the charger away from water, oil, and other liquids. If the cable becomes wet, do not use it for charging. Avoid attempting to dry it with a hairdryer.
- Unplug Before Driving:** Always disconnect the charger from your EV before starting the engine to avoid any damage or risks.
- Clear of Obstructions:** If you detect foreign objects in the plug, remove them after disconnecting the power.
- Child and Pet Safety:** Keep the charger out of reach of children and pets for their safety.
- Direct Connection Only:** For safety and efficiency, plug this charger into a fixed socket-outlet directly, and avoid using adapters or extension cords with this charger. It is recommended for the electrical installation intended for EV charging to be checked by an electrical installer.

Thank you for choosing our product. By following these guidelines, you can enjoy a safe and efficient charging experience.

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Overview



Usage of A and C Keys

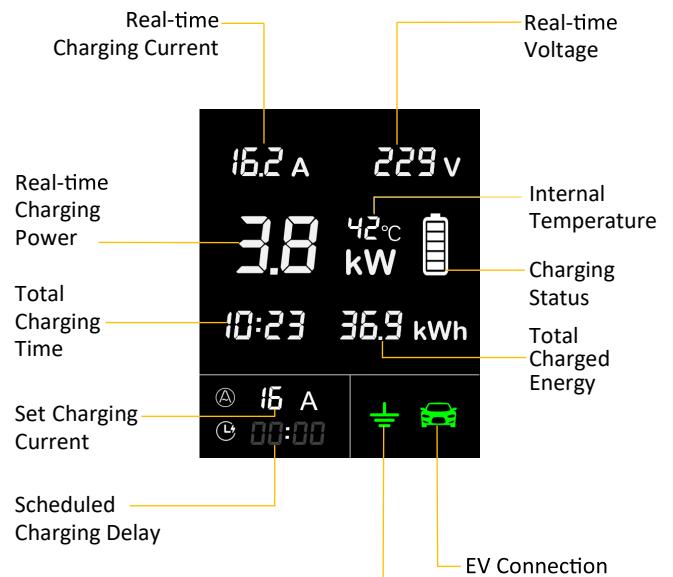
Key	Before Connection	Connected
A	Amp setting	Long press only
C	Timer setting	Long press only
A+C	System settings	Disabled

See pages 6, 10 and 11 for more details.

Status	LED Color
Initial self-test	White
Standby / complete	Blue
Charging	Rolling green
Critical error	Flash red
Other error	Red

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Screen Display



Status	Icon Color
Ready to connect	White
Grounded	Green
Grounding Error	Red

Status	Icon Color
Ready to connect	White
Connected	Green
Connection error	Red

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Specifications

2.2kW IC-CPD Portable EV Charger

Model Number	CY-EV1-1P10A
Rated Voltage	220-240V AC 50Hz
Rated Current	10A
Degree of Protection	IP66
Rated Residual Operating Current ($I_{\Delta n}$)	30mA, DC 6mA
Operating Temperature	-25°C to +45°C
Operating Altitude	up to 2000m

- User-friendly interface with touch-buttons and LCD display
- Comprehensive information display on screen
- Online modification for current and schedule settings
- Monitoring and protecting against leakage : AC 30mA + DC 6mA protection
- Self-testing and protecting against relay adhesion
- Monitoring and protecting against over-current
- Monitoring and protecting against over-voltage and low-voltage
- Alarm and protection for unearthed wall socket
- Overheat alarm and protection for control box
- Built-in temperature sensor in power plug, alarms on overheating
- EV diode error alarm

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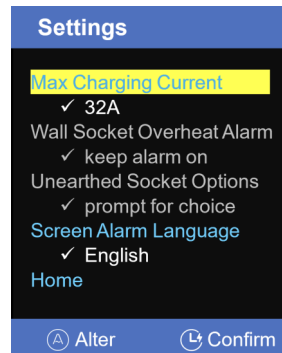
Initial Setup Guide ①

Welcome to your new charging experience! Before you embark on using your charger for the first time, we strongly advise that you thoroughly read this manual, understanding the key safety notes and initial setup process, and ensure compliance with the local regulations and directives.

