

样 品 承 认 书

SAMPLE APPROVAL SHEET

F

安德普料号:
ADY PART NO. : _____

产品型号:
PRODUCT MODEL: _____ ADY6313

品名/规格:
NAME/SPEC: _____ 48V200A

客户名称:
CUSTOMER NAME: _____

	Electrical	Material	Structure	Other
PASS				
Fail				
Other				
Director				

Remark:

ISSUE	CHECK	APPROVAL

QMS-21-001 V0

File Name:	ADY6313 48V200A Charger product Spec.				Confidential
File Attributes:	Product spec	Version:	V1.0	Pages:	2

ADY6313 High frequency smart charger specification



Model	48V200A
Version	V1.0

Compile:	Check:	Approve :
Qin Hai	Liao Zhaojun	Xu Liping

ADY-RD-002 V0

File Name:	ADY6313 48V200A Charger product Spec.			Confidential	
File Attributes:	Product spec	Version:	V1.0	Pages:	3

Compile	Qin Hai	QE	Zhou Baoyuan
Hardware	Zhaojun Liao	Check	Zhaojun Liao
Software	Weijie He	Approve	Xu Liping

Change Record

Version No.	Update No.	Update date	Modify the description	Compile
V1.0		2021-10-05	First version	Qin Hai

File Name:	ADY6313 48V200A Charger product Spec.				Confidential
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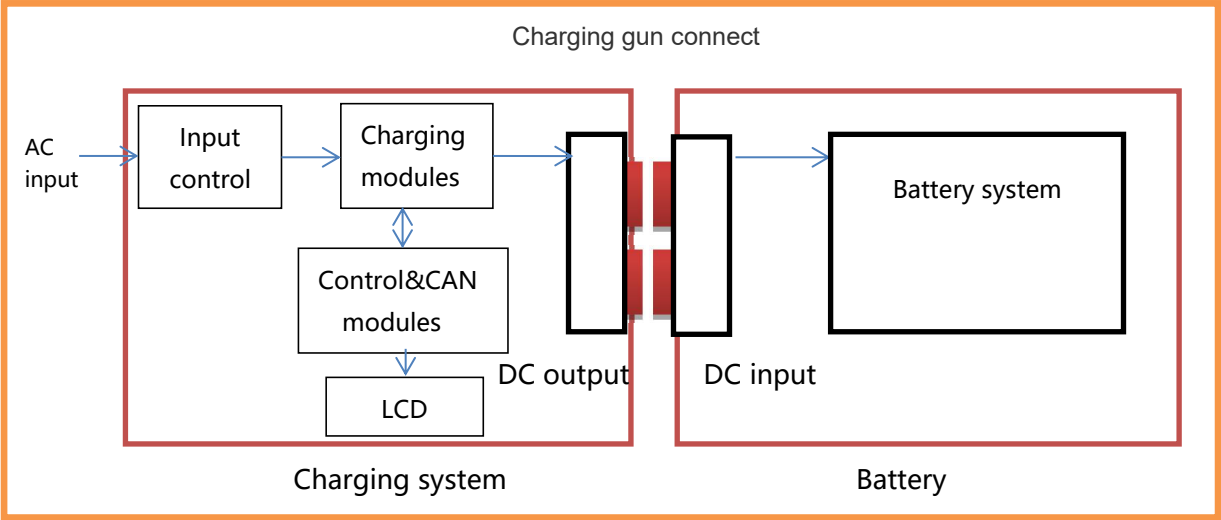
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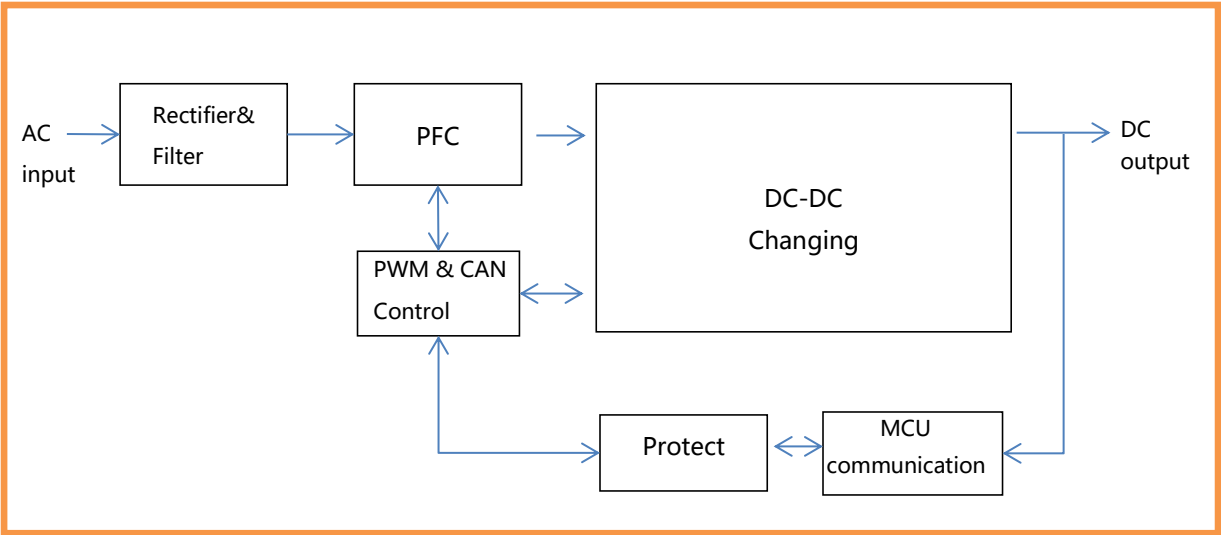
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1 Product Description

