

Input DC 200~400V Output 14.2V 1.2KW DC/DC Converter Fan Cooled Model No. ATRD1K2-300S14.2F

	Features 1 Output Power(KW): 1.2K 2 Input Voltage Range(VDC): 200~400 Rated Input Voltage(VDC): 300 3 Output Voltage Range(VDC): 9~16 4 Rated Output Voltage(VDC): 14.2 5 Output Current Range(A): 0-86 6 Output Current Max(A): 86 7 Weight(KG): $\leq 3.5 \pm 0.3$ 8 Cooling System: Fan 9 IP Rating: IP67 10 Communication: CAN2.0 B SAE J1939 11 Enclosure: Aluminum alloy 12 Pre-charge & isolated: Supported 13 Software: Digital software design 14 Online Upgrade & Fault Diagnosis: Supported
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Specification

Description		Remark
Input Voltage Range (VDC)	200 ~ 400	Adjusted as per requirement
Rated Input Voltage (VDC)	300	Adjusted as per requirement
Output Voltage Range(VDC)	9 ~ 16	
Rated Output Voltage(VDC)	14.2	Adjustable as per requirement
Output current(A) Max.	86	
Efficiency	$\geq 92\%$	Rated input voltage, load $> 25\%$
Output Voltage Ripple	$\leq 500\text{mV}_{\text{PK-PK}}$	
Output Voltage Accuracy(V)	$\pm 1\%$	
Communication Method	CAN-BUS SAE J1939	Baud rate: 500Kbps
Quiescent Current	$\leq 2\text{mA}$	Battery current will be consumed in sleep/standby mode
Pre charge	Built in	

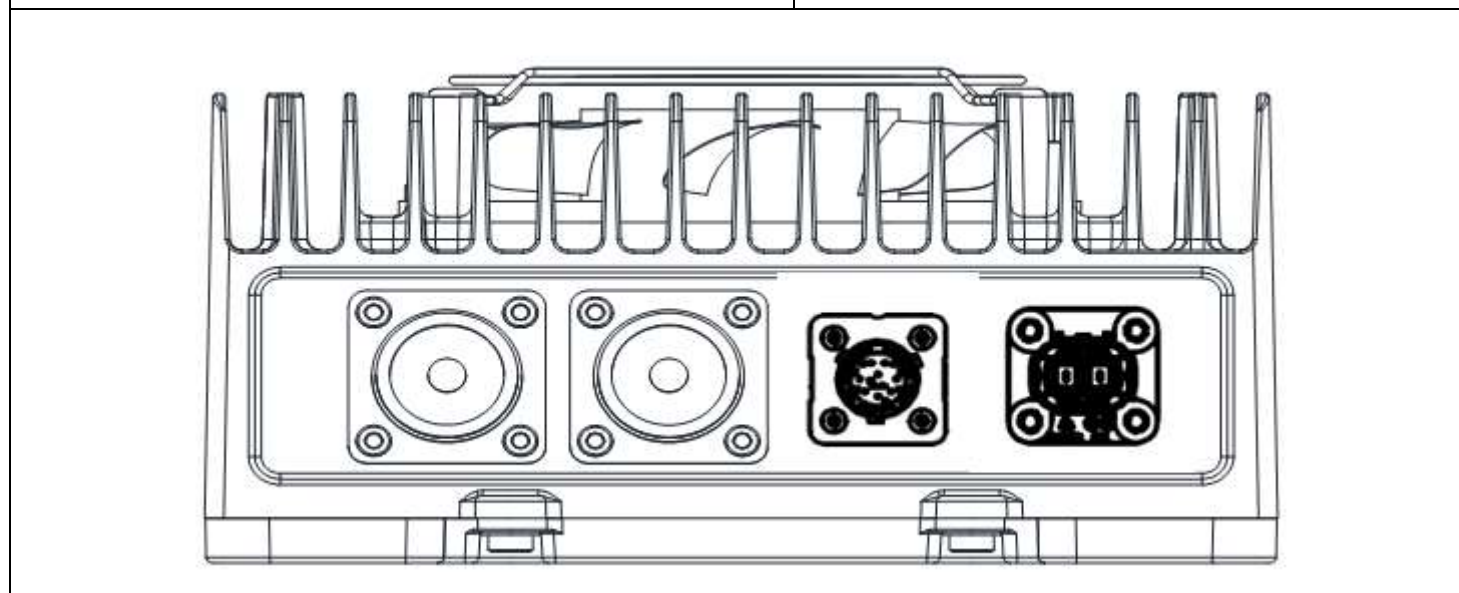
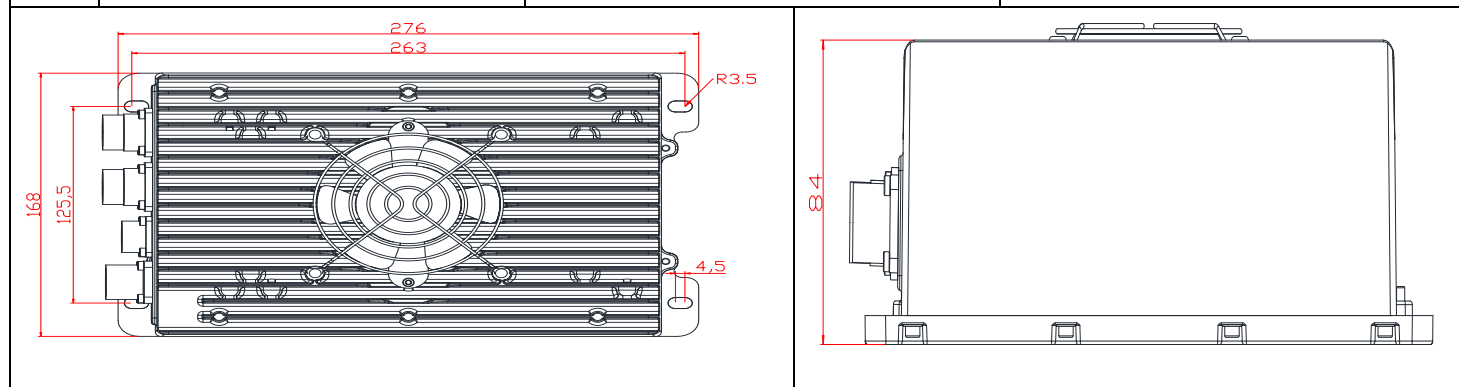
Operating Environment