Getting Started with Setup:

1. Accessing the Setup Interface:

- Press and hold both the Amp key (A key) and the Clock key (C key) for 3 seconds to enter the setup interface, as shown on the right.
- Use the A key to **A**lter your options. Once selected, press the C key to **C**onfirm and proceed to the submenu settings.



Friendly Reminder:

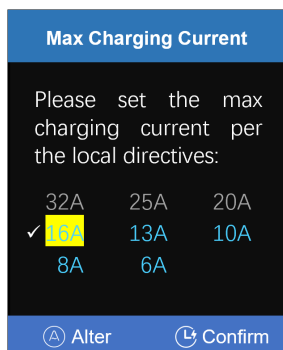
Please use the initial setting feature only when the charger is not connected to your EV. Note that once the charger is connected, the functionalities of a short press on either the A or C key, as well as the simultaneous press of both A and C keys, will be disabled to avoid any accidental interference with the charging process.

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Initial Setup Guide ②

2. Setting Maximum Charging Current:

- Select 'Max Charging Current' using the A key and confirm with the C key to access its settings.
- Adjust the settings with the A key as per your local directives, and confirm with the C key. This will return you to the main settings menu.



Important:

Each country may have its own specific regulations or guidelines for the maximum charging current. It is strongly recommended to set the maximum charging current of your charger in accordance with local regulations and the specifications of your power supply circuit. This ensures that your charging process is safe and reliable.

Remember, safety always comes first!

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Initial Setup Guide ③

3. Setting Up Wall Socket Overheat Alarm:

- The wall socket overheat alarm function shall be permanently enabled.
- Modification, deactivation, or user adjustment of this function is not permitted under any circumstances.



Friendly Reminder:

This alarm uses a temperature sensor inside the power plug to give you a heads-up if things start getting too hot. Keep in mind, though, it's measuring the plug's temperature, not the socket's. Think of this feature as an extra layer of safety, not the only line of defense.



Safety First:

Ensure that your wall socket is capable of supporting the selected charging current. This is not only important for smooth operation but also to prevent the risk of overheating or, in extreme cases, fire. Stay safe and charge responsibly!

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Initial Setup Guide ④

4. Setting Unearthed Socket Options:

- This option is mandatorily set to “**Prompt for choice**” and cannot be modified.
- Each time the charger is connected to a power source, it will verify whether the grounding is properly established.
- If an ungrounded condition is detected, a prompt will appear on the screen. Press A to proceed with charging (not recommended), press C to cancel the charging session. For more details, please see page 12.



Strongly recommended:

Have the power supply grounding issue inspected and corrected by a qualified electrician before continuing use.

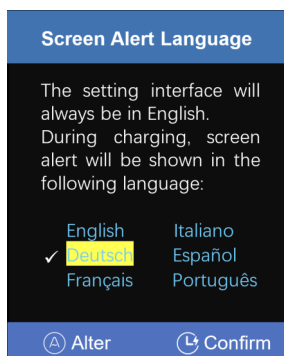
5. Setting Screen Alarm Language:

Select 'Screen Alarm Language' and enter the submenu as shown on the right. Use A key to Alter the choice, and C key to Confirm.



Friendly Reminder:

This setting does not affect the language of the system settings interface.



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Getting Started with Your Charger

Welcome to the world of efficient charging for your EV!

1. Powering Up and Self-testing:

Plug the charger into the socket. The charger will automatically conduct a self-testing to ensure it's in perfect working order.

2. Setting the Charging Current:

Use the A key to select the charging current. Choose from 6A, 8A, 10A, 13A, or 16A, based on your local regulations and your EV's specifications. The LED indicator glows white during this process.



Note: Your range of choices for the A key is limited to the max charging current you've set. If you need to adjust this for more efficient and safe charging, refer to the guide on page 7.



Friendly Reminder: Your charger will remember the last current setting you used. Next time you power it up, it will automatically apply this setting for your convenience.

3. Connecting to Your EV:

Insert the EV connector securely into your EV's charging port. The LED status indicator will illuminate green, and the grounding and EV icons on the display will also turn green, confirming a proper connection.



Attention: To ensure your settings remain secure, the A key is disabled once charging begins. For adjustments, you can perform a traditional off-line adjustment: disconnect the EV connector, make changes using the A key, and then reconnect.