Welcome to use ADY6313 Charger made by ADY, this charger is an efficient, fast, and small-sized charging device. The charger is a three-phase AC 380V voltage input with a maximum output power of 12KW. It adopts forced air cooling and has the functions of input overvoltage, undervoltage, output overvoltage, undervoltage, overcurrent, output short circuit, and fan fault protection. At the same time, it meets RoHS and CE requirements.



System Architecture



Charging module topology framework

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2 Charger Electrical Parameters

2.1 Charger technical parameters

Item	Parameters		Remark
AC Input：			
Rated input voltage	380Vac		L1+L2+L3+PE
Input voltage range	325-485Vac（Full load），323-280Vac（Linearly reduced to half load）		/
Input connector	Industrial anti-riot plugs, crimping terminals		/
Input cable length	3000±100mm		/
Frequency range	47-63 Hz		/
Input current	≤24A Max		380Vac
Input power	12KW±10%		Rated input and output
Efficiency	≥93%		Rated input and output
Power factor	≥0.99		Rated input and output
DC Output:			
Rated output voltage	48V	Communication adjustment	
Output voltage range	30-60V	/	
Output current	200A	Max output power	
Output power	12KW	BMS power	
Auxiliary supply output voltage	12	BMS power	
Auxiliary supply output current	5A	/	
Load regulation	±2%	/	
Current precision	±2%	20MHz bandwidth/peak to peak	
Voltage precision	≤±1%Vo（p-p）	25℃	
MTBF	>80000H	Communication adjustment	
Output cable、connector:			
Output connector	REMA 320A Male		DIN
Output cable length	3000±100 mm		/
Output cable Spec	70 mm²		/
Communication:			
communication method	communication method		communication method
Communication agreement	customer offer agreement		Communication agreement
Charger:			
Size	L535*W210*H360 mm		Charger size (without foot pads)
Bare metal weight	31±2kg	For reference only, please refer to the actual measured value	
Total Weight	34.3±2kg	For reference only, please refer to the actual measured value	

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2.2 Safety Features

Item	Parameters	Remark
Isolation voltage	Input to the case 2120 , 1min , leak current<30mA	Remove discharge tube test, require no arc, no breakdown
Isolation voltage	Input to output2120 ; 1min , leak current<30mA	
Isolation voltage	Output to case 225 ; 1min , leak current<30mA	
Insulation resistance	Input to output $\geq 1\text{ M}\Omega$; output to case $> 5\text{ M}\Omega$	500Vdc test

