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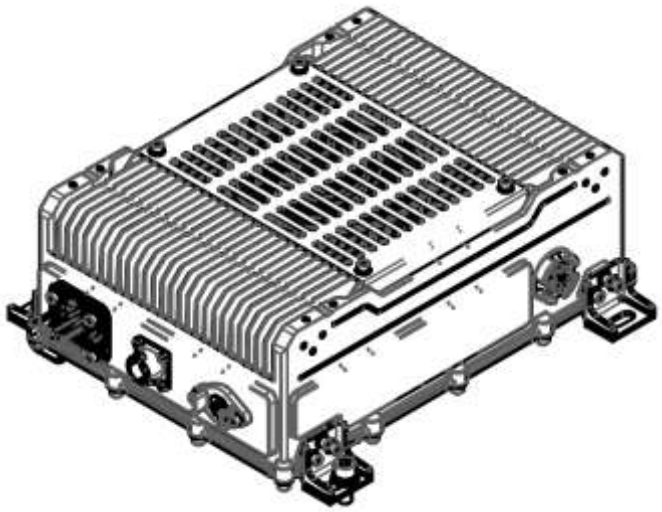
Input DC 36-60V Output 14V 1.5KW DC/DC Converter Fan Cooled
Model No. ATRD1K5-48S14F

BD NO.: BD2Q-601



Features

1 Output Power(KW): 1.5
2 Input Voltage Range(VDC): 36-60
Rated Input Voltage(VDC): 48
3 Output Voltage Range(VDC): 9~16
4 Rated Output Voltage(VDC): 14
5 Output Current Range(A): 93.75~144
Rated Out Current(A): 107
6 Dimensions(mm): 328 x 260 x 121
7 Weight(KG): ≤ 6.8
8 Cooling System: Fan
9 IP Rating: IP67
10 CAN compatibility: CAN2.0 B SAE J1939
11 Enclosure: Aluminum alloy
12 Isolated: Supported
13 Software: Digital software design
14 Online Upgrade & Fault Diagnosis: Supported

Specification

Description		Remark
Efficiency	≥90%	Rated input voltage, load＞30%
Output Voltage Ripple	≤500mVPK-PK	
Output Voltage Accuracy	±1%	
Communication Method	CAN-BUS J1939	
Quiescent Current	≤2mA	Battery current will be consumed in sleep/standby mode
Isolation	supported	

Operating Environment

The operating environment conditions of this assembly are as follows:

Items	Descriptions		Remark
1.	Operating Temperature(℃)	40-85	The power will be derated when the temperature exceeds 65℃
2.	Storage Temperature(℃)	40-95	
3.	relative humidity(%RH)	5～95	No condensation, no frost
4.	Protection level	IP67	

