



User Manual

CL5436 Series Integrated AC Charger



T-POWER PTY LTD

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1 Information

1.1 Copyright

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Although the information in this Manual has been carefully examined for accuracy, no warranty is given as to the completeness and correctness of the contents, including but not limited to product specification, functions and illustrations.

T-POWER PTY LTD. shall not be liable for any direct, special, accidental, indirect damage or any economic consequential damage (including loss of profits).

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1.2 Intended Use

The charger is developed, manufactured, tested and documented in accordance with safety standards. If you strictly follow its intended use and safety instructions, the product will not cause property damage or have any impact on your personal safety. Strictly follow the instructions in this Manual, failing which risks may occur or safety device may fail to

be operated.

This device is only suitable for charging the following electric vehicles or plug-in hybrid electric vehicles:

- The charging port is in line with **IEC 61851**
- The charger is in line with **IEC 61851**

In addition, the following conditions apply to the intended use:

- The charger must be fixedly installed.
- The charger can be mounted on the wall or pole.
- The charger can be used outdoors.

The following use is **not intended**:

- Hybrid electric vehicles without the above charging port are not supported.

1.3 Safety Instructions

Before installing, debugging and operating the device, carefully check this Manual and consult with licensed contractors, electricians and professionals to ensure compliance with local building codes, climatic conditions and installation standards. T-POWER is not responsible for any damage caused by failure to follow the safety instructions and operation instructions in this Manual.



Electric Shock

The symbol indicates the content of “likely to result in death or serious injury”.

(1) Risk of electric shock - before use

- Dangerous voltage and current may be generated during operation of the charger. Therefore, before any work on the device, please take the following protective measures:

- Disconnect all power supplies before installing the charger. Failure to do so can result in electric shock, damage to the electrical system and personal injury.
- Do not remove the circuit protection device or other components until all power supplies are disconnected.
- Ensure no unauthorized access to the working area.
- The grounding terminal of the charger must be reliably grounded.
- Use a measuring instrument to check for voltage.
- Use proper protection when connecting the main distribution cable.
(2) Risk of electric shock - in operation
- Do not use the charger to charge devices other than the electric vehicles for the intended use.
- Do not touch the contact pin of the charging plug during operation.
- Do not use the charger if the charging cable is worn or the insulation is damaged.
- Do not use the charger if there is a sign of damage.



The symbol indicates the content of “likely to result in injury or damage to property”.

Caution

- When not in use, plug the charging plug into a special socket for the charger.
- Damaged cables can only be replaced by the professionals.
- Do not use the charger if the housing or vehicle connector is damaged, cracked, opened, or shows any signs.
- Unplug the charging cable from the charging socket using only the charging plug.
- Be careful not to trip over the charging plug cable around.

- Always hang the charging plug cable onto the charging plug holder after use.
- Provide the instructions for the device that a pressure connector (torque wrench) is used for field wiring, indicating the range or nominal value of tightening torque applicable to the connector terminal screws.
- Any repair and replacement of parts on the device can only be provided by T-POWER, otherwise the warranty will be null and void.
- A damaged or illegible safety tag must be replaced.
- The charger can only be installed by a licensed contractor or licensed professional.
- To ensure an access protection level of **IP55**, adequately seal all external joints, and use the provided caps and the unused connectors.
- Do not remove warnings, warning symbols or other markings attached to the charger by T-POWER.

1.4 User's Responsibilities

- As a user of the charger, you're responsible for your own safety and proper use, especially for particularly vulnerable persons (such as children, the aged), and ensure that these persons keep a safe enough distance from the charger and the charging cable.
- Consider an emergency route at the installation site, allowing you to escape in case of an emergency.
- Do not install your device in an area of potentially explosive atmosphere (an explosive area).

