

3.3KW Li-ION OBC WITH CAN BUS COMMUNICATION



Item:	HGCH-360M 3.3KW	Rev.:	Name:	Date:	Remark:
Part No:	34-115-1ZZZ	01	SH	20.02.2019	Charge indication
Date:	05.12.2018	02	SH	08.04.2019	Resistance,CAN,LVD, MTBF
Originator:	HS	03	SH	10.09.2019	Input, CAN
Description:	Preliminary Datasheet				

Content

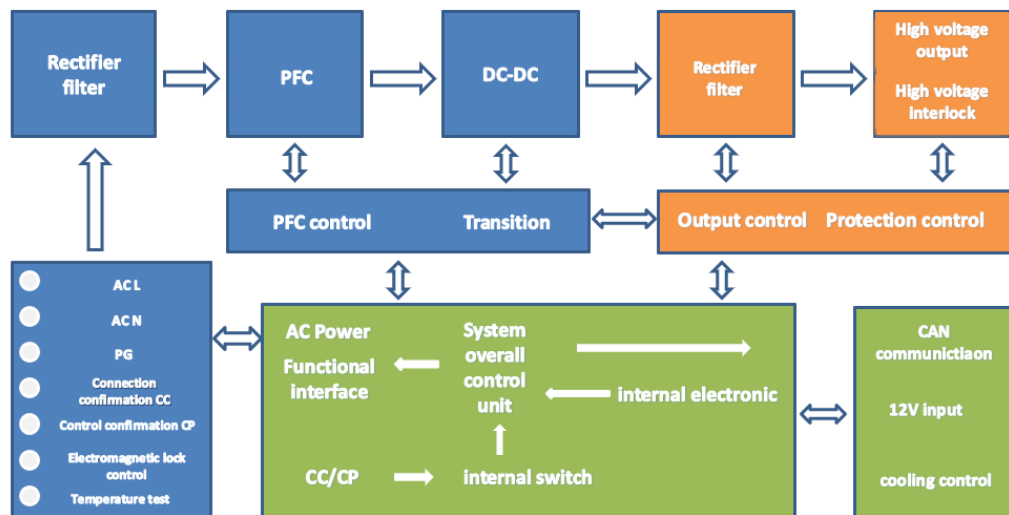
- 1. Input characteristics..... 3
- 2. Flowchart..... 3
- 3. Charging output characteristics..... 4
- 4. Auxiliary power supply 4
- 5. CAN communication..... 4
- 6. Protection 5
- 7. Indication 5
- 8. Working conditions..... 5
- 9. Safety and reliability..... 6
- 10. Dimension & weight 7
- 11. Drawing..... 7

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1. Input characteristics

Input voltage range:	120V - 240V AC Rated voltage: 230V AC
Input current:	≤16A (the power supply automatically reduces the output current when input is equal to 16A or greater)
Power input rate:	≤3.3KW (the power supply automatically reduces the output power at low input voltage)
Power factor:	rated input, PF >0.99 at 50-100% load
Input frequency:	47...63Hz
Protection:	Low voltage protection and high voltage protection switch off. Restart at specified conditions.

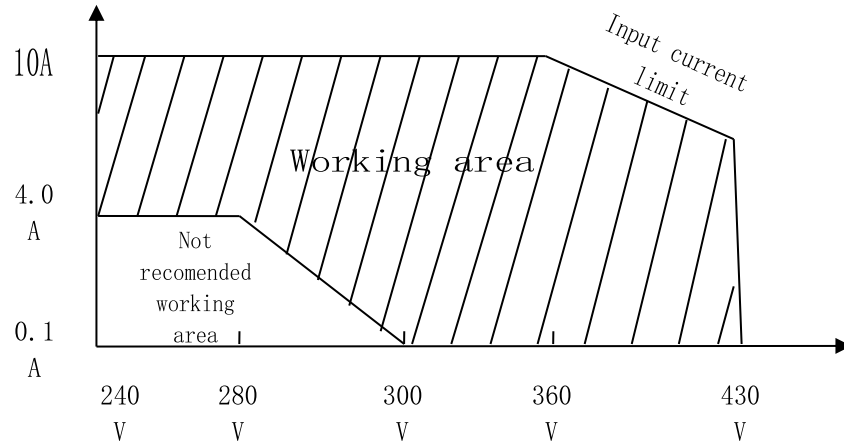
2. Flowchart



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3. Charging output characteristics

Output voltage: 240V-430V DC, rated voltage 360V DC
 Output current: 0-10A rated current 9A
 Load effect: $\leq \pm 0.5\%$ (10%-100% of the rated load)
 Source effect: $\leq \pm 0.5\%$ (10%-100% of the rated load)
 Voltage accuracy: $\leq \pm 1V$
 Temp. coefficient: $\leq \pm 0.02\%$ (°C)
 Output ripple: $\leq \pm 3\%$ (effective value)



4. Auxiliary power supply

Output voltage: 13.5V DC $\pm 0.5V$
 Output current: 2.5A
 Output ripple: $\leq 1.5\%$ (effective value)
 Voltage accuracy: $\leq \pm 1\%$

5. CAN communication

CAN communication protocol: J1939 CAN open
 CAN communication baud rate: 250kBps or 500kBps (can be changed)

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6. Protection

Output voltage: Working range is 240-430V DC. If the voltage is out of the range the power supply switches off. Restart of the power supply when voltage is in the working range.