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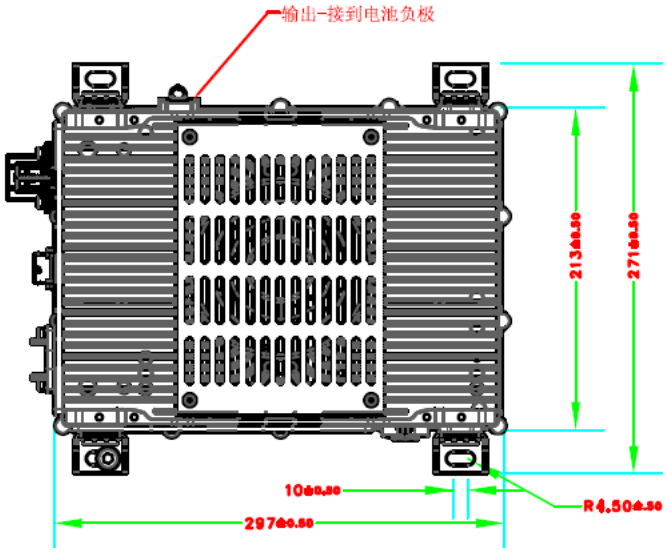
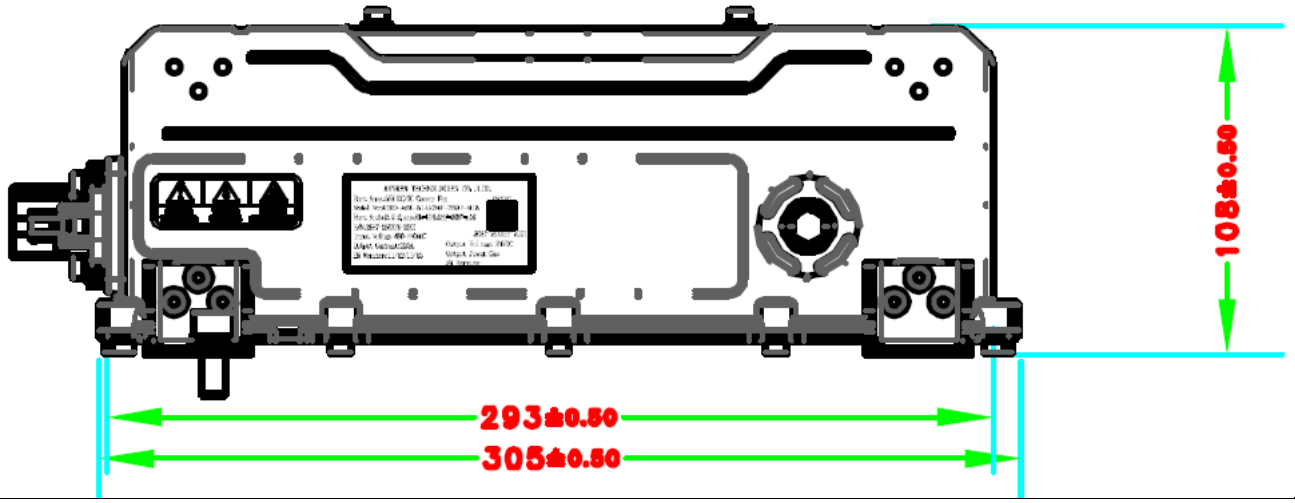
5.	Cooling method	Fan	
6.	Vibration level	ISO 16750-3,2012（E）	After X,Y,Z three directions of sweep frequency vibration testing, no damage for parts , no loose for fastening piece
7.	Noise level(dB)	65	Meet QC /T895-2011
8.	Salt spray level	GB/T 2423.17	
9.	Altitude(M)Max	3000	GB/T16935.1-2008
10.	Fall	Wiring harness according to QC/T417.1-2001 Housing according to GB/T 2423.8-1995	Appearance, structure and performance are normal
11.	Protection Characteristics	OTP& OVP & UVP& SCP	
12.	Electromagnetic immunity	GB/T17619-1998 chap4	
13.	Electromagnetic disturbance	GB18655-2002chap 12 chap14	





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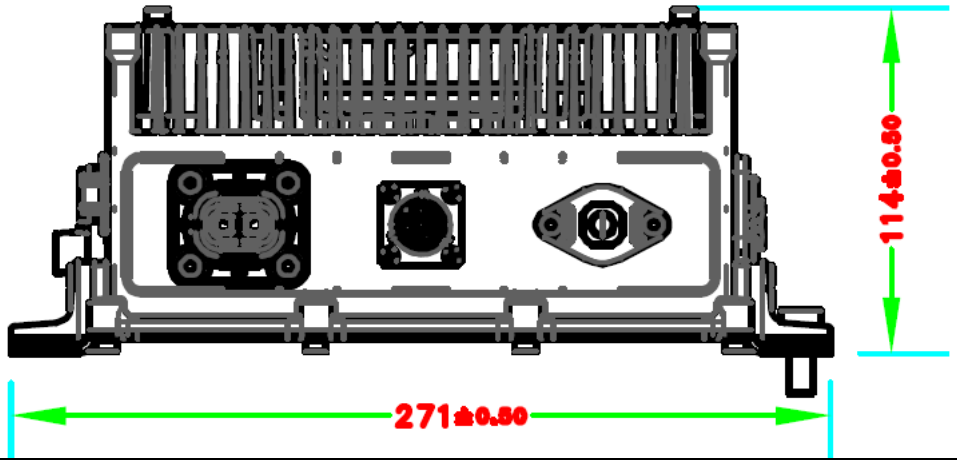

