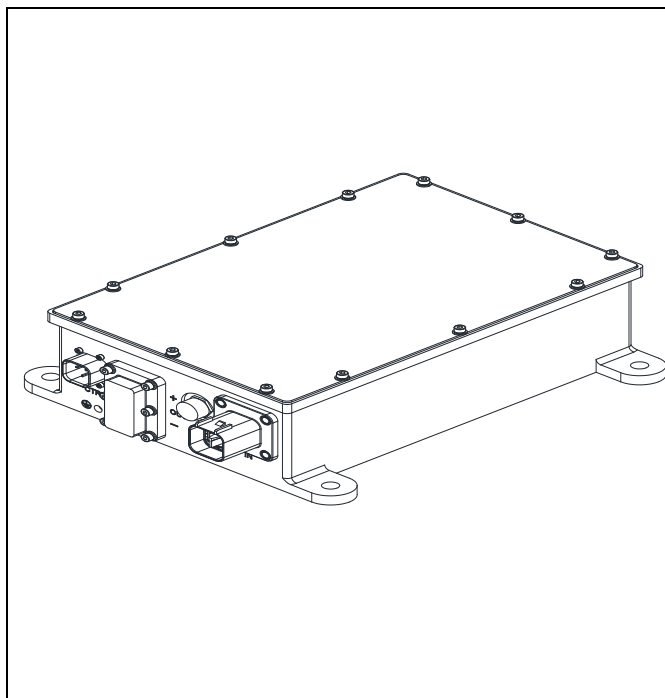




DC 200~450V in 14V out 2.5KW DC/DC Converter Liquid Cooled Model No. ATRD2K5-370S14W



Features

- 1 Output Power(KW): 2.5
- 2 Input Voltage Range(VDC): 200-450
Rated Input Voltage(VDC): 370
- 3 Output Voltage Range(VDC): 0-16
- 4 Rated Output Voltage(VDC): 14
- 5 Output Current Continuous(A): 178
- 6 Output Current Max(A): 178
- 7 Dimensions(mm): 359x270x100
- 8 Weight(KG): 4.5±0.5
- 9 Cooling System: Liquid flow ≥6L/min
- 10 IP Rating: IP67
- 11 CAN compatibility: CAN2.0 B
- 12 Enclosure: Aluminum alloy
- 13 Isolated: Non Supported
- 14 Software: Digital software design
- 15 Online Upgrade & Fault Diagnosis: Supported

Specification

Description		Remark
Efficiency	≥93%	Rated input voltage, load > 30%
Output Voltage Accuracy	±1%	
Communication Method	CAN 2.0 BUS	
Isolation	supported	

Operating Environment

The operating environment conditions of this assembly are as follows:

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

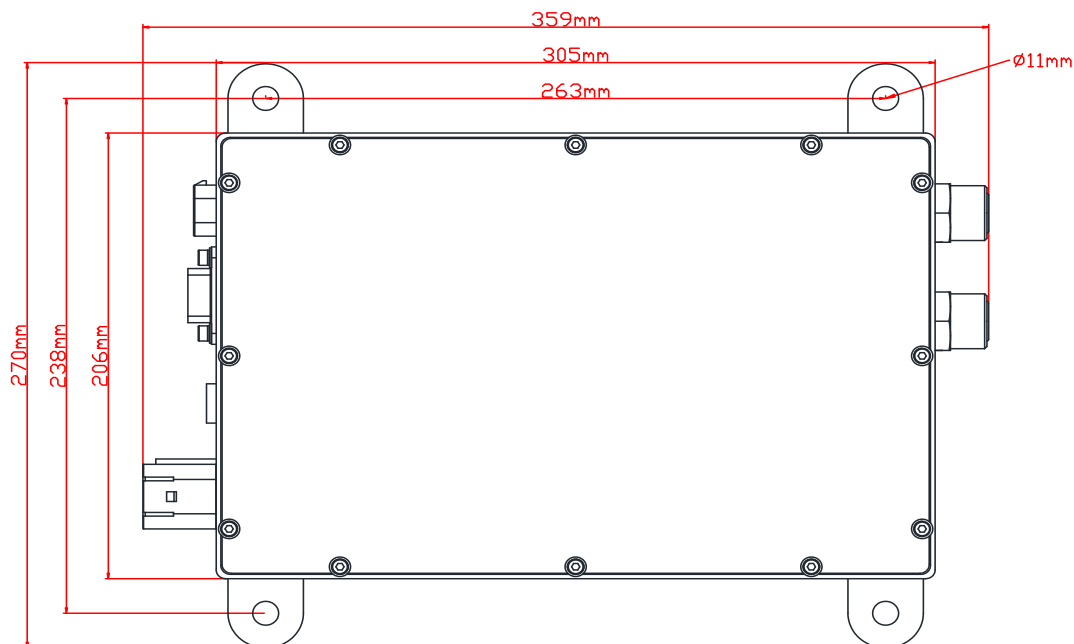


4.	Protection level	IP67	
5.	Cooling method	Liquid	
6.	Vibration level	ISO 16750-3,2012 (E)	After X,Y,Z three directions of sweep frequency vibration testing, no damage for parts , no loose for fastening piece
7.	Noise level(dB)	< 60	
8.	Salt spray level	GB/T 2423.17	
9.	Altitude(M)Max	3000	GB/T16935.1-2008
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	Input OVP/UVF, output OVP/UVF, input anti-reverse connection, output short circuit protection, OCP, OTP	
12.	Electromagnetic immunity	GB/T17619-1998 chap4	
13.	Electromagnetic disturbance	GB18655-2002chap 12 chap14	

