



HYDRA[®]

ELECTRIC VEHICLE CHARGERS



ZODIAC

AC wall-mounted EV charger

ELECTRIC VEHICLE CHARGER INSTALLATION AND INSTRUCTION MANUAL

CONTENTS



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SAFETY	3
INTRODUCTION	6
Serial Number Identification	6
Appearance and Dimensions.....	7
Technical Specifications.....	8
Product Features.....	9
SYSTEM ARCHITECTURE	10
Electric	10
Internal System Communications	10
INSTALLATION	11
Procedure.....	11
Site Space Requirements	12
Mounting Requirements	13
Electrical Requirements.....	14
Network Connectivity Requirements.....	15
Tool Preparation	16
Installation Instructions	18
Inside the Zodiac.....	19
Orientation of the CT clamp.....	20
Access ports.....	21
COMMISSIONING	22
Power On Process	22
Charging Operation.....	22
Emergency Operation.....	22
Forced Unplugging and Recovery.....	22
Download the APP	23
Check before commissioning.....	23
AFTER-SALES MAINTENANCE	24
After Sales Service	24
Disclaimer	24
Maintenance.....	24
PROCEDURES	26
APPENDIX	27
LED indicator status identification	27
Fault diagnostics	27
Restriction of Hazardous Substances	28
Authentication	29

SAFETY









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SAFETY ANNOUNCEMENTS


Before operating the EV charger, read the instructions and precautions carefully to reduce the risk of accidents. The “Caution, Warning and Hazard” notices on the charger and in the product manual do not represent all safety concerns to be observed and are only intended to supplement the various operational safety precautions. In carrying out the company’s product and equipment operations, you must comply with relevant industry safety norms and strictly abide by these instructions to provide the appropriate equipment precautions and special safety instructions

IDENTIFICATION DESCRIPTION

	Indicates that care must be taken with the operation or condition of hazardous voltage
	Important security information must be followed very carefully
	Indicates risk of burns from high-temperature areas or areas with high component temperatures
	Ground protected connection point
	AC electricity
	Indicates that the said action must be performed using clothing and/or personal protective equipment provided by the employer

ELECTRICAL SAFETY

HIGH VOLTAGE

	Some components of the power system operate with high voltage. Direct or indirect contact with these components through non-insulated protective material poses a fatal hazard.
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The installation of AC power supply equipment must comply with safety regulations, and personnel carrying out the installation of AC equipment must be qualified in high voltage AC-power operation.

SAFETY




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It is strictly prohibited to wear watches, bracelets, rings or other conductive objects on your wrist or hand. Turn off the power immediately if you find water or moisture in the unit. When operating in humid conditions, water should be strictly prevented from entering the equipment. A “Do not operate” sign must be hung on switches and buttons that are not to be used during installation.

	Construction of high-voltage lines can cause fire or electric shock accidents. The racking and wiring of AC cables through the area must comply with the local regulations and specifications. Only personnel qualified for high-voltage and AC operations can carry out various high-voltage operations.
---	---

TOOLS


	Special tools must be used for all high AC voltage operations.
---	--

THUNDERSTORMS


	High AC voltage operations during thunderstorms are strictly prohibited.
--	--

Strong electromagnetic fields are produced in the atmosphere during thunderstorms. To avoid lightning damage to equipment and personnel, do not carry out any operations during thunderstorms.

ELECTROSTATICS

	Static electricity generated by the human body can damage electrostatic-sensitive components on boards such as large-scale integrated circuits (ICs). To prevent static damage to sensitive components, personnel must wear an anti-static bracelet when in contact with equipment (hand-held boards, circuit boards, IC chips, etc.). The anti-static bracelet must be well-grounded on the other end.
---	---

SHORT CIRCUITS

	It is strictly prohibited to short-circuit the power supply system to the positive and negative poles or to short the non-ground pole to ground during operation. Short circuits can cause equipment to burn and pose a personal safety hazard.
---	---

In addition, the polarity of the cables and interface terminals must be strictly checked when carrying out live work.

Power distribution operation space is limited. Before any operation, close attention must be paid to the choice of operating space.

An insulation tool must be used during operation.

When working with electricity, care must be taken to keep your hands, wrists and arms steady, to prevent accidents from a tool slipping, or from too much movement of a tool or your body.

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SHARP CORNERS



When moving equipment by hand, wear protective gloves to prevent cuts.

POWER CABLE



Make sure that the cable label is correct before connecting the cable.

SIGNAL LINE



The signal cable should be tied separately from the power cable and at least 15mm away.

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INTRODUCTION



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SERIAL NUMBER DESCRIPTION

AC006	T2	7	A01	PC	ROU0120030002
1	2	3	4	5	6

6	PILE ID NUMBER ROU01 2003 0002 - CUSTOMER ROMARIA 01 MADE IN MARCH 2020, PILE 0002 HERE FOUR DIGITS IN DECIMAL.
5	FOUNDRY
4	BOM VERSION
3	CHARGING POWER: 7: AC CHARGER RATED POWER 7KW 22: AC CHARGER RATED POWER 22KW 11: AC CHARGER RATED POWER 11KW
2	CHARGING STANDARD: T2: TYPE2 AC CABLE VERSION T2S: TYPE2 AC SOCKET VERSION T1: TYPE1 AC CABLE VERSION
1	PRODUCT NUMBER: AC006- POLYCARBONATE REINFORCED ABS

The Hydra Zodiac wall-mounted, AC Electric Vehicle Charger can be configured with Type 1 J1772, Type 2 cable (tethered) or socket (untethered) 1 J1772, Type 2 cable (tethered) or socket (untethered). The system can be installed outdoors (but for safety reasons, if the water/snow level reaches the charger connector it should not be used).

