

CH420 SeriesHigh

Efficiency Intelligent Charger

I. Product Overview

CH42 series high efficiency intelligent charger is designed to charge power batteries of electric vehicles. This series of products adopt the most advanced technologies such as LLC resonant, active power factor correction, microcomputer measurement and control, digital adjusting, fully sealed waterproof technology and so on

Its features include: wide input voltage range adapted to global general voltage; High input power factor that significantly reduces the input current as well as heat generated by input cables, so the charger can be safely used in family; Low harmonic current that reduces interference to other electric equipment. Full range soft switching is realized to achieve high conversion efficiency and slight electromagnetic interference, the charger is more energy-saving and money-saving to use; the charger is designed according to IP66 protection grade and achieved high waterproof performance. Another feature includes small size, light weight, quiet operation, beautiful appearance, simple installation, operation and maintenance and so on.

The charger adopts microcomputer measurement and control technology, embedded CPU can accurately detect various states of battery. Advanced multi-stage charging mode can prevent the battery from be over-charged and over-discharged, minimize overheating and water loss phenomenon caused by over-charge, slow down polar plate vulcanization phenomenon caused by over-discharge, extend the service life of batteries. The charger will stop automatically after fully charged.

The charger has functions of temperature compensation, automatically shut down after fully charged, battery reverse connection protection, output short circuit protection, AC input under-voltage protection, overheating protection and so on, and these functions can ensure safe and reliable use.

II. Technical Specifications

Input voltage range: 85~265Vac (Note: When the Input voltage is lower than 185Vac, the output power will be limited to 1.5KW)

Input Current: <10A @220Vac Input;

Power Factor: ≥0.99 @220Vac Input;

Note: Full Power=1.25.Un.In;

Nominal output voltage (Un): See Model Description;

Maxim output voltage: 140%Un;

Rated output current (Ir): See Model Description;

Conversion efficiency: ≥ 93%full power output;

Protection class: IP66;

Audible Noise: ≤ 40dB;

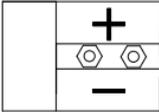
Vibration Class: According to “GB/T 2423.10”;

Working temperature: -25~55℃;

Storage temperature: - 40~85℃;

Recognition certificates: CE;

III. Interface Instructions

Output Cables						
Terminal Model	SB50					
No.	Color	Wire Diameter	Function Description			
+	Red	6.0mm ²	Output positive pole			
-	Black	6.0mm ²	Output negative pole			
Signal Cables						
No.	Color	Terminal Model and Function	Pin Description	Terminal Model for matching		
1#	Brown	DJ7031Y-2.3-21	Red Light	DJ7031Y		
2#	Blue	External LED indicator interface	Common-		-2.3-11	
3#	Yellow		Green Light			
4#	Purple	DJ7021-1.5-21	Sensor+	DJ7021		
5#	White	Battery Temperature sensor interface	Sensor-	-1.5-11		
6#	Pink	DJ7043-2-21	GND	DJ7043		
7#	Yellow and green		Serial communication interface		VCC	-2-11
8#	Blue				TXD	

	and white			
9#	Green and white		RXD	
10#	Orange	DJ7021-2-11	COM	
11#	Grey	Forbidden signal interface (normal close)	NC	DJ7021 -2-21
Wire Diameter	0.5 mm ² for all Signal wires			
Signal Cables Terminal Diagram				
<p style="text-align: center;"> J1 DJ7031Y-2, 3-21 J2 DJ7021-1, 5-21 J3 DJ7043-2-21 J4 DJ7021-2-11 </p> <p style="text-align: center;">Direction of view: form the cables to terminal for all.</p>				

Input Cables			
Terminal Model	DJ7031-4.8-11		
Terminal Model for matching	DJ7031-4.8-21		
No.	Color	Wire Diameter	Function Description
1#	Brown	2.5mm ²	L-Live wire
2#	Blue	2.5mm ²	N-Neutral wire
3#	Yellow and green	2.5mm ²	PE-Protective grounding wire

IV. Product Models

Product Models and Specifications		
Models	Nominal output voltage	Rated output current