2.3 Protect Function

Item	Unit	Parameters	Remark
Input overvoltage protection (software、 hardware)	Vac	≥ 475	Self-recovery, 325-480Vac (full load), 325-260Vac (linearly reduced to half load)
Input undervoltage protection (software、 hardware)	Vac	≤ 323	Self-recovery, 305-480Vac (full load), 325-260Vac (linearly reduced to half load)
Output overcurrent protection (software、 hardware)	A	$\geq 110\%I_o$	Self-recovery
Output undervoltage protection (software hardware)	Vdc	≤ 30	Self-recoverable, the output is guaranteed within the range of 30-50V, and the performance index is not guaranteed
Output overvoltage protection (software hardware)	Vdc	$\geq 110\%V_o$	Lock. Power off and restart.
Over-temperature protection (software)	℃	≥ 95	Outlet side radiator (test point)
Output short-circuit protection (software、 hardware)	/	Yes	Self-recovery
CAN communication interruption	/	Yes	Has Communication interruption and Intelligent shutdown after 5S' timeout

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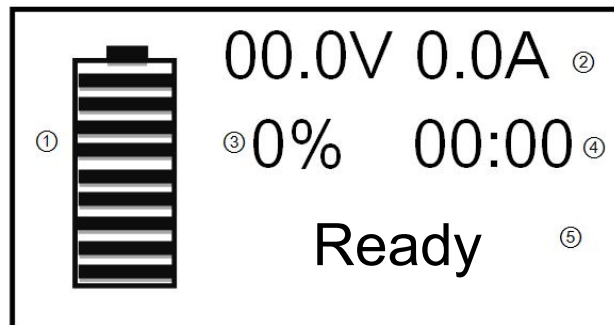
3 Working Environment

Item	Min	Typ	Max	Unit	Test condition
Working temperature	-20	25	40	°C	
Storage temperature	-40	25	70	°C	
Relative humidity	0	/	93	%	
Protection mode	/	IP21	/	/	
Cooling method	/	Forced Air cooling	/	/	
Working altitude	/	2000m full load output	/	m	
Working noise	/	75	/	dB	1m from the charger

4 EMC & Safety

Item	Unit	Standard	Remark
CE	/	IEC61000_3_2 IEC61000_3_3 IEC61000_6_2 IEC61000_6_4	Refer to relevant certification standards

