Instruction for

3.3KW HK-J Series Charger

■ 杭州铁城信息科技有限公司

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1. Overview

HK-J series 3.3KW charger was specially designed, by Hangzhou Tiecheng Info&Tech Co., Ltd for supplying the electricity for electric vehicle's power battery, on the basis of the national standards for the charger. This product has the advantages of not only only high efficiency, small size, high stability, long lifespan, but also high protection grade, and high reliability and complete protection function, etc. It's definitely an ideal charging power supply for electric vehicles.

This charger has built-in heat-sensing device and can automatic recover through the thermal protection. Fully sealed potting process and up to IP67 protection level ensures no causing trouble in any complex environment.

Key Features:

Fully sealed potting process, water cooling (modular optional)	Work reliably under -35℃- +85℃
Built in thermal sensor	Cut off output under dangerous operations conditions (internal 95℃)
Protection level IP67	Work safely in the short-term immersion conditions

2. Essential Parameter

Input Voltage Range	Input Current	Output Voltage Range	Max Output Current	Power Factor	Full-load Efficiency
AC90~265V	16A	110V~400VDC	40A	≥0.99 (half-load more)	≥93%

Models

Hardware	Input Current	Output Voltage Range	Model
48V40A	16A	18-68V	HK-J-H66-40-XXCANXXX/X-001
72V40A	16A	25-99V	HK-J-H99-40-XXCANXXXX/X-001
84V40A	16A	30-116V	HK-J-H116-40-XXCANXXXX/X-001
92V32A	16A	34-132V	HK-J-H132-32-XXCANXXXX/X-001
144V23A	16A	50-198V	HK-J-H198-23-XXCANXXXX/X-001
312V10A	16A	110V-440V	HK-J-H440-10-XXCANXXXX/X-001

3. Features

Low Voltage Output	Output Mode	Constant Voltage
	Output Voltage	13.8V
	Rated Current	5A
	CV Accuracy	±2%
	Maximum Current	5.5A±0.5A
	Output Power	≥62.5W
	Ripple Voltage Coefficient	1%
Input	Frequency	45-65Hz
	Stand-by Consumption	≤5W
Main Output	Output Mode	CV / CC
	Output Power	3300W@220VAC 1600W@110VAC
	CV Accuracy	±1%
	CC Accuracy	±2%
	Ripple Voltage Coefficient	5%
Communication Function	CAN Communication	Yes
	Baud Rate	125Kbps、250Kbps、500Kbps
	Terminal Resistance	N/A

4. Protection function

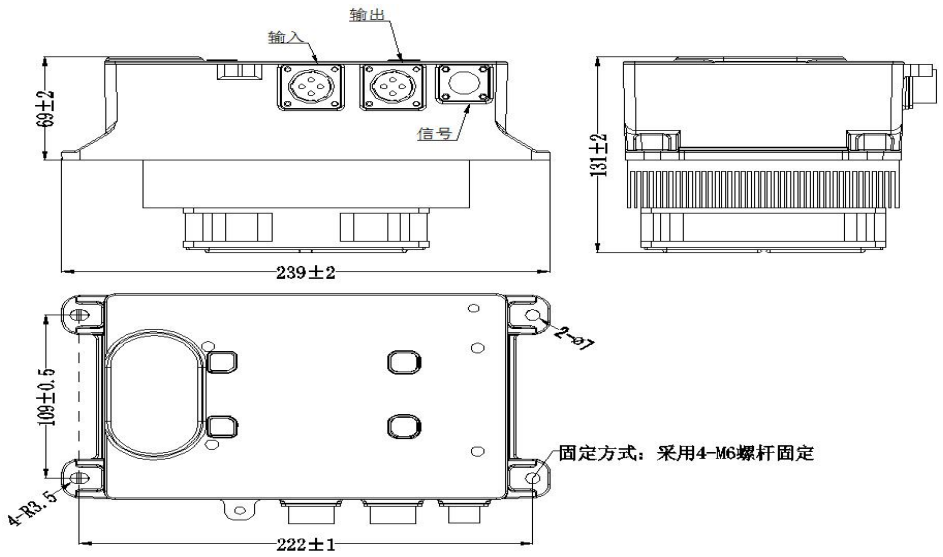
Input Over-voltage Protection	AC270±5V
Input Under-voltage Protection	AC85±5V
Output Over-voltage Protection	Stop the output when exceeds + 1% of the maximum output voltage
Output Under-voltage Protection	Stop the output when below -5% of the minimum output voltage
Output Over-current Protection	Stop the output when exceeds + 1% of the maximum output current
Over-temperature Protection	Power down from 85 ℃ and turn off at 90℃
Short-circuit Protection	Stop Output
Battery Reverse Connect Protection	Fuse Burn-out
Ground Protection	≤100mΩ
CAN communication Protection	Automatically stop the output when CAN communication fails
Power-off Protection	Yes