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APPEARANCE & DIMENSIONS

Use	Residential, Commercial or Workplace Parking
Material	POLYCARBONATE REINFORCED ABS
Installation type	Wall-mounted
Cable layout	Bottom
Weight	Charger: 2.8kg Charging Cable: 5.4kG
Cable length	4.7m
Charging socket	Type2



- 1 LED Status indicator light
- 2 Charging Socket (untethered models)
- 3 Emergency Stop and Reset Button
- 4 Backplate Fixing Screws x 4
- 5 Power Cable inlet
- 6 Ethernet port (option)
- 7 Cable Plug inlet (tethered models only)

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TECHNICAL SPECIFICATIONS

COMPONENT SPECIFICATIONS	Dimensions	350(L) x 200(W) x 135(H) mm
	Weight	3.5 kg
	Cable length	4.7 meters
	Shell material	Polycarbonate reinforced abs
	Screen	N/A
POWER CHARACTERISTICS	Input voltage	230V AC (L/N/PE) $\pm 10\%$ 400V AC (L1/L2/L3/N/PE) $\pm 10\%$
	Input frequency	50Hz/60Hz
	Rated power	7kW (single-phase) / 22kW (three-phase)
	Measurement accuracy	$\leq \pm 0.5\%$
	Output voltage	Same as input voltage
	Output current	32A
DESIGN FEATURES	UI	Emergency stop button, LED indicator
	Charging method	Plug and charge, APP (timed start and stop)
	Charging cable	Type2 (Socket/Cable)
COMMUNICATION	Web interface	WiFi/Ethernet
	Ocpp	Ocpp 1.6j
WORKING ENVIRONMENT	Usage	Indoor/Outdoor
	Operating temperature	-20°C ~ +50°C
	Operating humidity	5% ~ 95% no frost
	Elevation	<2000m
	Protection level	IP65
	Cooling method	Ambient air cooling
	Ground detection	30mA AC, 6mA DC

INTRODUCTION



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PRODUCT FEATURES

The HYDRA ZODIAC AC Charger has a modern design and user-friendly interface, designed for domestic, commercial and workplace use.

SAFETY FEATURES

- ⚡ Hardware protection features:
 - ⚡ Emergency stop protection
 - ⚡ Overcurrent protection
 - ⚡ Earth leakage protection
- ⚡ Comprehensive software protection features, providing multiple protections
- ⚡ IP65, EMC class B/C

SMART

- ⚡ The terminal charger is connected to the Open Charge Point Protocol platform online
- ⚡ Remote diagnostics, remote upgrades
- ⚡ Compatible with GB/T, Type1-SAEJ1772, Type 2 and IEC61851-1/2017
- ⚡ OCPP Smart charging
- ⚡ Support for OCPP1.6-J (direct upgrade to 2.0 when required)

CONVENIENT

- ⚡ Wireless or wired communication, flexible networking
- ⚡ Open communication protocol for sweep charge, swipe charging and API services
- ⚡ Several settings to end the charge
 - ⚡ Time limit
 - ⚡ Amount of electricity

OPTIONAL FEATURES

- ⚡ Plug and Charge (optional)

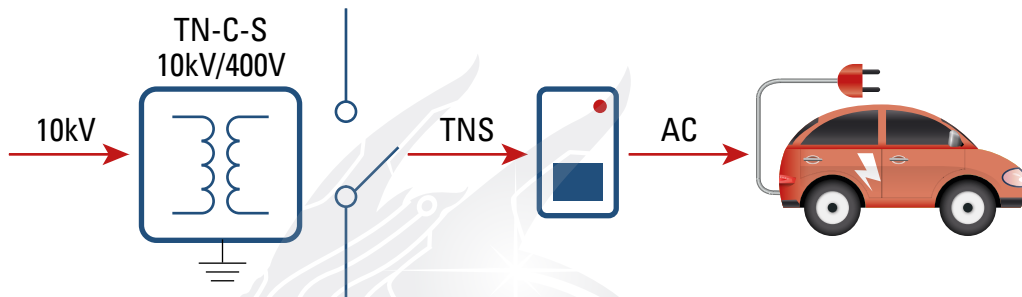
SYSTEM ARCHITECTURE



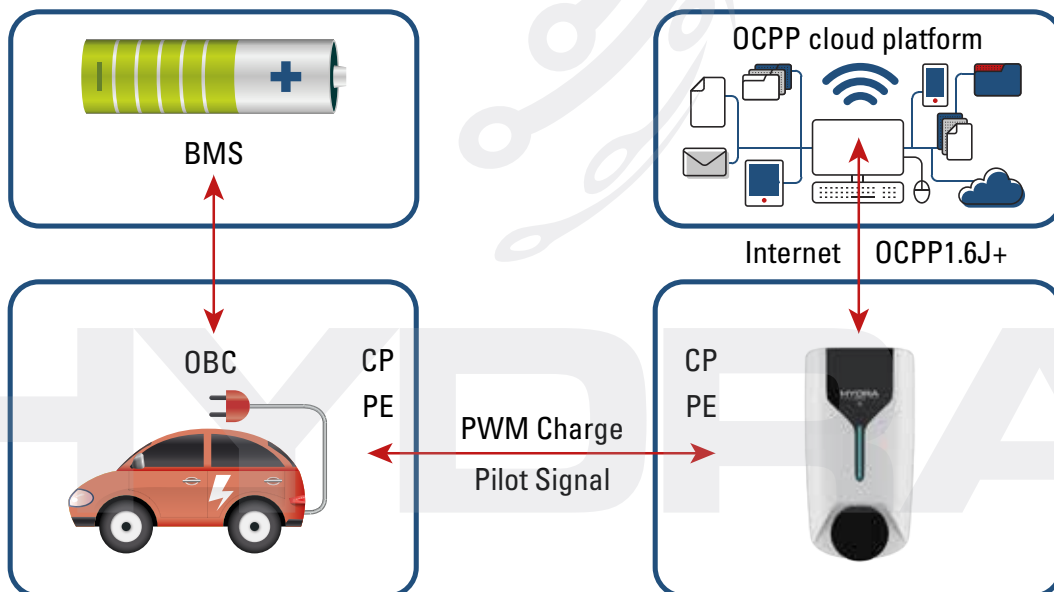
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ELECTRIC

