14S-7200W Zhian Dual-channel Smart Air-cooled Charger Specification

Model

ZAC61C0-02

Prepared By	Checked By	Approved By

Modified Record

Version	Date	Editor	Changed Contents
A0	2023-11-17	Sunny Li	draft
A1	2024-03-04	Jason Yang	1. Updated package size and weight，Added generator input line 2. Updated left and right channel light language, Added alternate charging and concurrent charging modes 3. Updated charging scheme description, Added alternate charging and concurrent charging modes 4. Updated dimensional and structural drawings, packaging schematics

CUSTOMER APPROVAL SHEET

ITEM	CUSTOMER SIGNATURE	DATE
PRODUCT FUNCTION CONFIRMATION		
PRODUCT DIMENSION CONFIRMATION		

*NOTICE: PLEASE REVIEW THIS FILE AND TEST THE PRODUCT BEFORE SIGNING CONFIRMATION. MASS PRODUCTS WILL BE PRODUCED ACCORDING TO THE SPECIFICATION IN THIS FILE.

1. Overview

ZAC61C0-02,14S-7200W Dual-channel smart air-cooled charger matches Zhian smart battery.The smart charger can automatically identify the smart battery.The exclusively developed smart fast charging mode can dynamically adjust the best charging strategy according to the health state of Zhian smart battery to charge the battery fast and safe, and make the battery achieve the best working and storage state to extend battery life.

Features

- Charging Power: Max output power is 7200W
- Max charge current is 120A (Adaptive smart battery charge request current, the max charge current less than 120A)
- Smart fast charging mode is available for Zhian smart battery
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- Support charging management of single-channel or multi-channel batteries
- CAN interface for communication
- Bluetooth upgrade function
- Data record
- Air-cooled heat dissipation of rechargeable batteries