1.5 Product Overview

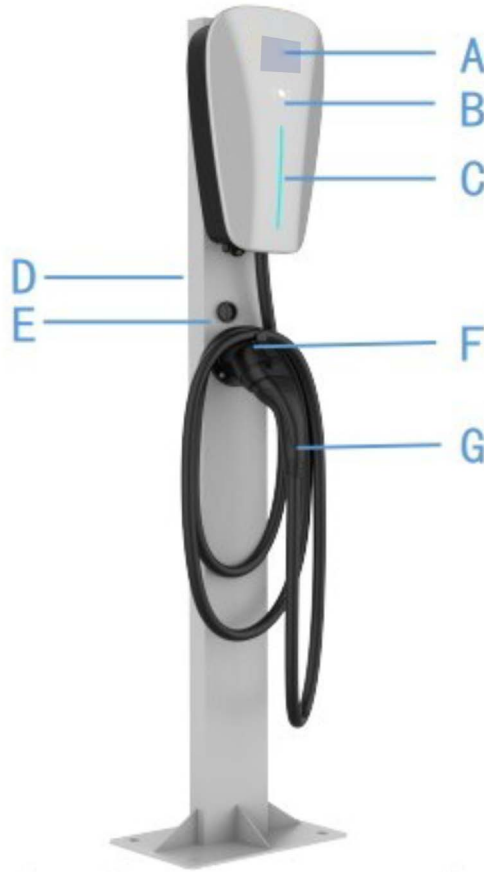
1.5.1 Product Parameters

Basic Parameters	Description
Charging mode	Mode 3
Charging port	IEC61851-1:TYPE 2
Input and output ratings	Single-phase, 200~240V, 32A, 50~60Hz
	Three-phase, 360~420V, 16A/32A, 50~60Hz
Input line	Single-phase: L1, PE, N
	Three-phase: L1, L2, L3, PE, N
Altitude	≤2000m
Internal residual current detection	30mA (type A) +DC 6mA
Surge protection	Level II
Electrical protection	Overcurrent protection, short circuit protection, overvoltage protection, undervoltage protection, ground fault protection, surge protection, overtemperature protection, L and N reverse connection protection
Display scheme	No screen/3.5-inch screen/4.3-inch screen
Status indicator	Green/blue/yellow/red
Starting mode	APP/Swipe card/Bluetooth
Emergency stop	Standard
Bluetooth	4.2
4G	Optional
Ethernet	Optional
Card reader	The contactless card reader meets

	IEC14443 A
Charging protocol	OCPP 1.6 (optional OCPP 2.0)
Stand-by power consumption	Without screen: 5W 3.5/4.3-inch screen: 6W
Operating temperature	With screen: -25°C~+55°C Without screen: -30°C~+55°C
Storage temperature	-40°C
Relative humidity	5%~95%
Length of charging cable ¹	3m/5m
Intensity of protection	IK 08
Level of protection	IP 55
Cooling mode	Natural cooling
Dimensions	218*404*109 (W*H*D) mm

¹ The cable length from the outside of the exposed charger body (excluding the length of the plug head).

1.5.2 Product Appearance²



A: 3.5/4.3-inch screen/QR code display area

C: Indicator

E: Cable protection ring

G: Charging plug

*: Optional accessories

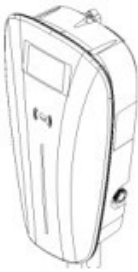
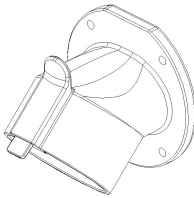

B*: Card swiping area

D*: Pole

F: Plug socket

² The appearance shall be subject to the available product. If you do not charge, plug the charging plug into the specified position for safe storage.

1.5.3 Deliverable Parts

Parts	Description
Charger body	
Plug socket	
Screw	
Cross recessed pan head screw M4*20	Cross recessed pan head tapping screw ST4.2*50 PE plug CN5020-6x40

Please check whether there is any damage to the internal product in the outer box when you receive the product package. When there is obvious damage, you can communicate with your logistics provider for return or replacement. You can also check the product in detail by opening the outer box to confirm whether they meet the product requirements.



CL5436 series AC chargers are precision electronic devices. Do not collide or fall when removing from the package and using. Do not use sharp objects to cut or scratch the housing of the charger. The charging cable is used for power carrying. Do not cut or scratch the insulation layer of the cable.