Transformer - Switch - Charger - Car



INTERNAL SYSTEM COMMUNICATIONS



INSTALLATION



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PROCEDURE

SAFETY INSTRUCTIONS

The operating voltage and current inside the charging system are high, and the following regulations should be observed at all times to ensure personal safety:

1. Charging systems must only be installed by personnel who have been trained in, and have sufficient knowledge of, the charging system. Always follow safety precautions and local safety regulations during installation.
2. To operate inside the charging system, make sure that the charging system is not live. The power input to the charging system must be disconnected.
3. Distribution cable wiring should be reasonable and protective to avoid accidental contact when operating power supplies.

VISUAL INSPECTION

Upon product delivery, check that the package is not damaged and that the label is complete and correct. If there is an issue, immediately inform the carrier and take photos as evidence. At the same time, immediately contact the manufacturer to discuss the issue.

Only after the goods arrive at the installation site can they be opened and the boxes opened for inspection. Start by opening the box with the packing slip, taking out the packing list and checking it against each item. Next, check the serial number of the box, the equipment packaging, the number and type of accessories and the integrity of all items.

Following the packing list, check that accessories and accompanying documents are complete (refer to the shipping list) and store the accessories and documents properly.

Carry out a visual inspection to ensure that the product is free of abnormal marks showing collisions, and of scratches, cracks, dents, rust, breakage, or peeling of paint.

Sign receipt documents, make a record of the situation, keep documents and scan them for archives, or give them to relevant parties.

ACCESSORY LIST

The packing list comes with the shipping documents.

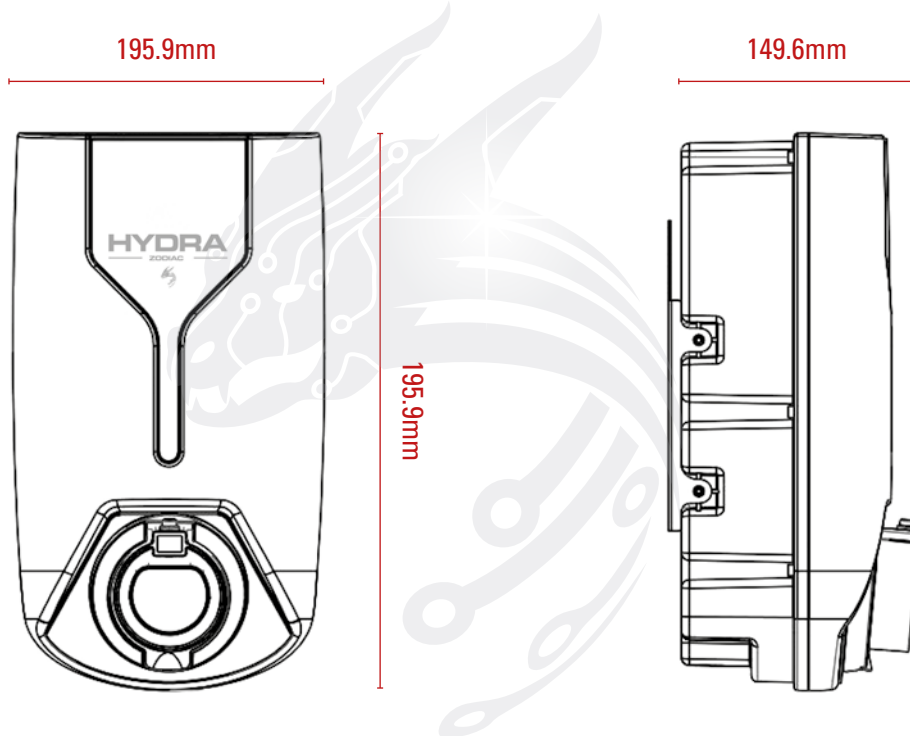
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SITE SPACE REQUIREMENTS

Adequate installation space should be reserved to ensure safe and reliable operation, ventilation and maintenance of the equipment. Installation requires 250x400mm of space



