




Input DC 400~900V Output 24V 12KW DC/DC Converter Liquid Cooled

Model No. ATRD12K-750S24W

	<p>Features</p> <ul style="list-style-type: none"> 1 Output Power(KW): 12 2 Input Voltage Range(VDC): 400-790 Rated Input Voltage(VDC): 750 3 Output Voltage Range(VDC): 0-32 4 Rated Output Voltage(VDC): 24 5 Output Current Range(A): 0~357 6 Output Current Max(A): 357 7 Dimensions(mm): 550x396x100 8 Weight(KG): ≤ 25 9 Cooling System: Liquid, flow rate ≥12L/min 10 IP Rating: IP67 11 Communication: CAN2.0 B SAE J1939 12 Enclosure: Aluminum alloy 13 Isolated: Supported 14 Software: Digital software design 15 Online Upgrade & Fault Diagnosis: Supported
<p>The connectors details: please refer to the connectors' table This is for refer only.</p>	

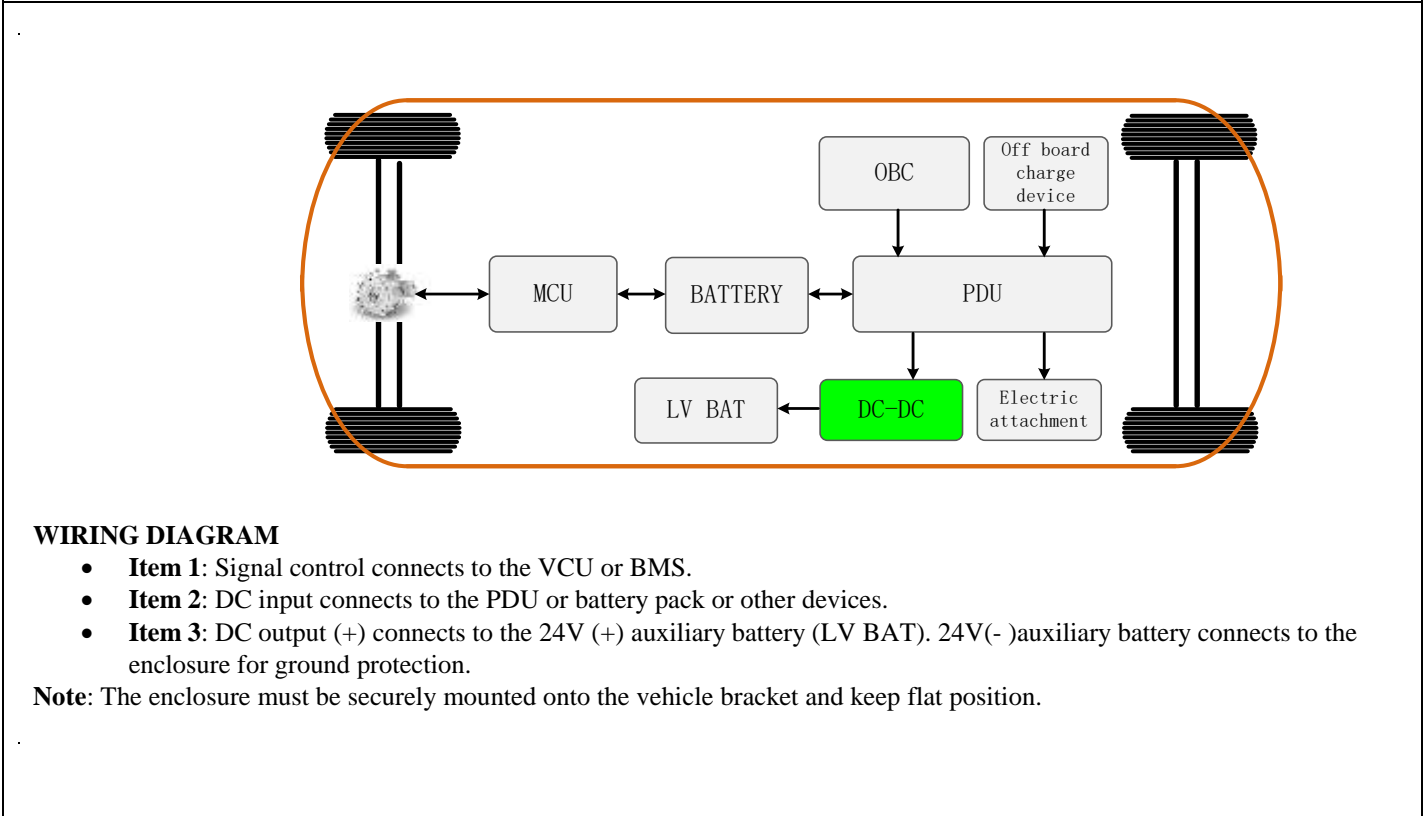
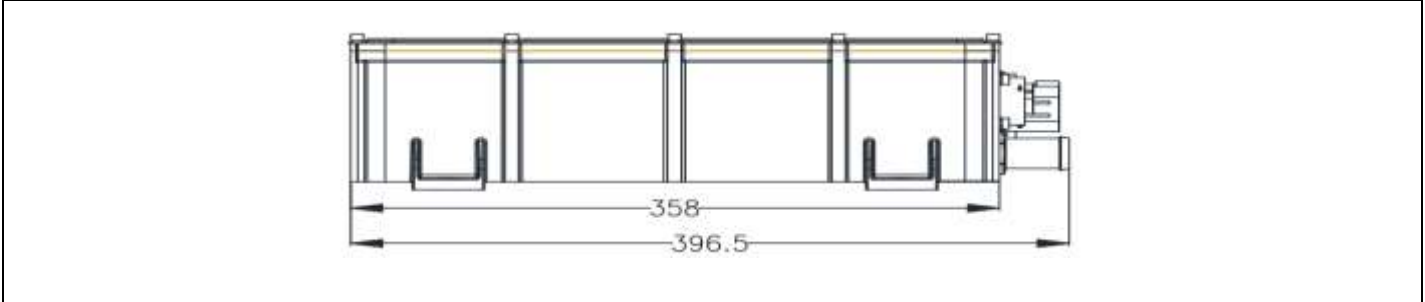
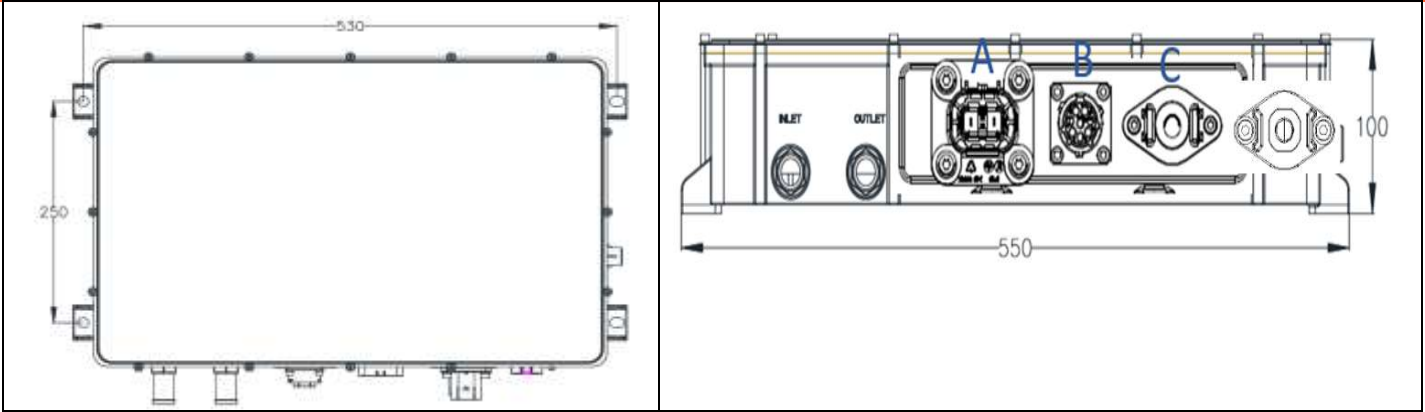
Specification