2 Installation³

2.1 Preparations

2.1.1 Installation Conditions

The charger can be installed in both indoor and outdoor environments, taking into account the installation conditions and protection measures on site:

- The installation environment of the charger shall match the protection level of the housing of the charger; avoid moisture, water, dust and explosive environment, and keep away from heat sources and corrosive substances.

³ Note: This product has two configurations: charger with screen and charger without screen, and the installation procedure is the same.

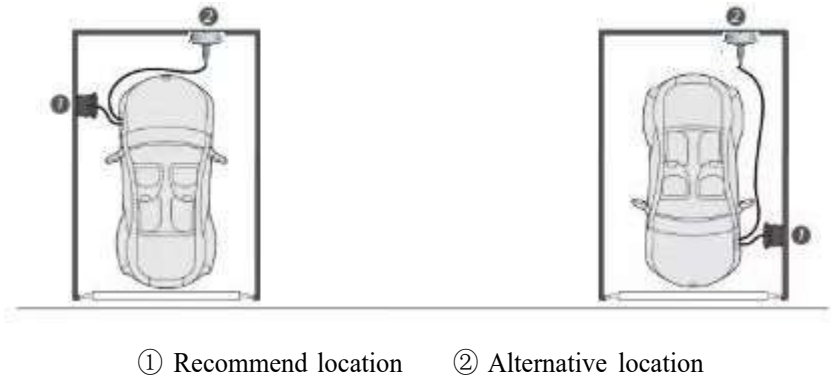
- It is recommended that a canopy should be added when the charger is installed outdoors, which can reduce the risk of water flooding and extend the service life of the product.
- Sufficient power access load capacity shall be reserved in the use place of the charger, and the voltage drop and power quality shall conform to the local standards.
- The location, installation, and construction of the charger shall comply with local safety laws and installation standards, and its installation shall be implemented by the professionals and the qualified construction organization.
- The emergency route shall be considered on the installation site.
- The installation location shall be convenient for charging, and the wiring length shall be shortened to reduce the line loss.
- When being pole-mounted, the charger shall not be installed in a low-lying place prone to pond or drip, shall be vertically installed, shall not have too high center of gravity to prevent tipping or tilting, and shall not be installed in severe vibration or high temperature place, and the pole shall be installed on a concrete foundation not less than 30cm high.
- When being wall-mounted, the charger shall be connected to at least two points of the wall, and cannot be removed without tools. The mounting wall shall bear the gravity of charger and its accessories, shall not be too close to the charger after installation, and the wall wiring shall not be too close to the internal line.
- Ensure that the ground wire is connected to the nearby ground wire of the power supply system reliably. (Note: A. Do not connect any breaking devices to the ground wire, such as fuse, air switch, knife switch, change-over switch, etc.; B. The cross-sectional area of the ground wire must be large enough) .

- Reserve a certain space for installing the charger so that maintenance personnel can inspect and maintain it.

2.1.2 Installation Risk Disclosure

- The strength of the installation location must meet the requirements, and all the fixing bolts shall be tightened, otherwise there will be a risk of falling and tipping.
- The cables, terminals and other components selected for installation shall meet the current requirements. Before and after installation, ensure that all cables related to the charger are tightened, well insulated, correctly connected, and free of risk of wear-out and extrusion damage, otherwise there will be risks of fire and electric shock.
- Construct according to the relevant construction safety laws and standards to avoid accidents.
- The power line must be fixed firmly and reliably to prevent pulling off and avoid safety hazards.
- Ensure that all holes through the charger are plugged after wiring, otherwise there may be risk of cable delayed combustion.
- Ensure that all electrical components, protective shells, insulated sleeves and other devices are not lost after the installation, otherwise there will be the risk of electric shock.
- Before powering on the device, ensure that the device is properly grounded (including the support) to avoid electric shock.
- Stop installing the charger immediately if you find it damaged.
- The charger outputs high voltage; pay attention to personal safety when using it, and keep out of reach of children.

2.1.3 Installation Space Diagram



2.1.4 Installation

For detailed installation procedure, see "**Quick Installation Manual for CL5436 Series Charger**".