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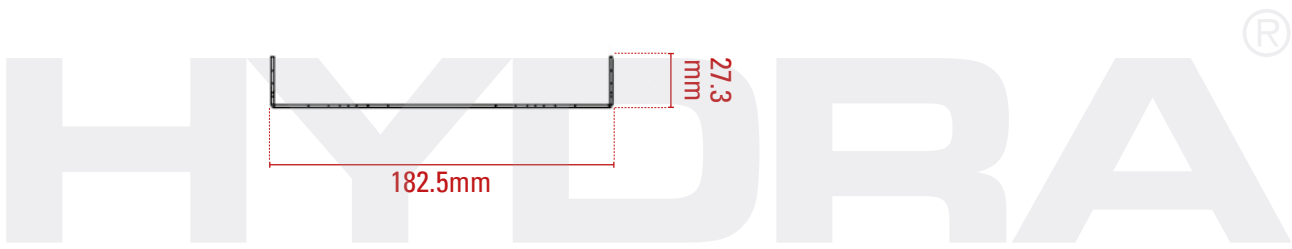
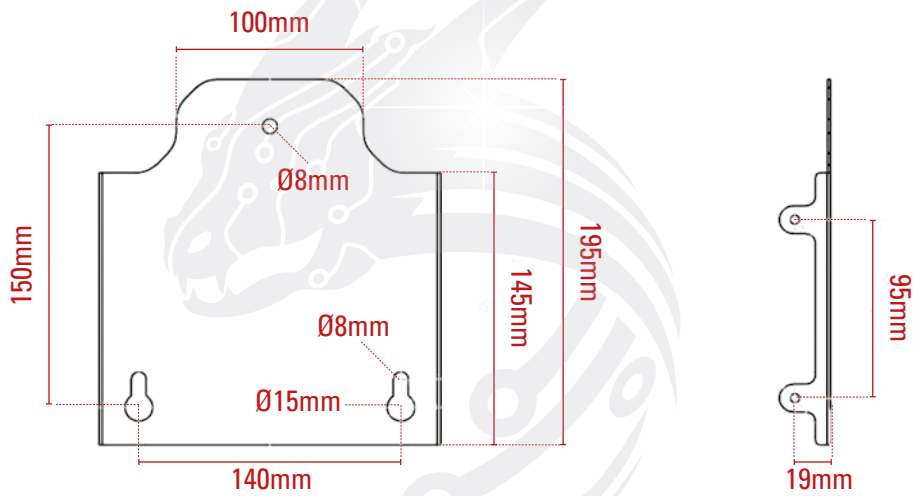


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MOUNTING REQUIREMENTS

When the backplate is used to hang the charger on the wall, ensure that the variation in wall smoothness is within $\pm 1.5\text{mm}$ per square meter and that the strength level of the installation position is not less than C30. Four M4 expansion screw holes are embedded in the mounting surface.

To avoid the back plate distorting when being screwed onto the wall, it is recommended that you fix each screw loosely one at a time and then tighten slowly once all screws are in place.





ELECTRICAL REQUIREMENTS

Cable type: TN-C-S/TN-S confirming the need for shielding as required by local laws or norms

- ⚡ If there is a shield, both ends of the shield are connected to the PE secure ground.
- ⚡ Cable diameter requirements are determined by the contractor or electrical engineer, based on power, distance and industry standards, or the following recommendations:
 - ⚡ ZR-YJV-multi-core-sheath power cable.
 - ⚡ The voltage level is 450/750V or higher.
- ⚡ A temperature of at least 90°C should be achieved.
- ⚡ PE Safety ground wire requires the same size model as the N wire, or uses the following recommended requirements:
 - ⚡ When the phase line is greater than 35mm, the ground line should be no less than half of the phase line section.
 - ⚡ When the phase line is greater than 16mm and less than or equal to 35mm, the ground line should be consistent with the phase section.
 - ⚡ The section of the ground line must not be less than 16mm.
- ⚡ The recommended power distribution input wire diameter of the charger should not be less than the following recommended values and should have a separate circuit breaker and leakage (the following table is at 25°C environment, YJV22 (armoured) cable in the soil directly applying flow as a reference, according to the actual cable material and laying method to determine the specific wire diameter).

Charger power(kW)	7	11	22
Input voltage	240V	240V (L-L)	400V
Input current	32A	16A	32A
Recommended line diameter	6mm ²	6mm ²	6mm ²

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NETWORK CONNECTIVITY REQUIREMENTS

The recommended way to connect to the network is via the WiFi module integrated within the charger. Make sure the signal strength is strong and stable at the location where the EV charge point is installed; otherwise a WiFi signal amplifier (booster) may be required.

If there is no or poor connection a standard wired internet connection (RJ45 ethernet) is an option. Wired connections must meet the following requirements:

- 🔌 RJ45 Ethernet
- 🔌 Network cable type: 5e class or greater, 8P plus PE, shielding wire.
- 🔌 It is recommended that the line length is less than 75m. Greater than 75m length requires a customised solution.

- 🔌 Minimum bandwidth required:
 - 🔌 Upstream: 128 kbps
 - 🔌 Downstream: 4 Mbps

- 🔌 Demand connection reliability: 99.9%.

- 🔌 For special configurations, please contact us.

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TOOL PREPARATION

STANDARD TOOLS

NAME	DESCRIPTION	QTY
Multimeter	Checking the electrical connections and electrical parameters	1
Electric impact drill	Drilling	1
Impact drill bit (Ø6mm)	Drilling	2
Tape measure (5m)	Measurement	1
Level	Measurement	1
Crosshead screwdriver	Unpacking	1
Pliers	Unpacking	1
Wire Stripper	Removing the insulation sheath / jacket	1
Terminal pressure line pliers	Pressing the terminals	1
Bevel cutting pliers	Cutting the cable	1
PVC tape and sheath	Insulation tape and insulation cladding connection	1
Personal protection tools	Ensuring the health and safety of operators	1

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CONNECT THE POWER CABLE

Note: Turn off switches and pull out all fuses before connecting electrically

CONNECT THE GROUND CABLE

The charging system uses a common grounding method, using a ground cable to connect the ground copper row of the charging cabinet with the main ground row.