Description		Remark
Efficiency	≥92%	Rated input voltage, load > 30%
Output Voltage Accuracy	±1%	
Communication Method	CAN 2.0 BUS	

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/UVLP, output OVP/UVLP, input anti-reverse connection, output short circuit protection, OCP, OTP	
12.	Electromagnetic immunity	GB/T17619-1998 chap4	
13.	Electromagnetic disturbance	GB18655-2002chap 12 chap14	



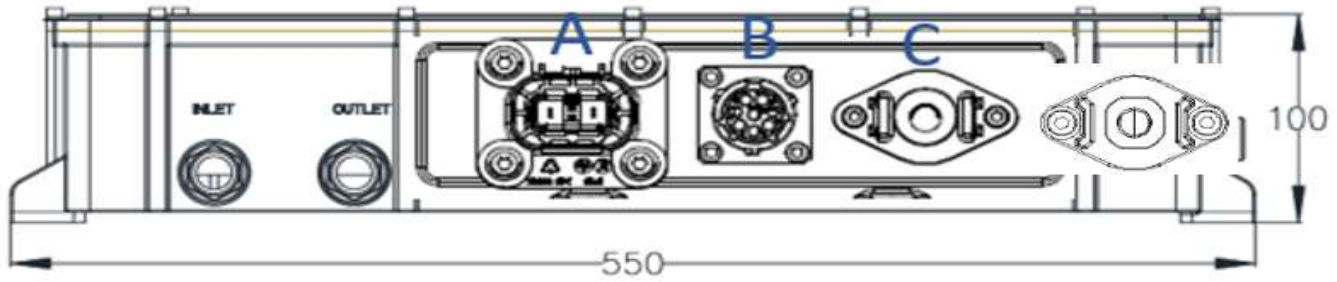
WIRING DIAGRAM

- **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.



2 Connector's table (Define Connectors and Connection Terminals)



Connector Model

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

Interface Definition

(A) HV DC Input		(B)Signal Control		(C)Output Positive	
1	Input + 2.5MM2	A	CANH	1	Output +
2	Input -2.5MM2	B	CANL 0	2	Output +
A	HVIL +	C	KL15		
B	HVIL -	D	KL30		
Cable Size: 1/2: 2.5mm2 (22A) A/B: 0.75mm2		E	KL31		
		F	HVIL +		
		G	HVIL -		
		H	N/C		
		CABLE SIZE: 0.75MM2		200A 50MM2	

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		