5 LCD Display panel and its contents



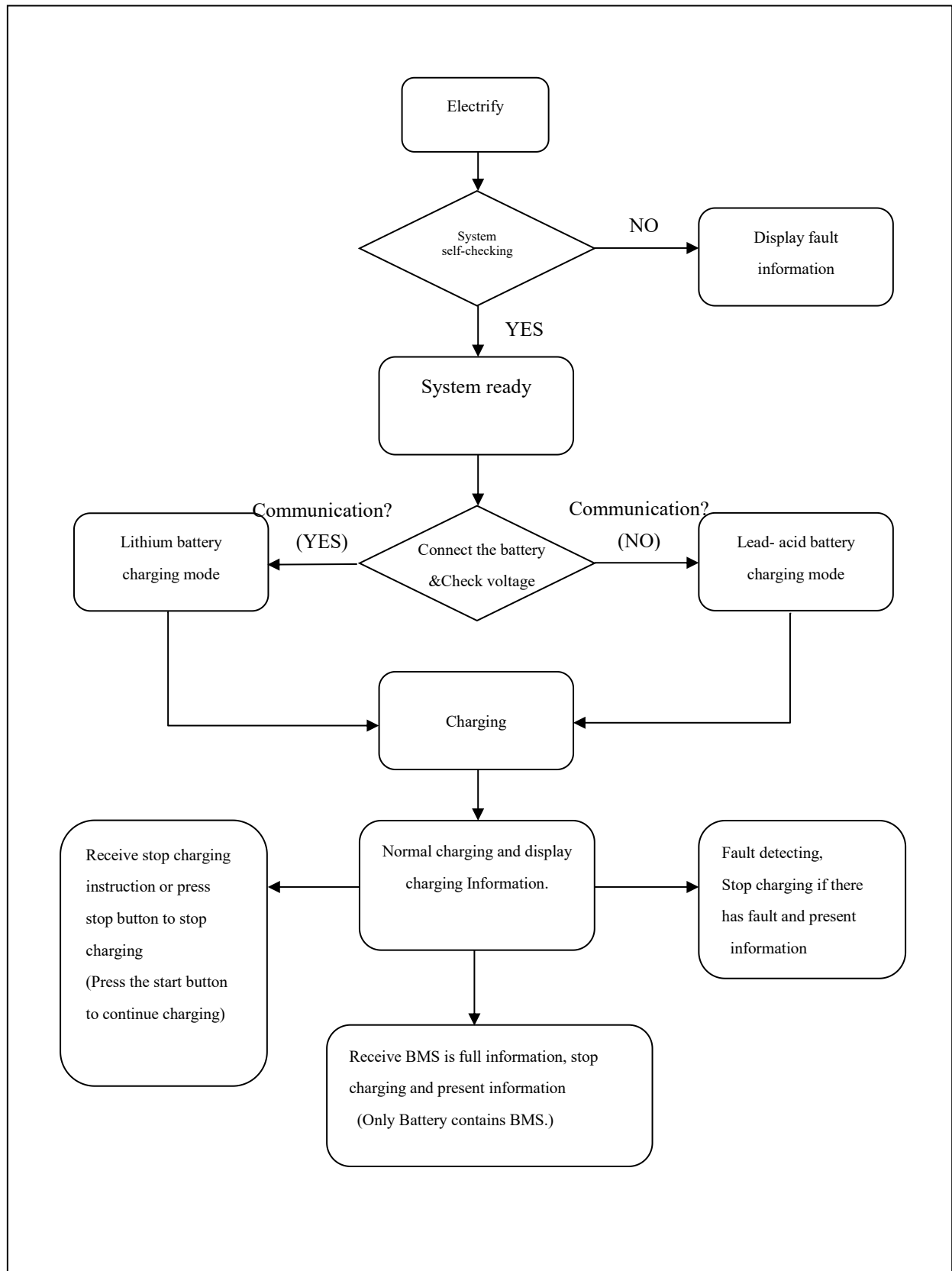
- ① : Battery charging status chart , it will has indication when charging
- ② : Shows current and voltage
- ③ : SOC battery percentage (Provideby BMS)
- ④ : Charging time (Hour: min)
- ⑤ : LCD display will show the status

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Charging status:	Description :
Self-checking	Check the battery condition, whether charging is allowed, and whether the charger has faults itself.
Ready	The battery can be charge
Charging	Battery Charging
Fully Charge	Charger complete
Shutting down	Close charger, turn off the main switch
Input abnormal	The charger's input voltage is higher or lower than the preset value
Connect battery	The charger output line is not connected to the battery, but the communication connection is good.
Disconnect Battery /Error mode	The charger's charging mode is wrong.
Disable charging	The battery is forbidden to charge
Remark: The above fault codes should do cooperation with BMS'send out,then can show.If the battery without BMS,some fault codes wonot be displayed. Support for customer customization.	