Online adjustment: Our unique online feature streamlines setting adjustments. Even with your EV connected, just press and hold the A key for 3 seconds to enter current setting mode. The flashing current value can be adjusted by short presses of the A key, and if untouched for 5 seconds, the new setting is automatically activated.



Note: Once connected, only long press of the A or C keys is available, but short press and simultaneous press are disabled to avoid any accidental interference with the charging process.

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Scheduling Your Charging

1. Powering Up and Safety Check:

Plug the charger into the socket. It will automatically conduct a safety check to ensure it's in perfect working order.

2. Setting the Timer with the C key:

Schedule your night-time charging by setting the timer using the C key. Each press adds 30 minutes, up to 08:00, before resetting to zero.



Note: The C key sets a delay for charging to start. For example, a 02:30 setting means charging will begin in 2 hours and 30 minutes, not at 2:30 AM.

3. Connecting to Your EV:

Once you plug the EV connector into your EV, the car icon on the screen turns green, the LED status indicator changes to blue, and the charger will start charging automatically after the set delay.



Attention: To prevent accidental changes, the C key becomes inactive once the EV connector is plugged in. To change your settings, you can conduct a traditional off-line adjustment: unplug from EV to adjust and replug the EV.



Online Adjustment: Alternatively, hold the C key for 3 seconds to enter the scheduling mode directly. When the timer setting flashes, adjust it by short presses of the C key. Without any action for 5 seconds, the flashing stops and the change takes effect.



Friendly Reminder: With the online adjustment feature, you can not only change the scheduled charging time but also switch between real-time and scheduled charging as needed.



Important: Please consult your EV's manual to verify if it accepts scheduled charging from the charger. Avoid using this feature with the EV models that can't be awakened by scheduled settings.



Important: If your EV is equipped with a built-in scheduled charging feature, use either the EV's or the charger's setting, but not both, to avoid any potential misalignment and charging failure accordingly.

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Troubleshooting ①

● 1 - Leakage Protection

If a leak is detected between the EV connector and your vehicle, the charger's Type B RCD (Residual Current Protection Device) will immediately halt power supply and display an error message on the screen, accompanied by a flashing red LED status indicator.



Action: Disconnect the power immediately and consult a professional to identify and fix the leakage source.



Important: Keep your charger clean and dry. Never clean with a wet cloth or rinse with liquids.

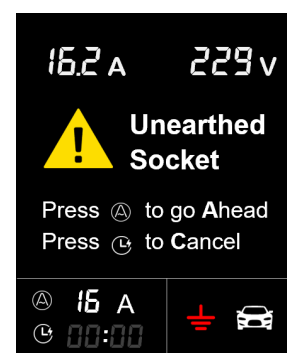
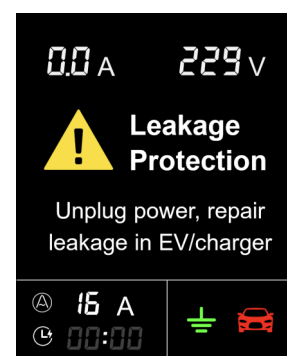
● 2 - Unearthed Socket

If an unearthed socket is detected upon powering on, a reminder with a red grounding icon will appear, prompting you the options to either continue or cancel charging.



Action: To proceed with charging, simply press the A key. If you wish to cancel charging, just press the C key.

Please have the unearthed socket repaired ASAP to ensure proper grounding for safe charging.



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Troubleshooting ②

● 3-Wall Socket Overheat Protection

If the built-in temperature sensor in the power plug detects overheat(>70°C), the charger will display a 'Wall Socket Overheat' warning and the LED indicator will flash red.



Action: Charging pauses to allow cooling. When the internal temperature drops below 60 °C, the charger automatically resumes charging at a reduced current.

Please check your wall socket and wiring to ensure they supports the set charging current well.



Important:

This feature is only a supplementary precaution and does not replace the need for proper socket installation and wiring.



● 4-Control Box Overheat Protection

If the control box's internal temperature exceeds the preset safety limits(80°C), a 'Control Box Overheat' warning will appear on the screen.



Action: Charging pauses to allow cooling. When the internal temperature drops below 70 °C, the charger automatically resumes charging at a reduced current.