5. Safety and others

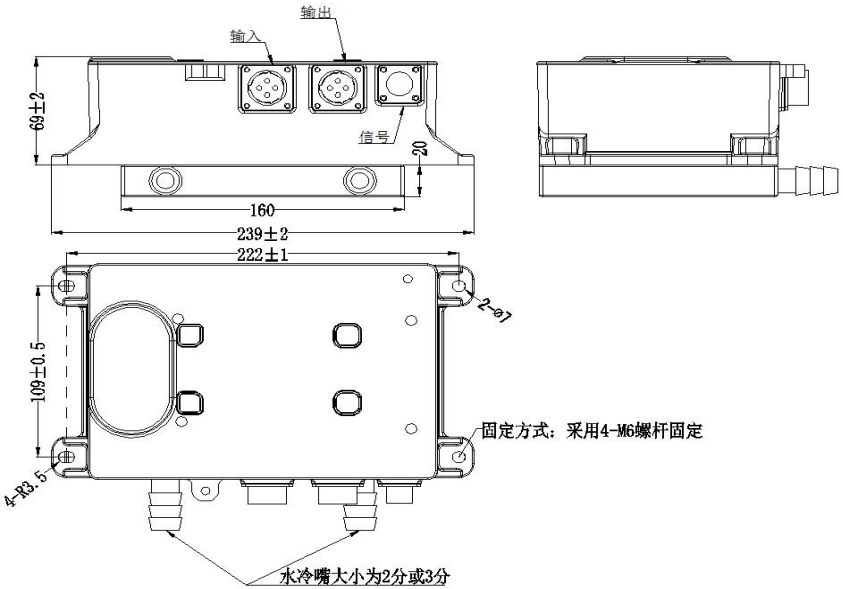
Withstand Voltage	Input to Output：2000VAC≤10mA Input to Ground：2000VAC≤12mA Output to Ground：2000VAC≤10mA，all 1min
Insulation Resistance	Input, output, signal terminal to casing≥10MΩ Testing Voltage 1000VDC
Electromagnetic Immunity	GB/T 18487.3-2001 11.3.1
Electromagnetic Abusive	GB/T 18487.3-2001 11.3.2
Harmonic Current	GB 17625.1-2003 6.7.1.1
Inrush Starting Current	≤24A
Current-rise Time	≤5S，Overshoot≤5%
Close Response time	100%到 10%≤50mS，100%到 0%≤200mS
Protection Level	IP67
Vibration Resistance	10－25Hz Amplitude1.2mm，25－500Hz 30m/s2，8hrs per direction
Noise	≤60dB(A 级)
MTBF	150000H
Work Environment	Relative Temp 5%-95% No condensation
Working Temperature	-35℃ ~ +85℃
Storage Temperature	-55℃ ~ +100℃