3 Precautions Before Use

- After the installation of charger, power on according to the requirements;
- If the Ethernet connection is used, ensure that the network is normal;
- Please charge the electric vehicle according to the operating procedure in the user manual.

3.1 Ethernet Instructions

Network configuration will be carried out according to the user

requirements before the device leaves the factory. If the user needs to change the configuration, contact **our after-sales engineer for technical support**.

3.2 4G Instructions

4G configuration will be carried out according to the user requirements before the device leaves the factory. The user only needs to insert the SIM card when using the device. Once the device is powered on and connected to the network, the SIM card will be activated and there is network flow in the SIM card. Please use it within the validity period. According to regulations, the SIM card may be bound to the charger when being activated, and the card cannot be used on other devices after being bound. If the user needs to change the configuration, contact **our after-sales engineer for technical support**.

4 Charging⁴

4.1 Safety Information

- During the charging process, do not disconnect the circuit breaker or press the emergency stop switch at will.
- Do not use charger when the device is faulty. Do not operate it without authorization if the charger is abnormal.
- In case of emergency, please contact the staff in time, and press the emergency stop switch on the charger or disconnect the circuit breaker to stop charging.
- Do not maintain the charging device when the power supply is not

⁴ Charging: At present, the private charger only supports start and stop by card swiping and Bluetooth. If the networking function of the private charger is added later, this document will be updated.

disconnected, because there is a risk of electric shock.

- Please operate the charger in strict accordance with the user manual for the charger, operating instructions and tips on the device, failing which electric shock and fire risk may be caused.
- In case of a fire or charger flooding, do not approach the charging device. Notify the personnel familiar with the device and emergency handling methods for emergency handling.
- Guardians shall take care of children to avoid accidents such as electric shock while they are around the charger.
- Pay attention to the activities of pets, poultry and other animals during charging. Guardians shall take good care of them to avoid accidents such as electric shock.

4.2 Start Charging

- **Preconditions**

The charging plug is not plugged into any vehicle

The charger is in standby state (green indicator is normally on)

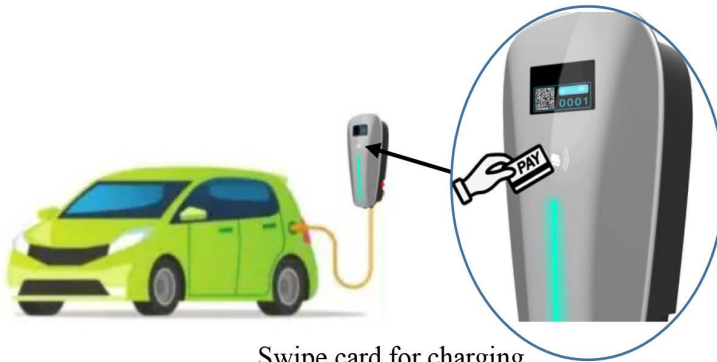
- **Operation Procedure**

Step 1 Plug the charging plug into the vehicle, and the LED indicator is normally green.



Stand-by state

Step 2 (Optional) Place the IC card in the card swiping area until the LED indicator is blue. If the single card swiping fails to start for the reason of network problems, proceed with the card swiping process again.



Swipe card for charging

Step 3 (Optional) Configure the charger as plug-and-charge mode. When you need to use it, plug the charging plug directly into the vehicle to start charging.

Step 4 When the blue LED indicator is on by scrolling, charging is started.

4.3 Stop Charging

Step 1 Do not use brute force to pull the mechanically locked plug out of the socket (the users without the card swiping function can skip the card swiping step).

Step 2 Pull out the charging plug on the vehicle.

Step 3 Put away the charging plug, wind the charging cable around the charger body, and put the charging plug onto the holder.