CONNECT THE AC INPUT

1 The AC input cable is routed from the user's power distribution switch and is connected to the output terminal of the user switch when power is ready to be turned on. The user distribution switch should have overcurrent, short circuit, lightning strike and other protective devices. The capacity of the power distribution switch is recommended as not less than 1.5 times the actual load capacity.

Please ensure the The Zodiac has its own dedicated circuit – EV charging equipment in the UK is required by law to have its own dedicated circuit.

2 The L1-phase, L2-phase, L3-phase and N-zero cables of the AC input cable should use brown, black, grey and blue cables (standard reference below). If the cable has only one colour, the line number identification is pasted or marked with different colour insulation at both ends of the cable.

3 Cables should not have severed heads, broken heads or scratches.

Colour	Blue	Brown	Yellow and Green
Phase order	N	L	PE

PHASE LINE / ZERO STUD / IDENTIFICATION CHART

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INSTALLATION INSTRUCTIONS

OPENING THE ZODIAC EV CHARGER HOUSING

The faceplate of the Zodiac EV charger is held in place with six small screws (three each side). These cannot be accessed once the EV charger has been mounted onto the wall.

Lay the Zodiac face down on a level surface taking great care not to scratch the faceplate. Use the foam sheets from the original packaging to protect it.

In addition to the power cables to the charging socket (Untethered version) there is a communications antenna wire (black) and power cable to the LED status indicator light (white/red ribbon) attached to the back of the faceplate.

On some models there is an additional antenna wire (black) for an RFID card reader.



It is vitally important to the function of the EV charger that these wires are not disturbed.

LED Ribbon

WiFi Antenna

(on some models this is fixed to the main body of the Zodiac, not the faceplate)

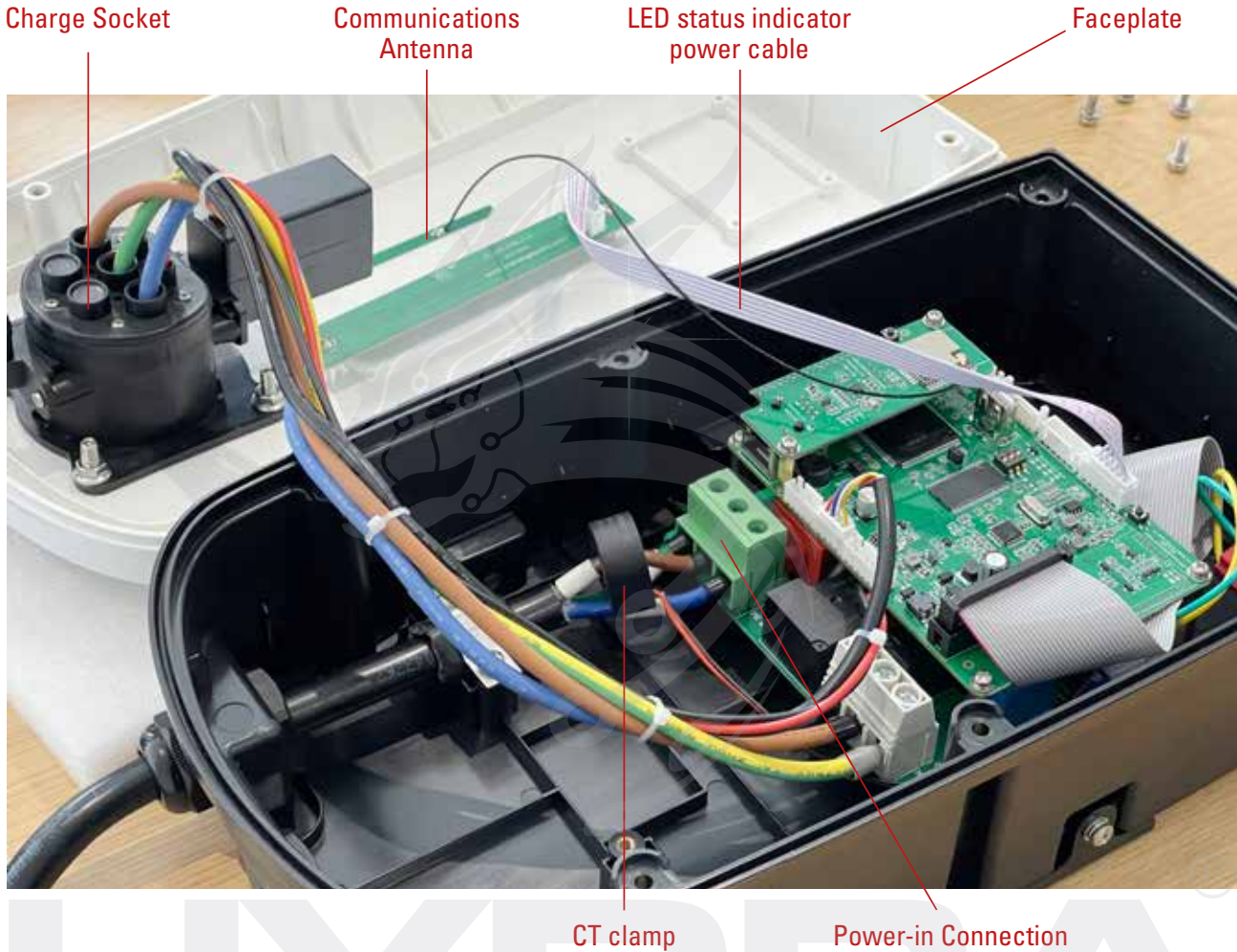


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INSIDE THE ZODIAC EV CHARGER (SOCKET ONLY MODEL)



Above shows the single-phase 7kW Hydra Zodiac with the quick-connect tail attached. When disconnecting this to attach the power cable direct to the charger the CT clamp needs to be re-installed on the live feed.