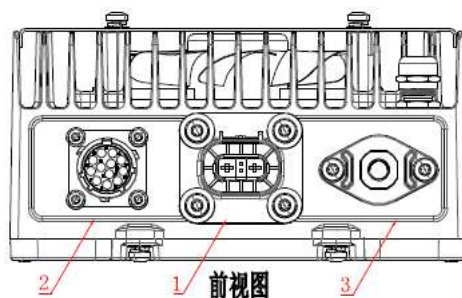
2 Dimensions and Weight

2.2 Product size

Top View

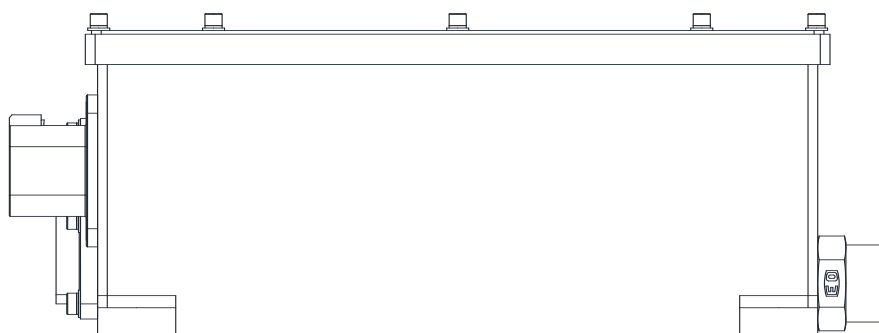


Front View



The connector pin definition will be defined according to the approval sheet.

Side View



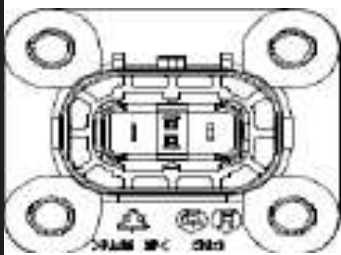
3 Define Connectors and Connection Terminals

Connectors Definition

Connector Model

Position	Function	Brand	Socket Model	Plug Model
1	HV DC input	Recodeal	RED-Z2PAH-2.5-A	RED-T2PAH-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 +	A	CAN L	1	Output +
2	INPUT -	B	CAN H		
A	HVIL +	C	HARDWIRE ENABLE(KL15)		
B	HVIL -	D	VCC(KL30)		



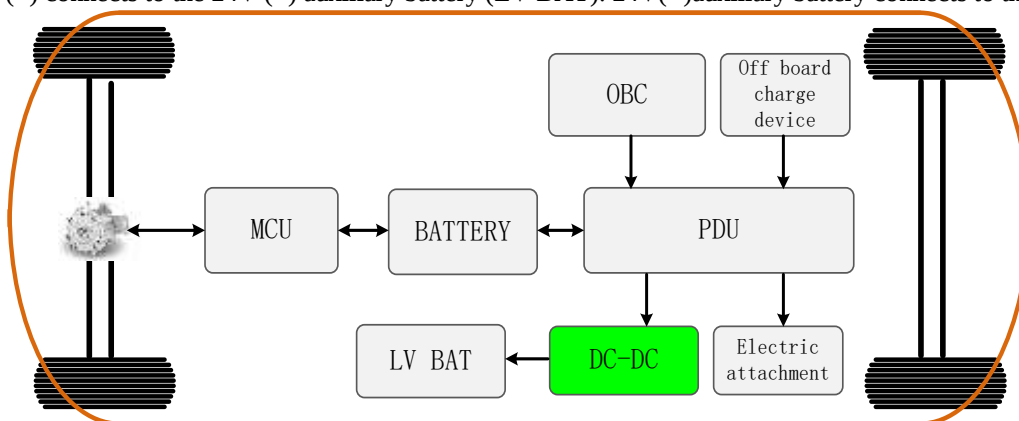
		E	GND(KL31)		
		F	HVIL+		
		G	HVIL -		
		H	NC		
Cable Size: 1/2: 2.5mm2 (22A) A/B: 0.75mm2		Cable specification: 0.75mm2 shield twisted pair OD= ϕ 11-12.5mm N/C: No connection		CABLE SIZE: 25MM2	

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		

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 24V (+) auxiliary battery (LV BAT). 24V(-) auxiliary battery connects to the enclosure for



ground protection.

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