Output current: limited at 10A ±1A

Output short circuit: In case of short circuit on output, device switches off by Automatic protection. Automatic restart after clearance of short circuit

Revers polarity protection: Switch off or no start in case of polarity inverse of output. Error Signal indicated by LED.

Temperature protection: At internal temperature of 95°C the output power is reduced. At 105°C internal temperature the power supply switches off. When temperature drops down charger restart automatically.

7. Indication

Green LED:

- Flashing - Standby
- ON - Charge
- OFF - Ready

8. Working conditions

Working temperature: -40 °C - +85 °C

Storage temperature: -40 °C - +95 °C

Relative humidity: 5% - 95% (non-condensation)

MTBF: min. 50,000 hours at ambient temperature 25°C

Altitude: <5000m

Cooling: Convection cooling
at internal temperature of 60°C the external fan starts.

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9. Safety and reliability

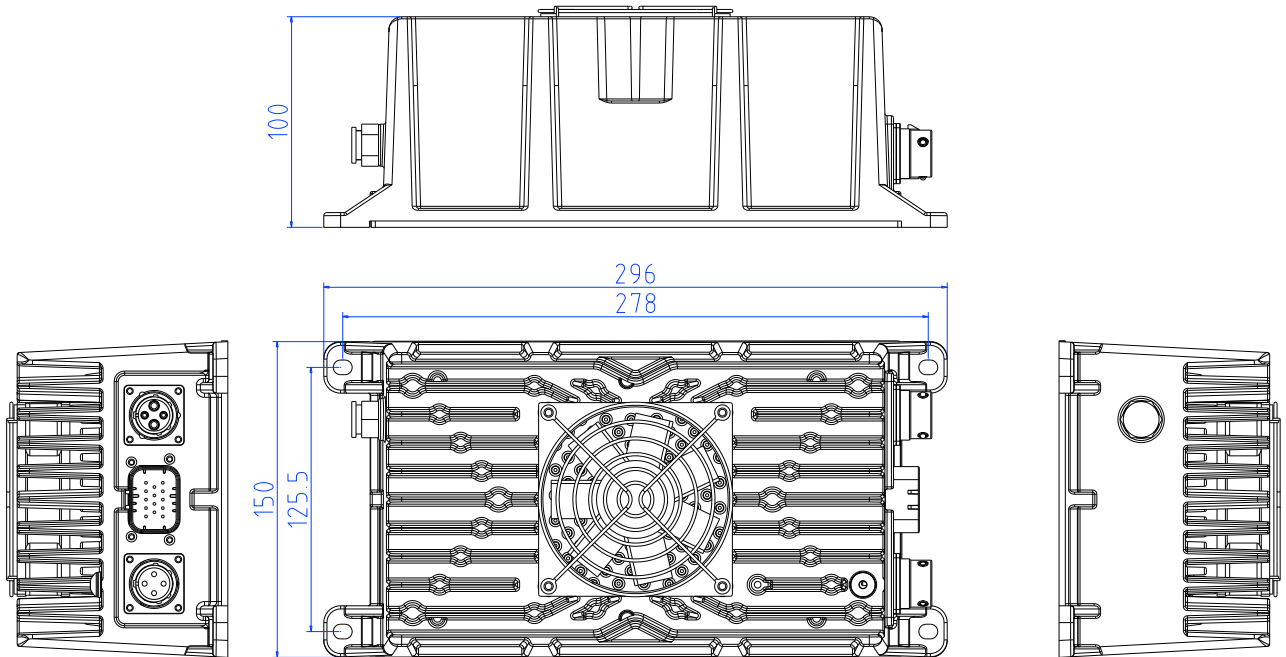
LVD:	Compliant to IEC/UL 60950
EMC:	EN 55011:2016/A1:2017, EN 55014-1:2017, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-3:2013
Ground protection:	Impedance housing to ground $\leq 0.1\Omega$.
Electric strength:	
Input to output:	2500Vac/10mA/60s
Input to the ground:	2000Vac/10mA/60s
Output to ground:	2000Vac/10mA/60s
Insulation resistance:	Input, high output, low voltage power supply and ground (PE) insulation resistance is higher than 20m Ω (1000 VDC). Input, high output, low voltage power supply insulation resistance between each other is higher than 20m Ω (1000 VDC).
Leakage current:	less than 3.5mA at 264V input
Surge and ESD:	Input 2.5KV 4KV lightning surge test All metal parts and electrical interfaces withstand contact discharge of 4KV and air discharge of 8KV.
Protection level:	IP67
Impact resistance:	The on-board charger in the non-working state is subjected to half-sine pulse with peak acceleration 500m/s and the nominal pulse duration of 18ms. After the test, its performance does not decrease and the active parts does not come into contact with the housing due to permanent or temporary deformation.

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10. Dimension & weight

Dimension: 296x150x100mm
Weight: 4.2Kg + / - 0.5Kg

11. Drawing



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