5 Charging Instructions

5.1 Indicator Description

Indicator Description

No.	Status	Color
1	Green indicator is normally on	Stand-by_rechargeable
2	Green indicator flashes slowly for 1s	Reserved_rechargeable
3	Yellow flowing light	Upgrading
4	Blue flowing light	Charging
5	Blue light 2S - flash twice - Blue light 2S	Charging_S2 disconnected
6	Blue light 2S - flash once - Blue light 2S	Charging_trickle
7	Yellow light	Abnormal state
8	Red light	Fault state

Description of abnormal state

No.	Abnormality Type	Abnormality Indicator
1	Abnormal voltage	Normally on for 2S—>Flash 3 times—>Normally on for 2S
2	Abnormal overcurrent	Normally on for 2S—>Flash 4 times—>Normally on for 2S
3	Abnormal overtemperature	Normally on for 2S—>Flash 7 times—>Normally on for 2S
4	Abnormal current leakage	Normally on for 2S—>Flash 9 times—>Normally on for 2S
5	Abnormal CP signal	Normally on for 2S—>Flash 10 times—>Normally on for 2S

Description of fault state

No.	Fault Type	Fault Indicator
1	Emergency stop, access control, tilting	Red light is normally on
2	PE is disconnected	Normally on for 2S—>Flash twice—>Normally on for 2S
3	The contactor is adhered	Normally on for 2S—>Flash 5 times—>Normally on for 2S
4	The electricity meter or measuring unit is abnormal	Normally on for 2S—>Flash 6 times—>Normally on for 2S
5	L , N are reversely connected	Normally on for 2S—>Flash 8 times—>Normally on for 2S
6	The card reader communicates	Normally on for 2S—>Flash 11 times—>Normally on for 2S

7	The display screen communicates	Normally on for 2S—>Flash 12 times—>Normally on for 2S
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6 Common Faults

No.	Fault	Faults and Troubleshooting Methods
1	The indicator is not on	<ul style="list-style-type: none"> ● Ensure that the power input is properly connected and the power supply is within the operating range of the unit ● Ensure that the switching power supply is turned on ● The device is damaged, contact the customer service center
2	The device cannot charge properly	<ul style="list-style-type: none"> ● The charging plug is not correctly plugged <ul style="list-style-type: none"> ➢ Remove and plug the charging plug, and ensure that the charging plug is connected successfully ● The charging process is not performed correctly <ul style="list-style-type: none"> ➢ Please follow the instructions in section 4.2 Start Charging ● The charging plug may be soiled or damaged in a locking area <ul style="list-style-type: none"> ➢ Clean or replace the charging plug ● Confirm that the configuration of the vehicle end is normal <ul style="list-style-type: none"> ➢ Refer to the vehicle operating manual ● The device is damaged, contact the customer service center
3	The battery is not fully charged or the	<ul style="list-style-type: none"> ● The current decreases because the temperature of the vehicle or charger is too high <ul style="list-style-type: none"> ➢ Visually inspect the plugboard for dirt,

	charging time is increased	wear or damage <ul style="list-style-type: none"> ● Lack of release due to external control devices (power supply device, PV device) ● The device is damaged, contact the customer service center
4	The fault LED is red	<ul style="list-style-type: none"> ● Fault <ul style="list-style-type: none"> ➤ If the red light does not flash, check the emergency stop status ➤ If the red light flashes, locate the possible causes according to 5.1 Fault Indicator Description ➤ Cut off the power supply of the charger and pull out the charging plug on the vehicle, and then switch on again ● The device is damaged, contact the customer service center

If other exceptions occur or the service cannot be restored after the preceding operations are completed, contact the customer service center. Do not open the charger, touch or remove the circuit protection device or any other components.

7 Maintenance⁵

- To ensure the normal service life of the charger and reduce the risk in use, the charger must be maintained by the professionals using the qualified and safe maintenance tools within the specified time period.
- The emergency stop switch shall be inspected and maintained regularly to ensure that it is effective.
- Take shading and lightning protection measures for the charger. It is recommended that you install an awning outdoors.
- Regularly check whether all the bolts in the charger are tightened, whether the connecting line is loose, and whether the connection is not reliable.
- Check whether there is a short circuit.
- Pay attention to lightning protection to ensure the effective shielding and reliable grounding of the charger.
- When the charger is in use, control the output voltage and current of the charger within the nominal range as far as possible to ensure that the charger works at the maximum efficiency.
- When stopping using the charger, stop the charging output first, and then wind the charging cable and put it back to the original position.
- When the charger is in standby state, clean it regularly. It is highly recommended that you use soft wet cloth with clean water and ensure that no water enters the vehicle joints.
- Maintenance Interval.