Tamper Boundary Warning Switch

This has been added to the Hydra Zodiac 2023 model to comply with the Secure OZEV regulations which are now in force.



CONTENTS



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INSIDE THE ZODIAC EV CHARGER (UNTETHERED MODEL)

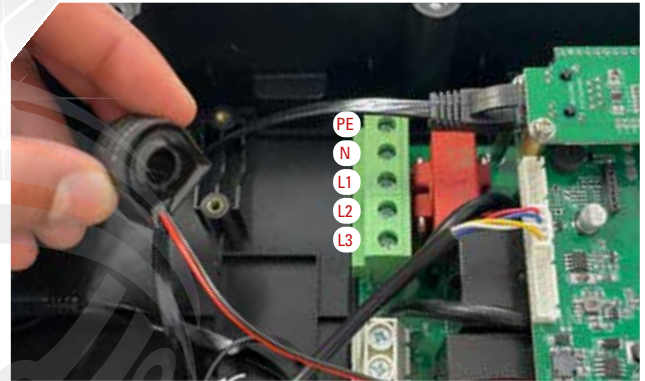
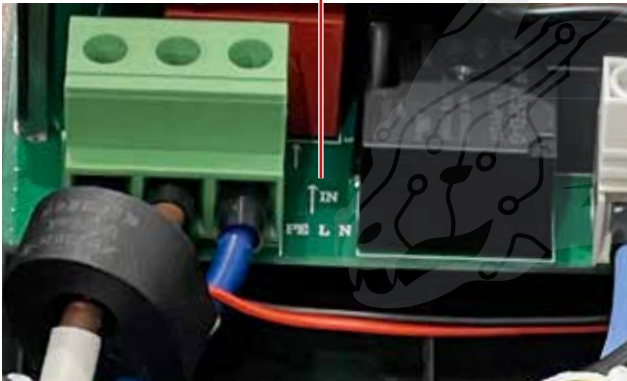
The terminals on the model above (from left) are PE, L, N

A 5-terminal block is fitted to the 22kW, three-phase model, and also on some 7kW models. (see below)

Please always check the board for correct orientation and wiring order. Some Zodiac models may be configured as PE, N, L (see below for location)

Here the terminals are designated PE, N, L1, L2, L3

Always check wiring order marked on PCB

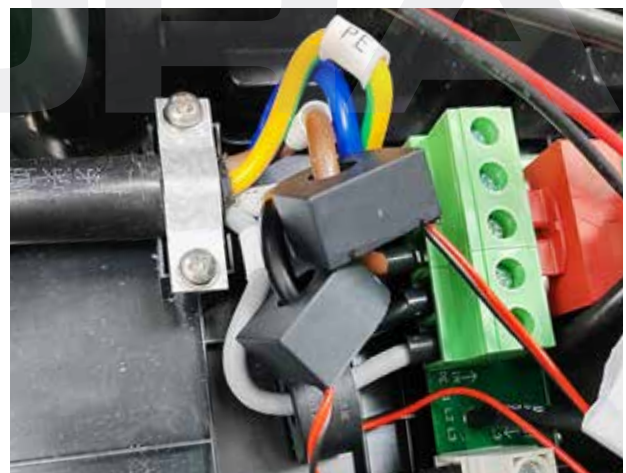


CT CLAMP ORIENTATION (WHERE FITTED)

Please make sure that the orientation of the CT clamp is correct (where fitted): The Black/Red wire exiting the CT clamp should face the direction of the board to achieve a correct reading. If the side of the CT clamp with these wires is facing away from the board it will not give accurate readings.

For the three-phase Hydra Zodiac (below right) each CT clamp needs to be attached to the correct feed and with the correct orientation (black/red wire facing the board).

(Please Note: Later models take the reading direct from the board and no separate CT clamp is used)



INSTALLATION



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ACCESS PORTS UNDER THE ZODIAC CHARGER



The Hydra Zodiac has three access ports underneath, these are for:

- A Power in** (LEFT on all models),
- B RJ45 Ethernet cable** (CENTRE on some models),
- C Charging Cable Out** (RIGHT on tethered models only)



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RJ45 Ethernet port (centre on some models)

COMMISSIONING



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POWER-ON PROCESS

Ensure that the charger is installed properly and attached securely to the wall. Check that the wires are wired correctly and the charger can be powered up.

After the Hydra Zodiac is powered up the LED indicator light on the faceplate should be **BLUE**, either flashing or steady and constant.

If it does not show a blue indicator light please refer to the appendix of this manual where it describes different LED indicator status lights.

CHARGING OPERATION

There are two methods to commence charging: simple Plug-and-Charge or via the smart-phone App: **HYDRA HOME**.

Before charging, please make sure that the charging cable is firmly inserted into the charging port of the vehicle.

If the customer intends to use the App to facilitate charging, set up charging times, record charging sessions or to allow other family members to use the chargepoint, please refer them to the **HYDRA HOME APP USERGUIDE**.