1.1. Typical application

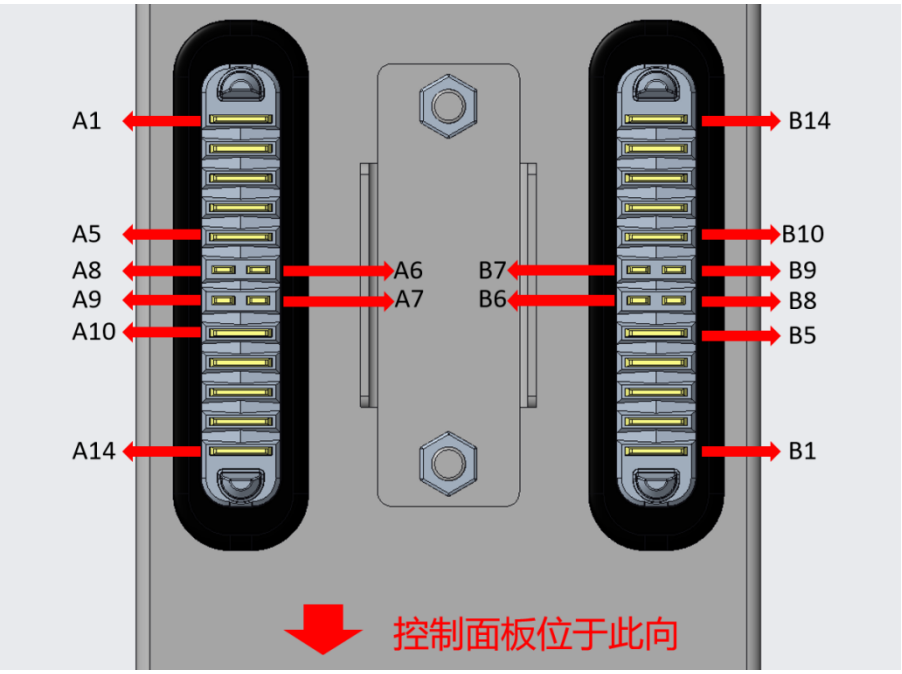
- UAV smart battery charger

2. System specification

2.1. Electrical characteristics（25℃）

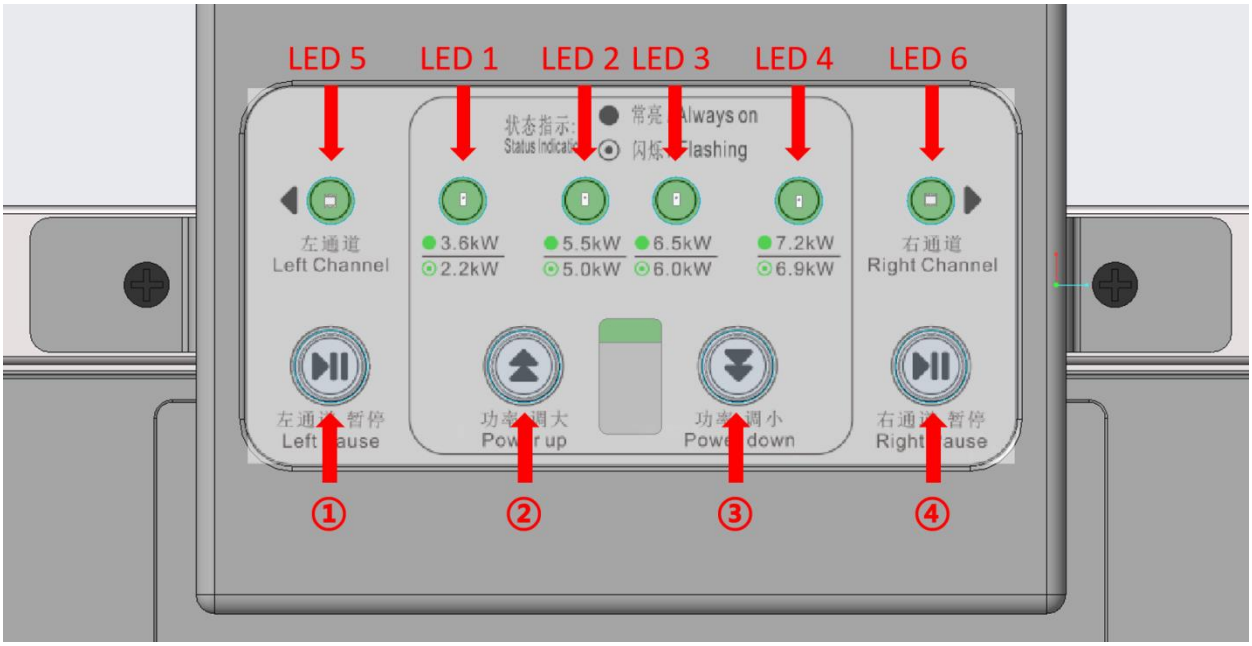
Category	Item	Value	Unit	Remark
Input characteristics	Rated input voltage (AC)	100-290	Vac	Two inputs
	Input frequency	50/60	Hz	
	Input current	20×2	A	Standard two 16A input cables
	Power on peak input current	90×2	A	
	Efficiency	93	%	
Output characteristics	Number of output channels	2	Ch	
	Rated output voltage	60.9	V	
	Rated output current (max)	60×2	A	Input 211Vac～290Vac
		54×2	A	Input171Vac～210Vac
		49×2	A	Input100Vac～170Vac
Protection function	Overvoltage protection	Available		Follow the smart battery settings
	Overcurrent protection	Available		Follow the smart battery settings
	Short circuit protection	Available		
	Current backflow prevention	Available		
	Start-up delay	Available		
	Shutdown delay	Available		
Smart function	Support communication with battery	Available		
	Support smart charging mode	Available		
	Support upgrade	Available		
	Data record	Available		

2.2. Interface definition



PIN#	Name	Remark
A1-5/B1-5	Charger P-	Output negative
A6/B6	CAN_L	CAN-Negative
A7/B7	CAN_H	CAN-Positive
A8-9/B8-9	NC	
A10-14/B10-14	Charger P+	Output positive

2.3. Pad and buttons



No.	Name	Function

①	Left channel pause	Channel pause charge
②	Power up button	Input power up
③	Power down button	Input power down
④	Right channel pause	Channel pause charge

2.4. Light language description

Note: "●" Indicates that the light always on; "⊙" Indicates that the light is flashing; "○" Indicates that the light is off

LED1	LED2	LED3	LED4	Power
●	○	○	○	3.6kW
⊙	○	○	○	2.2kW
○	●	○	○	5.5kW
○	⊙	○	○	5.0kW
○	○	●	○	6.5kW
○	○	⊙	○	6.0kW
○	○	○	●	7.2kW
○	○	○	⊙	6.9kW

Left channel

LED5	LED6	State
⊙	○	Waiting for alternate charging mode
●	○	Wait for concurrent charging mode
⊙	○	Charging
●	○	Finished charging
⊙	○	Charging failure
●	○	Port short circuit