6. Installation Dimensions & Interface Defination

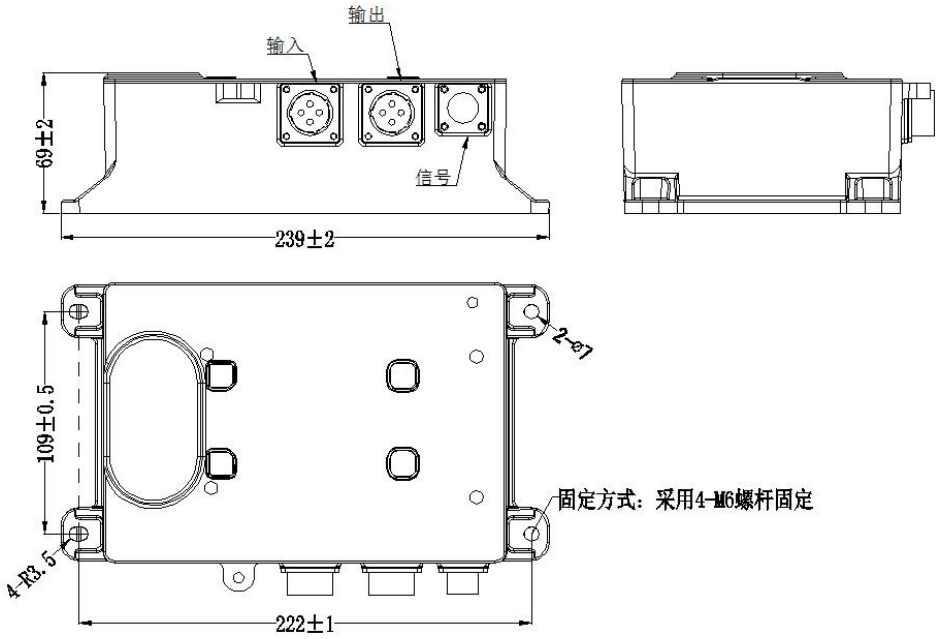
1). Installation Dimensions (Air-cooled)



2). Installation Dimensions (Water-cooled)



3). Installation Dimensions (Module Type)



Interface Definition

S. N.	Port Name	Terminal Definition	Connector Model	Matching Connector	Vender
1	Charger's AC Input	A-Null line, B-Fire Line, D-GND	DY7-4ZJN	DY7-4TKPIN	XINXI
2	Charger's DC Output	A-Positive B-Negative	DY7-4ZJW75°	DY7-4TKP1W	XINXI
3	Signal Control	A-CANL, B-CANH, C-CANGND, D-12V+, E-12V-, F-12V200mA	DY7-6ZJN	DY7-6TKP1N	XINXI