DO NOT pair the Zodiac charger to the app on your own phone, this will prevent the customer being able to pair it to their account. If you wish to test the Zodiac operation from the Hydra Home App please ask the customer to register an account and pair the zodiac to their own smartphone then guide them through the process.

EMERGENCY OPERATION

Refer to this section only if an exception has occurred or the charger has been mishandled.

Emergency stop: In the event of an emergency, quickly remove the transparent protective cover (if present) and press the metal/silver Emergency Stop button to cut off the output power supply. Do not use the Emergency Stop button for normal shutdown.



The Emergency Stop button and its location
(right hand side of the Zodiac if facing the charger)

FORCED UNPLUGGING AND RECOVERY

Forced unplugging of the charging outlet is prohibited during charging!

If the normal stop operation does not occur, it is recommended to press the Emergency Stop button and then manually unlock to prohibit forced pull-out of the outlet.

COMMISSIONING



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DOWNLOAD THE APP

For iPhones, please use App store to search “Hydra Home” to download and install the app.

For Android phones, please use Google Play to search “Hydra Home” to download and install the app.

		Android phone	Android 5.0 and above (8.0+ recommended)
		iPhone 6 and above	IOS 11.0 and above

REGISTER AND LOGIN

We have produced a comprehensive **User Guide** for the **HYDRA HOME App** which is accessible online. Scan the QR code found in the packaging or on download it here: www.hydraev.co.uk/support

CHECK BEFORE COMMISSIONING

BEFORE STARTING ANY COMMISSIONING OF THE ZODIAC, THE FOLLOWING CONDITIONS NEED TO BE PREPARED AND VALIDATED:

- ⚡ All preparation, installation, connections, etc. have been completed.
- ⚡ The Zodiac input power supply has been connected and the charger power-up capacity is already available.
- ⚡ If there is no Wi-Fi signal, the zodiac needs to be connected via a wired RJ45 Ethernet cable.

POWER-ON CHECK

Once the charger is connected to AC power, check the LED light is on and pulsing **BLUE** to signal that is in an idle/ready state. Next configure the network connection via the APP.

CHARGING OPERATION

- ⚡ Connect an electric vehicle, EV simulator or other suitable testing device. The charger must show that the electric vehicle is connected.
- ⚡ Use the APP to commence charging or set up ‘Plug and Charge’ to start charging and check the Zodiac starts the normal charging process
- ⚡ Check the charger’s LED light is **GREEN** and the module is working.

AFTER-SALES MAINTENANCE



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AFTER-SALES SERVICE

- ⚡ Parts and labour are covered by a three-year warranty (go to www.hydraev.co.uk/support to obtain your warranty document)
- ⚡ During this period any defective part will be replaced.
- ⚡ One-to-one technical engineer support is available: go to www.hydraev.co.uk/support

DISCLAIMER

This equipment must be used under normal conditions. Should the following circumstances lead to an accident or damage, we will not be held responsible.

- ⚡ All human factors, damage and use in an abnormal working environment
- ⚡ Failures and damage caused by improperly using the device or not following instructions.
- ⚡ Damage caused by transport after delivery.
- ⚡ Normal wear, breach or immersion.
- ⚡ Use of parts not authorised by the manufacturer (such as aftermarket or counterfeit parts).
- ⚡ Dismantling, repairing or modifying the products without the prior consent of the company.
- ⚡ Damage caused by flood, fire, lightning strike, typhoons, earthquakes or abnormal voltage.
- ⚡ Accidents, faults or damages outside the warranty period.

MAINTENANCE

DAILY MAINTENANCE

Regular servicing maintains the charger's safety and condition.

REGULAR MAINTENANCE

MONTHLY

- ⚡ Check the charger is still perfectly upright.
- ⚡ Clean any dirt on the outer surface.
- ⚡ Check for damage to the painted surface.
- ⚡ Test the charging outlets and cables.
- ⚡ Check the LED display status.

QUARTERLY

- ⚡ Check the ground screw and ground resistance (no greater than 1Ω).
- ⚡ Check the charger's alarm light is green and the module is working.

continued...

AFTER-SALES MAINTENANCE



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MAINTENANCE

SEMI-ANNUALLY

- ⚡ Check ground bolt torque and tighten if required (pedestal mounted units)

ANNUALLY

- ⚡ Arrange for a qualified electrician to check all internal components and wiring.

ON-SITE MAINTENANCE

This device is an internet of Things-type charger with pre-charge self-test, daily regular self-test, online monitoring of electrical parts and other intelligent functions.

- ⚡ If working, simply perform routine maintenance, no overhaul maintenance is required.
- ⚡ If not working properly, promptly contact our customer support centre or your local supplier.

REMOTE MAINTENANCE

The Hydra Zodiac can remotely connect to our cloud platform to monitor the status of the charger in real time. When connected, the platform can provide remote diagnosis, remote service and remote firmware upgrade services as required. It can also locate problems and provide solutions to help our support technicians carry out remote services. It can remotely upgrade software, solve end-user problems and carry out unattended operations.

- ⚡ The system self-tests daily. If there is an issue, it will escalate it automatically.
- ⚡ If there is an abnormal operation, please contact the customer service centre or local supplier promptly.
- ⚡ Service engineers can query logs, update configuration and procedures, carry out remote management, diagnosis, configuration, upgrades and other remote maintenance actions.

