DCNE-Q2 3.3kw / 6.6kw charger

instruction manual

1. Overview

DCNE-Q2 3.3kw/6.6kw Fully enclosed frequency conversion pulse charger is specifically designed for electric vehicle power batteries according to the national standards for chargers. This product has the advantages of high efficiency, small size, high stability, long life, etc., and the full waterproof technology has the characteristics of safe operation, high reliability, complete protection and other characteristics under the protection level of IP66. The built-in thermal sensor of the charger can work reliably under the condition of -20 ℃- + 85 ℃; it has overheat protection function, it can work reliably under the condition of -20 ℃+ 85℃, and it can recover automatically.

2. Parts product model(3.3kw)

Input voltage range	Input current	Output Rated voltage	Max charging voltage	Max charging current	Power factor	Efficiency
AC 90～265V	≤ 16A	48V	58.8V	45A	≥0.99 Half load	≥93% Full load
		72V	99V	40A		
		84V	116V	40A		
		96V	132V	32A		
		144V	198V	23A		
		312V	440V	10A		

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2.1 Parts product model(6.6kw)

Input voltage range	Input current	Output Rated voltage	Max charging voltage	Max charging current	Power factor	Efficiency
AC 90～265V	≤ 32A	48V	58.8V	90A	≥0.99 Half load	≥93% Full load
		72V	99V	80A		
		84V	116V	80A		
		96V	132V	64A		
		144V	198V	45A		
		312V	440V	20A		

3. Electrical parameters

Input	Frequency rate	45-65Hz
	Standby power consumption	≤ 5W
Main output	Output type	Constant pressure/current
	Output power	3300W@220VAC,2800W@110VAC 2650W@90-265VAC 6600W@220VAC,5600W@110VAC 5280W@90-265VAC
	CV Accuracy	±1%
	CC Accuracy	±1%
	Ripple voltage coefficient	5%

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Low voltage output	Output type	CV
	Output voltage	13.8V
	Rated current	5A
	Precision of constant voltage	±2%
	Max current	5.5A±0.5A
	Output power	≥ 62.5W
	Ripple voltage coefficient	1%
CAN Communication	CAN communication	Optional
	Baud rate	125Kbps、250Kbps、500Kbps
	Terminating resistor	No

4. Protection feature

Protection	Input over-voltage protection	AC264V
	Input under-voltage protection	AC90V
	Output over-voltage protection	Yes
	Output start voltage	0.3 times rated voltage
	Output over-current protection	Yes
	Over temperature protection	Power down from 85℃, shut off At 90 ℃
	Short circuit protection	Stop output
	Reverse battery protection	Stop output
	Ground protection	≤ 100mΩ
	C A N Communication protection	Automatically stop output when CAN communication fails
	Power failure protection	Yes

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5. Safety and others

Withstand pressure	Input to output：2000VAC≤ 10mA ,Input to ground：2000VAC≤ 12mA Output to ground：2000VAC≤ 10mA，All are 1 minute
Insulation resistance	Input, output, signal end to shell ≥ 10MΩ ， Test voltage 1000VDC
Electromagnetic immunity	Satisfy GB/T 18487.3-2001 11.3.1
Electromagnetic disturbance	Satisfy GB/T 18487.3-2001 11.3.2
Harmonic current	Satisfy GB 17625.1-2003 6.7.1.1
Current rise time	≤ 5S，Overshoot ≤ 5%
Off response time	100% to 10%≤ 50mS，100% to 0%≤ 200mS
Protection level	IP66
Vibration resistance	10－25Hz Amplitude 1.2mm,25－500Hz 30m/s2, each direction 8 hours
Noise	≤ 60dB(Class A)
MTBF	150000H
Working environment	Relative temperature 5% -95% without condensation
Operating temperature	-20℃ ~ +85℃
Storage temperature	-30℃ ~ +90℃