7. LED status

1). Initial State

Red Off Green Off Red Off Green Off Red Off Green Off Red Off Green Off

2). Charging State

Red Off Red Off Red Off Red Off Red Off Red Off Red Off Red Off

3). Stand-by State

Green Off Green Off Green Off Green Off Green Off Green Off Green Off Green Off

4). Fault State

Red Green Red Green……Other error status word error

Red Green……Wrong Battery

Red Green Red……Wrong Communication

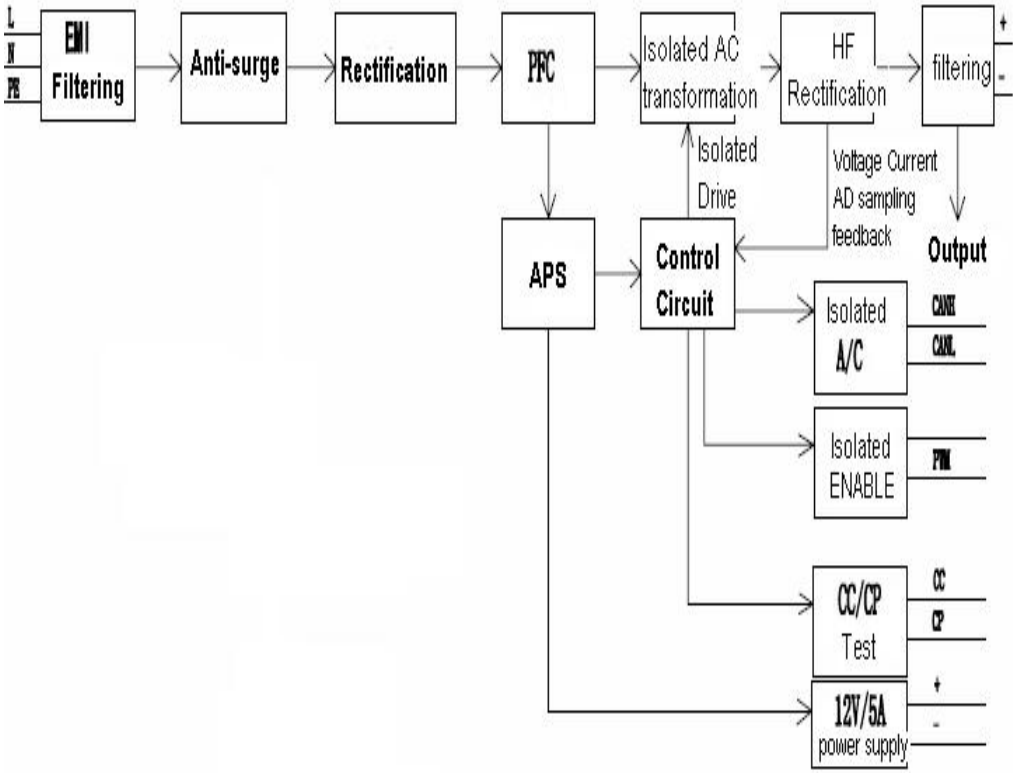
Green Red……Wrong Input Voltage

Green Red Green……Internal Temperature Protection

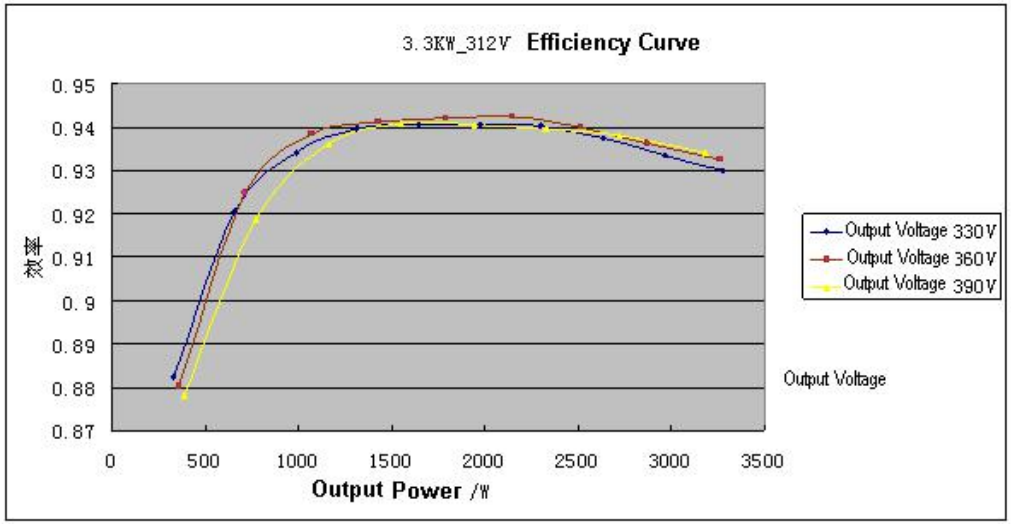
Green Red Green Red……Wrong Hardware

8. Schematic diagram and the efficiency curve

1). Schematic Diagram



2). Efficiency Curve



10. Packaging, Transport and Storage

1). Packaging

On the packing box, there are product name, product part number, product brand, product type, production number and name of manufacturer; In packing box, along with the technical documents, it includes packing list, quality certificate, product specification.

2). Transportation

Suitable for cars, boats, aircraft, transportation. The products have to be prevented against sunshine and moisture and in a civilized transportation.

3). Storage

Product should be stored in the packing box when it is not used and be maintained in a 5 ℃ to 40 ℃ clean, dry and well-ventilated environment. It should not be stored together with chemicals, acid and alkali substances etc,. Should avoid storing in the sun, fire, water and avoid storing with corrosive substances. The storage period is 2 years (from the inventory date of the factory). After the 2 years of storage period, the products should still comply with the provisions of the relevant standards.