PROCEDURES



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DURING INSTALLATION, REPAIR AND REPLACEMENT OF PARTS

- ⚡ Live work is strictly prohibited.
- ⚡ Unauthorised dismantling is strictly prohibited.
- ⚡ Follow safety procedures when operating the equipment.
- ⚡ Access to the power supply line should be followed in the PE ground -> zero-line -> phase line order.
- ⚡ All operations must comply strictly with relevant safety standards.

AFTER INSTALLATION, REPAIR AND REPLACEMENT OF PARTS

- ⚡ Refer to the installation and maintenance requirements for validation and testing.
- ⚡ Bring your own tools to restore the internal switch.

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LED INDICATOR STATUS IDENTIFICATION

Indicator light	Description
RED	Issue detected
GREEN	Charging
BLUE	Ready
On, static	OCPP is connected (network)
Flashing	OCPP is disconnected (no Wi-Fi or Ethernet network connection)

FAULT DIAGNOSTICS

Fault	Potential cause	Recommended solution
LED display not illuminated	No AC power input.	Check whether there is power to the charger. Check if the power cable to the device has a short circuit. If these checks are normal, please try to power off the Zodiac charger and restart. If the fault persists, please contact your EV chargepoint installer or Hydra EVC support.
Cannot lock the charging connector	The charging gun is not properly connected with the charging port of the car or the electronic lock or the charging gun is faulty.	Remove and reconnect the charging gun ensuring it is properly seated within the car and the Zodiac charger. Restart the Zodiac charger using the emergency stop button. Try a different charging cable if possible. If the fault persists, please contact your EV chargepoint installer or Hydra EVC support.
Cannot unlock charging connector	The electronic lock of the charging gun is faulty or stuck.	Restart the Zodiac charger by pressing the emergency stop or power off to allow you to disconnect the charging gun. If the fault is still not eliminated after reconnecting, please contact your EV chargepoint installer or Hydra EVC support.
Unusual LED indicator light status	The emergency stop button may have been pressed or the charger is faulty.	Please refer to the appendix later in this document for the description of the LED status indicator lights. Try to power off and restart. If the red light is illuminated or flashing, please make sure that the emergency stop button is pressed first. If it is pressed, please press it again to reset. If the fault is still not rectified, please contact your EV chargepoint installer or Hydra EVC support.
<p>For any other issues not covered above, please contact us. Go to www.hydraev.co.uk/support</p>		



RESTRICTION OF HAZARDOUS SUBSTANCES

ELEMENT IDENTIFICATION TABLES (ROHS)

PART	TOXIC AND HARMFUL SUBSTANCES OR ELEMENTS					
	Lead	Mercury	Cadmium	Hexavalent chromium	Polybrominated biphenyl	Polybrominated diphenyl ethers
	PB	HG	CD	CR6+	PBB	PBDE
Cabinet, box and copper row	x	•	•	•	•	•
Charging module	x	•	•	•	•	•
Monitoring module	x	x	•	•	•	•
Distribution parts	x	•	x	•	•	•
Circuit board	x	•	•	•	•	•
Hardware	x	•	•	•	•	•
Cable	x	•	•	•	•	•
<p>• Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T 11363-2006</p>						
<p>x Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T 11363-2006</p>						
<p>The following components or applications containing toxic and harmful substances are limited by the current level of technology, with no reliable alternative or solution:</p> <ol style="list-style-type: none"> 1. Solder contains lead 2. Copper alloys contain lead 3. The contacts of the switch contain cadmium 4. The backlight tube contains mercury 						
<p>Description of the environmentally friendly use period: the environmentally friendly use period of this product (marked in the product body) refers to the period of time from the date of production of the product containing toxic and harmful substances or elements that will not have a serious impact on the environment, persons and property, subject to normal conditions of use and compliance with the safety precautions of this product.</p>						
<p>SCOPE OF APPLICATION: AC SINGLE OUTLET CHARGER</p>						



AUTHENTICATION

CERTIFICATION



CERTIFICATE

ATTESTATION CERTIFICATE OF ELECTROMAGNETIC COMPATIBILITY AND LOW VOLTAGE DIRECTIVES

Technical file of the company mentioned below has been observed and audit has been completed successfully.
2014/30/EU Electromagnetic Compatibility Directive and
2014/35/EU Low Voltage Directives have been taken as references for these processes

Company Name	: Nanjing PowerCore Tech Co., Ltd.
Company Address	: No.21 Andemen Street, Yuhualai District, Nanjing City, Jiangsu Province, P.R. China
Related Directives and Annex	: 2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive
Related Standards	: EN IEC 61851-1:2019, EN 61851-22:2002 EN 61000-6-3:2007+A1:2011, EN IEC 61000-6-1:2019
Product Name	: AC EV Charger
Report No and Date	: STE21113003E/December 07, 2021, STE21113004S/ December 10, 2021
Product Brand/Model/Type	: AC006
Certificate Number	: M.2021.206.N8512
Initial Assessment Date	: 17.12.2021
Registration Date	: 20.12.2021
Reissue Date/No	: -
Expiry Date	: 19.12.2026



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The validity of the certificate can be checked through www.udem.com.tr. The CE mark shown on the right can only be used under the responsibility of the manufacturer with the completion of EC Declaration of Conformity for all the relevant Directives. This certificate remains the property of UDEM International Certification Auditing Training Centre Industry and Trade Inc. Co. to whom it must be returned upon request. The above named firm must keep a copy of this certificate for 15 years from the registration of certificate. This certificate only covers the product(s) stated above and UDEM must be notified in case of any changes on the product(s).

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