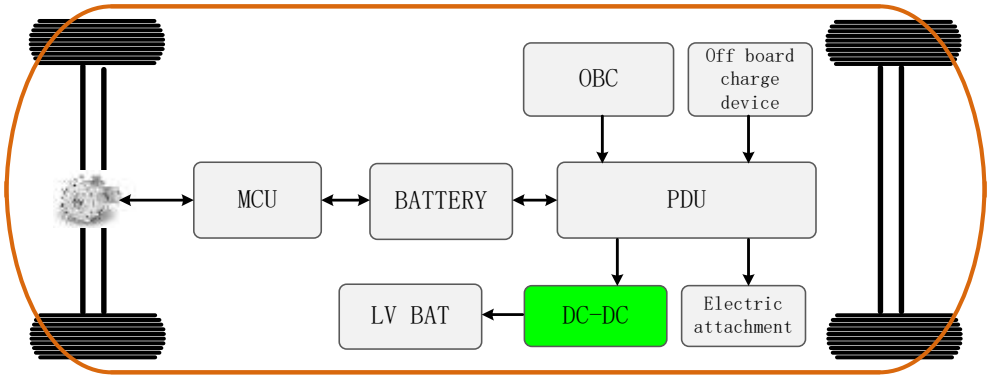

WIRING DIAGRAM

- **Item 1**: Signal control connects to the VCU or BMS.
- **Item 2**: DC input connects to the PDU or battery pack or other devices.
- **Item 3**: DC output (+) connects to the auxiliary battery, auxiliary battery connects to the enclosure for ground protection.

Note: The enclosure must be securely mounted onto the vehicle bracket and keep flat position.

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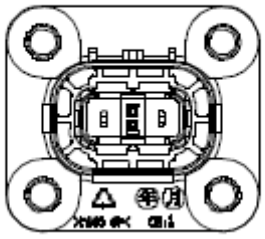
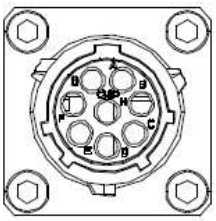
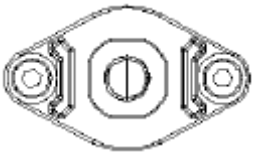
Connector Table

Connector Model

Position	Function	Brand	Socket Model	Plug Model
1	HV DC input	RECODEAL	RED- ZM2PAH-2.5-A	RED- TM2PAH-2.5-A
2	Signal control	Amphenol	RT00128PN03	RT06128SNHEC03
3	Output +	GUWEITONG	GH01-F200-1NNB-T21	M8 BOLT

Interface Definition

HV DC Input(1)		Signal Control(2)		Output Positive(3)	
					
1	Input + 2.5MM2	A	CAN H	1	Output +
2	Input -2.5MM2	B	CAN L		
A	HVIL +	C	KL15		
B	HVIL -	D	KL30		
Cable Size: 1/2: 2.5mm2 A/B: 0.75mm2		E	KL31		
		F	HVIL +		
		G	HVIL -		
		H	N/C		
		CABLE SIZE: 0.75MM2		110A 25MM2	

Cable Current Rating Table for reference only. The actual current-carrying capacity shall be based on the cable manufacturer's specifications

CURRENT (A)	CABLE SIZE (MM2)	CURRENT (A)	CABLE SIZE (MM2)	CURRENT (A)	CABLE SIZE (MM2)
7	0.75	60	10	250	70
22	2.5	80	16	300	95
25	3	125	25	350	120
30	4	150	35		
40	6	200	50		

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