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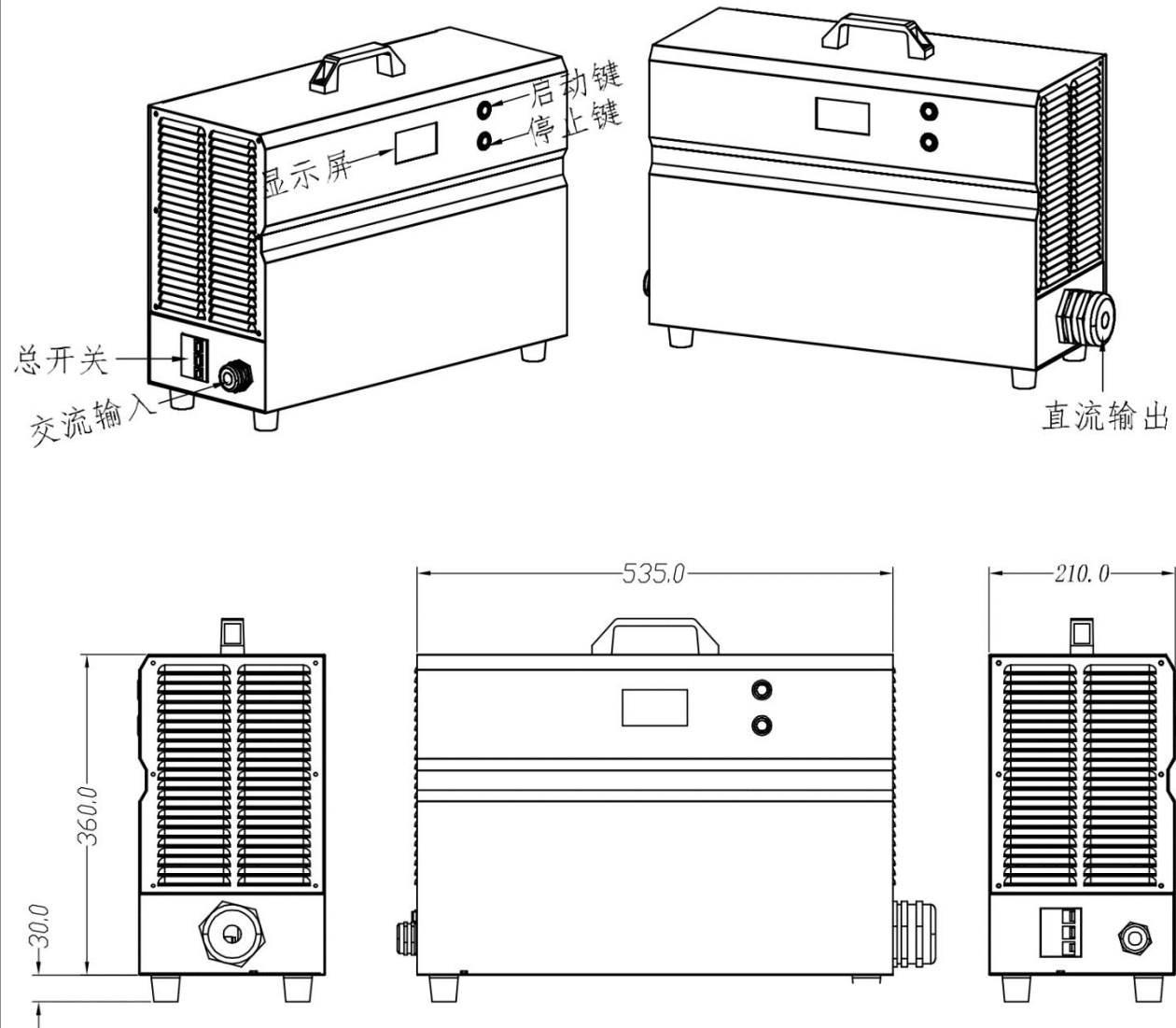
6 Charging Process



File Name:	ADY6313 48V200A Charger product Spec.				Confidential
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7 Charger Structure (mm)

7.1 Structural dimensions



Overall size:

Length*width*height L535*W210*H360 mm (without foot pads)