CH4200-7220	72V	20A
CH4200-6025	60V	25A
CH4200-4830	48V	30A
CH4200-3635	36V	35A
CH4200-2435	24V	35A

V. Charging Indicator Information Description

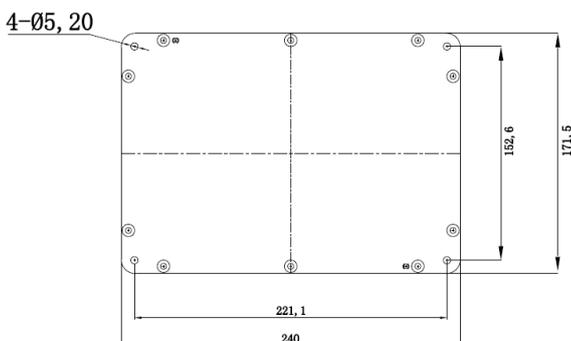
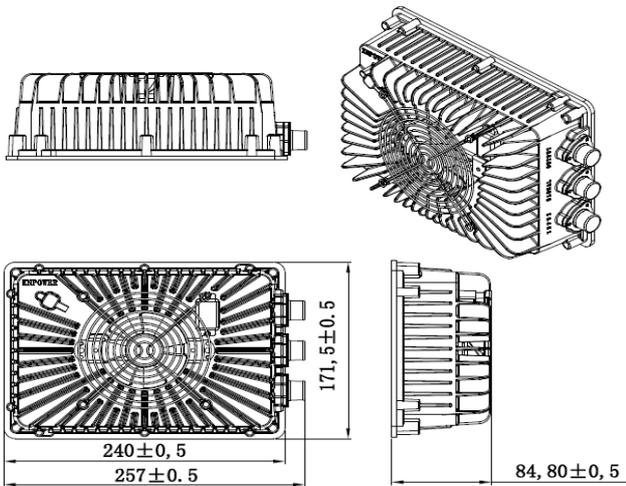
LED Indicator Information Description			
I. Charging Process Information			
1	Low battery power		R---
2	Battery charge lower than 80%		R-
3	Battery charge between 80%--90%		Y-
4	Battery charge between 90%--100%		G-
5	Fully charged	Normal process of charging Battery temperature sensor fault	continuous Green light Green light (3S) Yellow light (0.3s)
II. Alarm Information			
1	Battery Not connected		R-G---
2	Charger over-temperature protection		R-G-Y---
3	Input fault protection		R-G-Y-Y---
4	Charging timeout		R-G-Y-Y-Y---
5	Battery Overheating		R-G-Y-Y-Y-Y---
6	Pre-Charge timeout		R-G-Y-Y-Y-Y-Y---
7	Internal temperature sensor fault		R-G-Y-Y-Y-Y-Y-Y---
8	Output voltage feedback fault		R-G-Y-Y-Y-Y-Y-Y-Y---
9	Low temperature start delay (When the internal temperature of charger is between -20 to -30 ° C, the charger will delay starting for		R-G-Y-Y -Y-Y-Y-Y-Y-Y---

	1~2 minutes)	
<p>Note:</p> <p>1."-" represents led that does not light for 0.5s, a color word represents that the LED of this color lights for 0.2s.</p> <p>2. R --red G —green Y—yellow</p>		

VI. Methods of Operation

1. Connect the output terminal of the charger to the battery terminal.
2. Connect the input plug of the charger to AC power socket until the charger turns into normal charging process (observe the LED Indicator), then Charger will automatically charge the batteries. When fully charged, the charger will automatically shut down, and display 'full power'.
3. If observed the battery become overheating or ballooning during charging process, you should stop the charger immediately by unplug the plug from the AC socket.

VII. Appearance and Installation Dimensions (mm)



VIII. Services

1. Warranty period and maintenance mode: From date of purchase within 12 month, free of charge to repair. Users need to pay for

reparation beyond warranty period.

2. If faults happen within warranty period in follow cases, cost of material and service need be paid appropriately:
 - A. Guarantee paper does not have the seal of distributor.
 - B. Fault caused by improper operation.
 - C. Fault caused by improper safekeeping and maintenance.
 - D. Damages cause by accident or disaster, such as natural disaster, war, or lightning strike.
 - E. Guarantee paper is damaged, or cannot be distinguished clearly.
3. Out of warranty period, users need to pay for cost of material and service, spare parts can have guarantee for 3 month from the date of reparation.