The operating environment conditions of this assembly are as follows:

Items	Descriptions		Remark
1.	Operating Temperature($^{\circ}\text{C}$)	40-85	The power will be derated when the temperature exceeds 65°C
2.	Storage Temperature($^{\circ}\text{C}$)	40-105	



3.	relative humidity(%RH)	5~95	No condensation, no frost
4.	Protection level	IP67	Housing : IP67, connector: IP 6K/9K
5.	Cooling method	Natural	
6.	Vibration level	ISO 16750-3,2012 (E) GB/T 28046.3-2011 - 4.1	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(normal), 5400(Specific regions)	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	





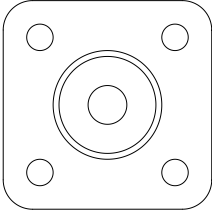
Connector Model: Adjustable as per requirement

Connector Model

Position	Function	Brand	Socket Model	Plug Model
1	Signal control	Huuzheng	FPT20N21208PN	FPT60N21208SN
2	HV DC input	RECODEL	RED-T2PAH-2.5-A	RED-Z2PAH-2.5-A
3	Output +		Leishen	
	Output -		Leishen	

Interface Definition

1	RED-T2PAH-2.5-A	1	輸入+	2.5mm ²	
		2	輸入-	2.5mm ²	
		A	HVIL	0.75mm ²	
		B	HVIL	0.75mm ²	
2	FPT20N21208PN	A	CANL	0.75mm ²	
		B	CANH	0.75mm ²	
		C	Enable	0.75mm ²	
		D	12V-OUT	0.75mm ²	
		E	HVIL	0.75mm ²	
		F	HVIL	0.75mm ²	
		G-H	TBD		

Output Positive(3)	
	
Through-the-wall terminals	
	Output +
	Output -