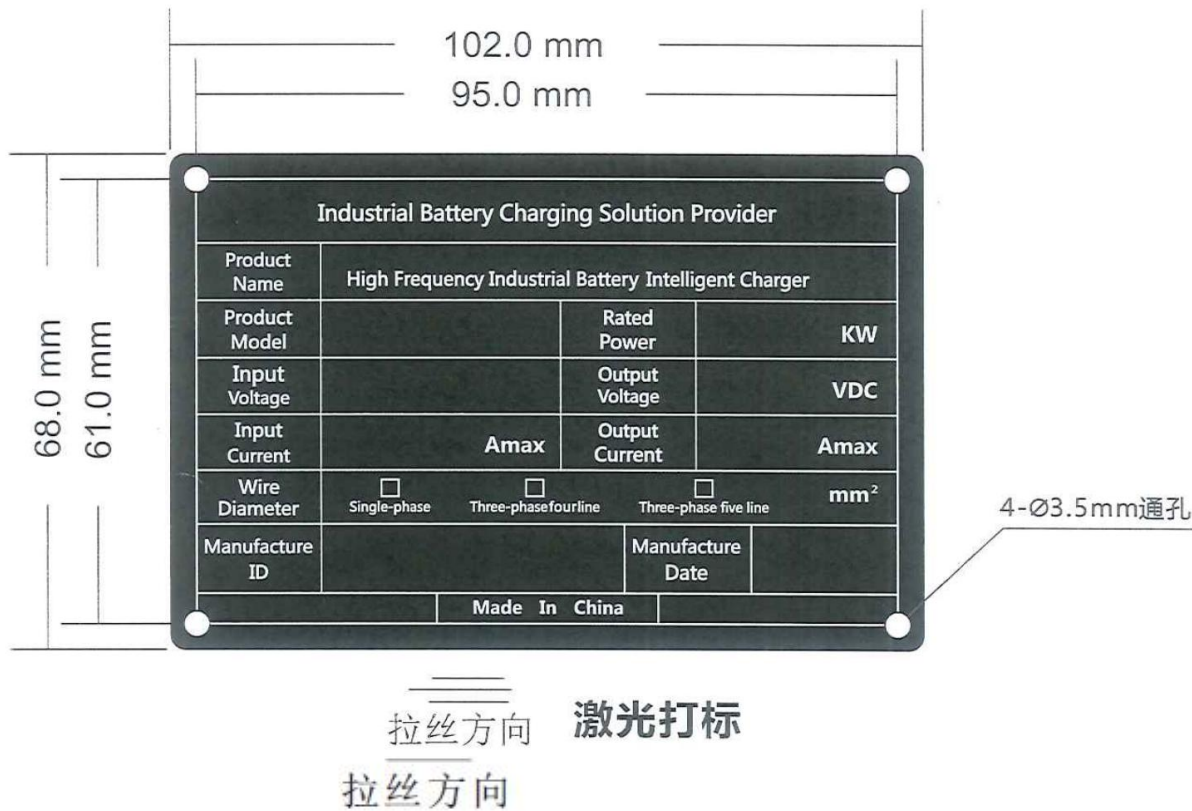
Length*width*height L535*W210*H390 mm (including foot pads)

Note:

1. The main color of the charger body is sand grain black RAL9005;
2. Paste our company's logo on the front of the body;
3. Other silk-screened white Chinese fonts;

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7.2 Schematic diagram of nameplate size

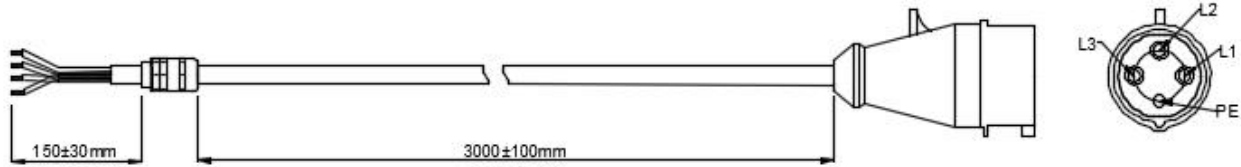


Note: For reference only, please refer to the actual product

7.3 Input cable and connector specifications

Phase	Specification	Remark
L1	4mm ²	Brown
L2	4mm ²	Black
L3	4mm ²	Grey
PE	4mm ²	Yellowish green