Right channel

LED5	LED6	State
○	⊙	Waiting for alternate charging mode
○	●	Wait for concurrent charging mode
○	⊙	Charging
○	●	Finished charging
○	⊙	Charging failure
○	●	Port short circuit

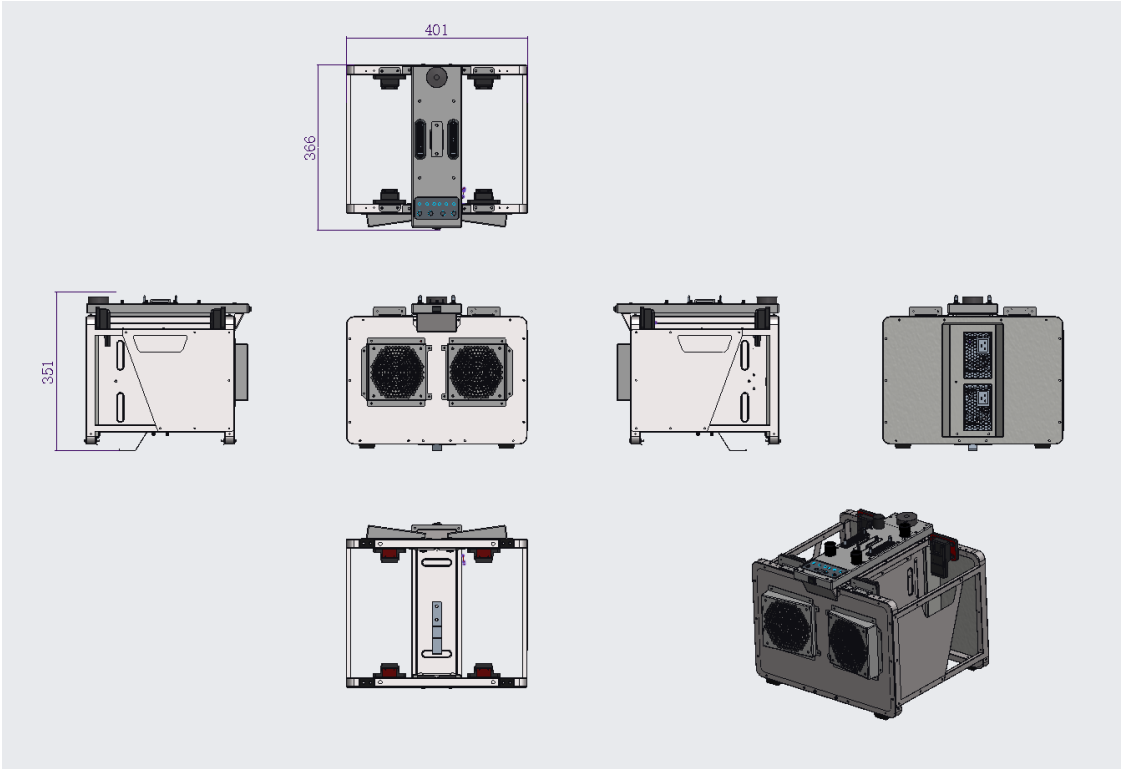
2.5. Description of Charging Scheme

State	Strategy	Remark
Single channel charging	After the battery is connected and the communication is successful, open the channel to charge, and stop until it is fully charged	Communication via CAN protocol
Alternate charging mode	Prioritize charging the battery with higher capacity, and charge the other battery if the switching condition is met	Switching condition: When the battery capacity is greater than 95% and enters the stage of reducing current charging.
Concurrent charging mode	After recognizing that dual batteries are connected, the battery with the lowest voltage will be charged first. When the voltage of the two batteries is similar, will enter into concurrent charging mode.	
Press the button to adjust the power	The charging power can be increased/decreased by the up/down buttons on the keypad	One adjustment range is 500W
Press the button to pause charging	The left/right channel can be controlled to pause and resume the charging through the left/right button on the keypad.	Pause: After the battery is connected, short press the pause button to pause Resume: Remove the battery or press and hold the pause button to resume

3. Environmental requirements

Item	Parameter range	Remark
Working temperature	5- 45°C	
Storage temperature	-20 - 70°C	
Working humidity	35 - 85 RH	
Storage humidity	5 - 95 RH	

4. Dimension and structure



5. Schematic diagram of charger packaging

Charger number	1 PCS
Total package weight	14 KG
16A input cable×1	Length 1.5M
Generator input line×1	Length 2M
Package dimension	445*420*377MM