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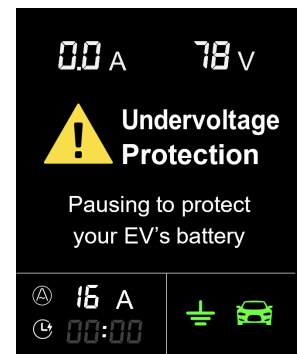
Troubleshooting ③

● 5 - Undervoltage Protection

If the grid voltage drops too low (<80V), potentially damaging the charger and EV battery, the charger will cut off the power supply.



Action: No action needed from you. Charging will resume when the voltage increases to a safe level.

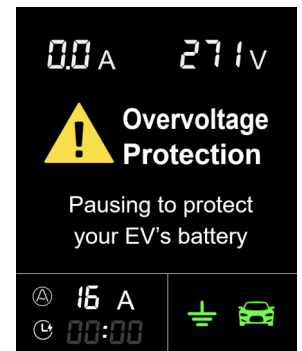


● 6 - Overvoltage Protection

Should the grid voltage become too high(>270V), posing a risk to both the charger and your EV's battery, the charger will automatically stop supplying power.



Action: No action needed from you. Charging will automatically resume once the voltage returns to normal.



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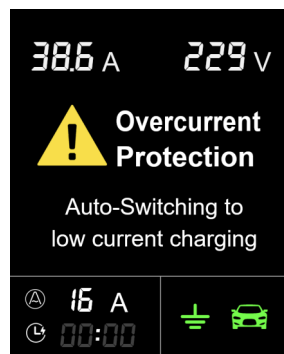
Troubleshooting ⑤

● 7 - Overcurrent Protection

If the charging current exceeds the set value by more than 20% or 2A (whichever is greater) due to interactions between the power grid, EV, and charger, the charger will issue an overcurrent warning and reduce the PWM signal to prompt the EV to lower its charging current within 1 minute.



Action: No Charging will resume automatically at a reduced current within 1 minute. If overcurrent protection is triggered twice during a single session, charging will stop to prevent potential damage to the EV battery.

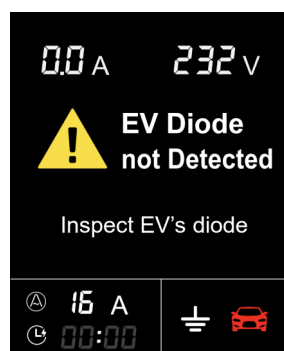


● 8 - EV Diode Not Detected

If the charger does not detect a diode on the EV side, an error message will be displayed.



Action: Please check if the diode is correctly installed in your EV. If the diode is damaged, it should be repaired by a professional.



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Troubleshooting ⑤

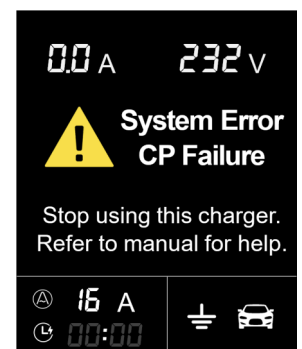
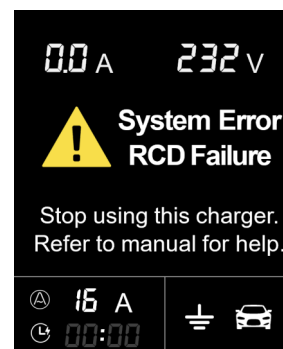
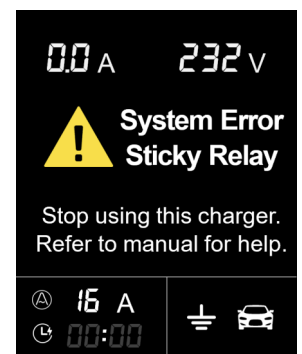
● System Error

If 'System Error' appears on the screen with an accompanying fault message as follows, it indicates a critical technical issue with the charger.

- 9 - Sticky Relay
- 10 - RCD Failure
- 11 - CP Failure



Action: Stop using the charger and contact your dealer or service agent for further assistance. It is strongly advised to have it inspected or remedied by qualified professionals.



Thank you for choosing our product. We're committed to providing you with a safe and efficient charging experience. For any further assistance or inquiries, please refer to our customer support section.

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