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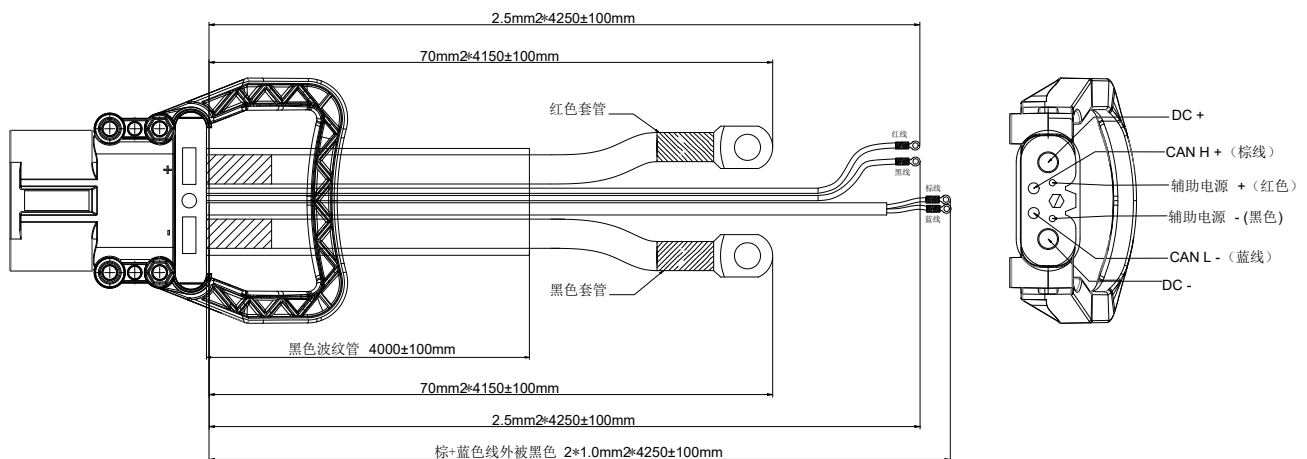
Note:

- 1、四芯电缆线，黑色，L=3000mm
- 2、32A 3P+PE工业插头
- 3、L1 (棕)+L2 (黑)+L3 (灰)+PE (黄绿)
- 4、配套工业插座

Example picture: 32A industrial four-pin plug (for reference only)

Note: This charger is a high-power leakage device. In order to ensure safety, please ensure that the PE terminal of the protective earth in the AC input is correctly connected to the earth before use;

7.4 Output cable and connector specifications

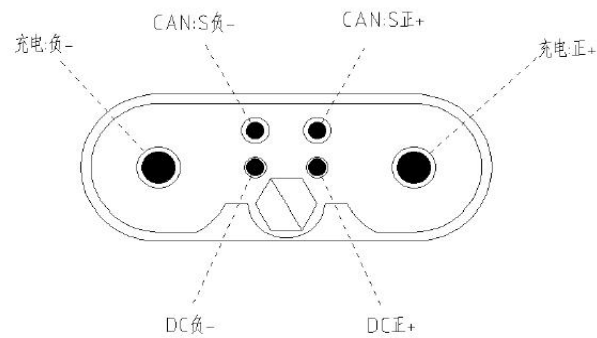


Output connector: REMA 320A male

Output connection line: 70 mm² 3M

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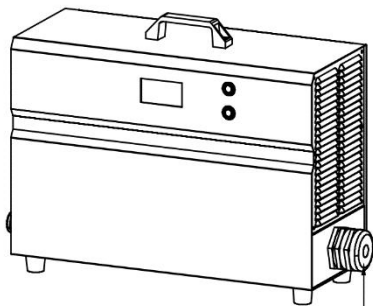
REMA80-160-320(公)



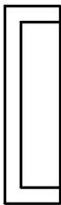
Output interface definition description

8 Packaging

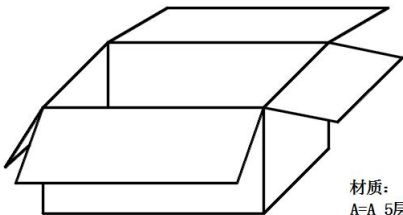
Carton (wooden box), pearl cotton, anti-static bag (for reference only, please refer to the actual packaging)



充电机



珍珠棉*4PCS



材质:
A=A 5层瓦楞纸

9 Appendix