⁵ Note: Non-professional personnel shall not disassemble the device components.

Inspection Item	Monthly	Trimonthly	Semiannually	Annually	Action
Charging plug	-	√	-	-	Inspect
Protection of residual current circuit breaker	-	√	-	-	Inspect

8 After-sales Service

8.1 Inspection Methods⁶

Item		No. of Charger	
1	Device Appearance	Records	Suggestions
1.1	Inspect whether the power indicator, fault indicator and charging indicator are normal		If any problem is found, please first check whether there is a problem with the connection; if the connection is correct and the charging is normal, please replace the indicator
1.2	Inspect whether the paint layer of the device is clean		If any problem is found, contact the

⁶ Note: If it is a station operation device, it is the basis for after-sales service; if not, it is the basis for daily inspection of users.

	and intact, whether the housing is deformed, fixed or rusty		relevant staff to repair the device; if it cannot be repaired, please return to the original factory for repair
1.3	Inspect whether the charging plug is properly plugged, whether there is any foreign body, and whether the charging cable is damaged		If any problem is found, please contact the manufacturer for repair
1.4	Inspect whether the device lock is normal		If any problem is found, please contact the manufacturer for repair
1.5	Inspect whether the antenna of the charger is intact		If any damage is found, contact the manufacturer for replacement
1.6	Inspect whether the emergency stop button is intact and can be reset by turning		If the emergency stop button cannot be turned back, contact the relevant staff for replacement
1.7	Inspect whether the marks and operation instructions of the device are clear and complete		If marks and instructions are covered by stains, wipe them with alcohol
1.8	Inspect the top of the charger for water accumulation		If there is water, please wipe it off immediately

			after the rain stops
1.9	Use a multimeter to measure whether the charging plug is electrified		If the charging plug is electrified, please inform the relevant staff immediately for handling
1.10	Inspect whether the PG head (where the charging cable is fixed) is tightened		If the charging cable is loose, use a tool to screw it back
2	Interior of device	Records	Suggestions
2.1	Inspect whether the screw connection between the wire and the electrical components is firm and reliable		Ensure that all wires are securely connected with the screws of the electrical components
2.2	Inspect whether the wires are in good condition, and inspect the wire insulation for damage		If any cable or control cable is damaged, replace it immediately
2.3	Inspect cable joints for rusting and cable holes for sealing		If the joints are rusty, inform the relevant staff to replace them
2.4	Inspect whether all cables in the device are marked clearly and correctly		If the cable mark is incorrect, inform the relevant staff to correct it
2.5	Inspect whether the cable is squeezed or twisted		If any problem is found, remove the cable and reconnect it
2.6	Periodically inspect the dust screen for dust accumulation		Use a high-pressure air gun to periodically

			remove dust from the dust screen
2.7	Inspect whether the interior of the device is clean		Periodically clean the dust inside the device
Inspection department			
Inspectors			
Date of inspection			

8.2 Parts Repair/Replacement

If the product is damaged or cannot be used normally due to poor production or normal wear and tear of the device during the warranty period, we are responsible for free maintenance, debugging or replacement of the parts for the user. In case of damage caused by disassembly, impact, smashing and other intentional acts, we will provide paid maintenance, debugging or replacement of the parts. After the warranty period, we will provide paid maintenance, debugging or replacement of the parts

8.3 Upgrade Method

If you need to upgrade the charger, please inform our after-sales service personnel. They will upgrade the charger on site or remotely upgrade the software version online through the platform.

8.4 Maintenance and Training

For device maintenance and user training services, please contact our customer service email, support@t-power.com.au.

9 Disposal



The logo is located on the product, in the manual or on the package, indicating that electrical and electronic devices and their accessories shall be disposed separately from ordinary household wastes.

Materials can be recycled according to their markings. By recycling old devices and materials, or other forms of reuse, you can make a great contribution to the environment.

T-POWER PTY LTD

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