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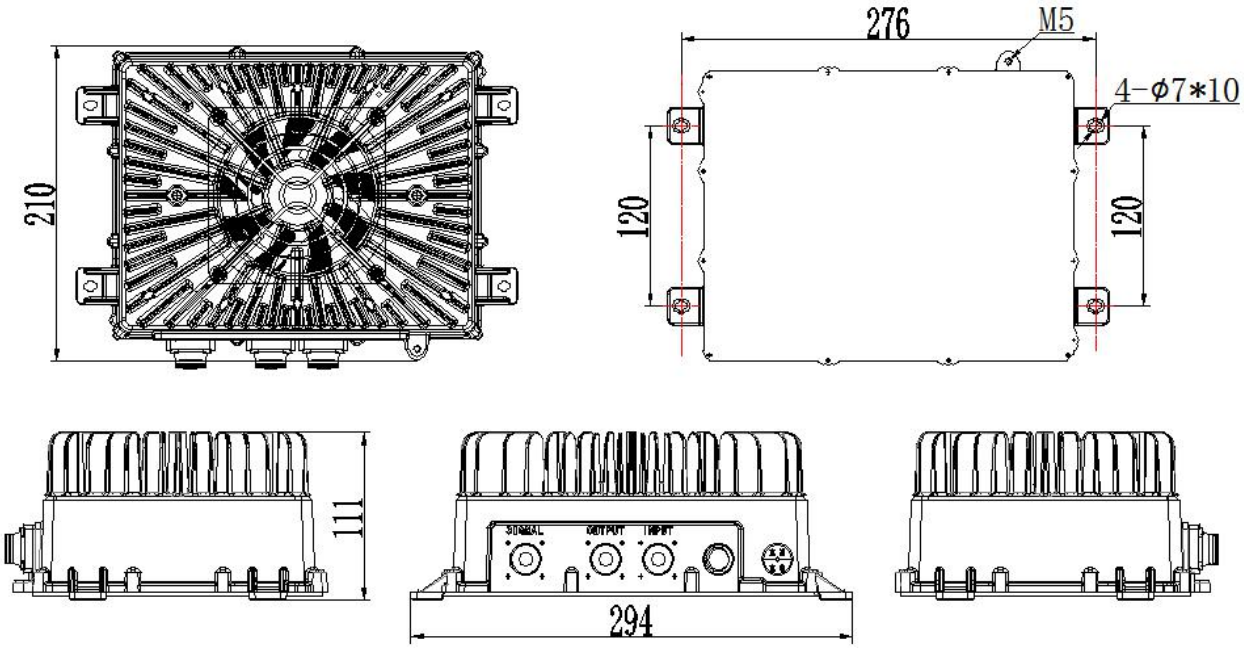
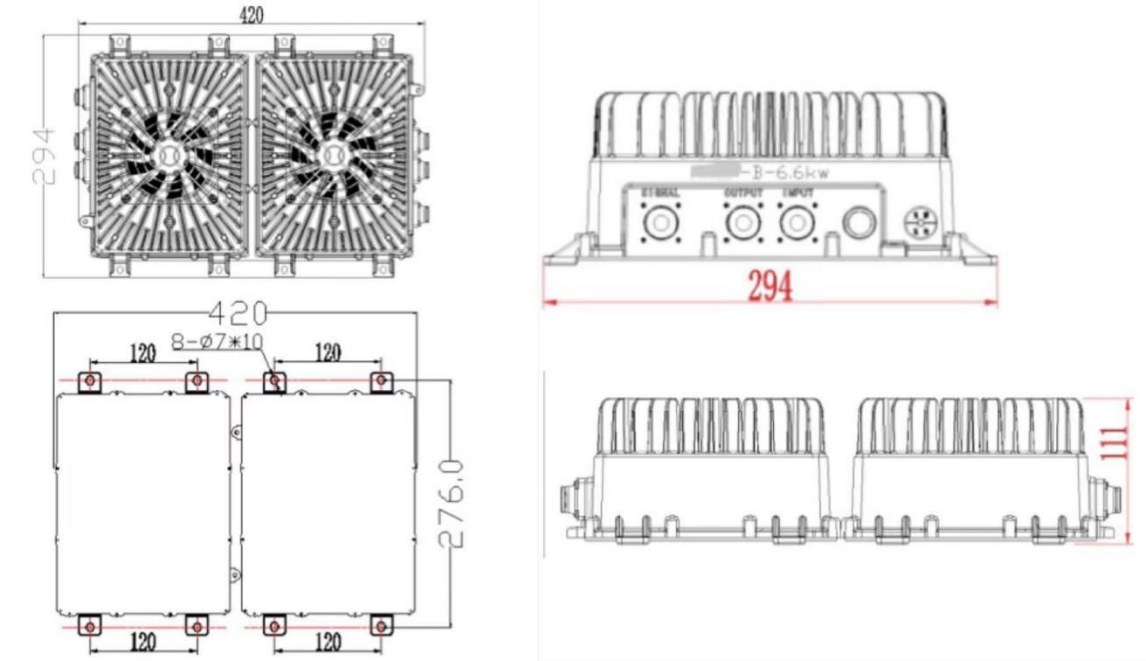
6. Shape and size

3.3KW Air cooling



6.6KW Air cooling



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7. Indicator status definition

7.1 No alarm

a. Charging operation status: The red light flashes at 1s intervals, and the green light is off.

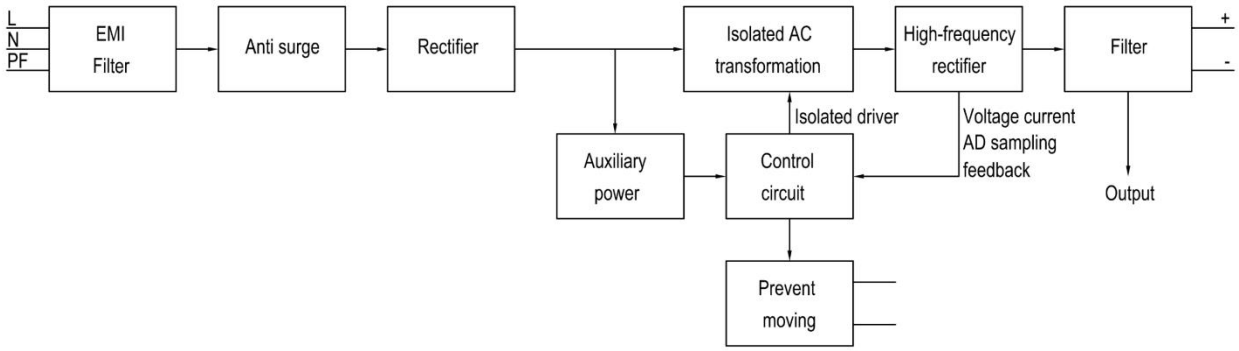
b. Heating operation status: The green light flashes at 1s intervals, and the red light is off.

c. Waiting state: The green light is always on and the red light is off.

7.2 With alarm

a.Hardware failure or DC12V failure: red、green、___、___、___、___.
b.PFC, CC & CP slave CPU communication failure:
red、green、red、___、___、___.
c.DC bus voltage failure: red、green、red、green、___、___.
d.Low or high AC voltage protection: red、green、red、green、red、_.
e.Battery is not connected: red、green、red、green、red、green.
f.Segment charge timeout protection: red、___、___、red、_、___.
g.Battery temperature protection: red、_、_、red、___、___.
h.CPU temperature or transformer temperature protection:
green、red、green、_、_、___.
i.Output short-circuit protection: green、red、green、red、_、_.
j.Transformer primary overcurrent protection:
green、red、green、red、green、_.

8.Functional block diagram



9. CAN communication protocol

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Protocol type	Motorola
Baud rate	250K
Charger receives CAN ID	0x1806E5F4
Charger emits CAN ID	0x18FF50E5
Description	Chengdu Dacheng New Energy Techenology Co. Ltd Standard Communication Protocol

Message description:

Message1

OUT	**IN**	**CANID**	**Cycle （ms）**
CCS	BCA	0x1806E5F4	1000
Data			
Location	Data name		
BYTE1	Output voltage high byte	0.1v/bit offset ： 0 case： Vout=3201, Corresponding voltage is 320.1V	
BYTE2	Output voltage low byte		
BYTE3	Output current high byte	0.1A/bit offset：0 case： Lout=582, Corresponding current 58.2A	
BYTE4	Output current low byte		
BYTE5	Control	0： Turn on the charger and start charging ; 1： Battery protection, charger turns off output .	
BYTE6	Control	0： Charging mode; 1： Heating mode.	
BYTE7	Keep		
BYTE8	Keep		

Messag2

OUT	**IN**	**CANID**	**Cycle （ms）**
CCS	BCA	0x18FF50E5	1000
Data			
Location	Data name		

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BYTE1	Output voltage high byte	0.1v/bit offset：0 case：Vout=3201 Corresponding voltage is 320.1V
BYTE2	Output voltage low byte	
BYTE3	Output current high byte	0.1A/bit offset：0 case：Iout=582, Corresponding current 58.2A.The highest is the symbol of BIT ,0 for charging ,1 for discharging .
BYTE4	Output current low byte	
BYTE5	Status indicator STATUS	
BYTE6	Temp(Only for individual, others may not)	Internal temperature.Offset：100. Eg：150, Corresponding temperature is 50 degrees.
BYTE7	Keep	
BYTE8	Keep	

Messag3

STATUS	Mark	Description
Bit0	Hardware failure	0: Normal ;1: Hardware failure.
Bit1	Charger temperature	0: Normal ;1: Charger over temperature protection.
Bit2	Input voltage	0: The input voltage is normal;1: The input voltage is wrong and the charger stops working.
Bit3	Start status	0: Battery connection is correct; 1: The battery is not connected or battery is reversed.
Bit4	Communication status	0: Communication is normal;1: communication reception timeout.
Bit5		
Bit6		
Bit7		

10. Way of working

BMS sends control information (message 1) to the battery at a fixed interval of 1s. After the charger receives the message, It will Stream settings to work through the received voltage and current . If no message is received within 5 seconds, it enters a communication error state and turns off the output. Charger sends

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broadcast information (message 2) every 1s,The display meter can display the status of the charger according to the information.

11. Product appearance

11.1 The outer surface should be smooth, without obvious defects such as scratches and deformation. The surface coating should be uniform.

11.2 The nameplates and signs should be installed firmly and the handwriting is clear.

11.3 Spare parts should be fastened reliably, without rust, burrs, cracks and other defects or damage.

11.4 Each product shall be marked with product logo, including part number, product trademark, product model, production number, production company name, warning instructions, etc., at obvious locations.

12. Packaging, transportation and storage

12.1 Packaging:

Product name, model, specification, name of manufacturer are printed on the label . The box contains the products and manual.

12.2 Transportation:

It is suitable for transportation by car, boat and airplane. It should be protected from sun, moisture and civilized transportation during transportation.

12.3 Storage:

When the product is not in use, it should be stored in a packing box. It should be kept in a clean, dry and well-ventilated environment at -30 ℃ ～ 90 ℃. Avoid exposure to sunlight, fire and water. The product has a shelf life of 2 years (from the manufacturer,from the date of storage), if the storage time is too long (more than 1 year), it should be tested by professional before use.

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