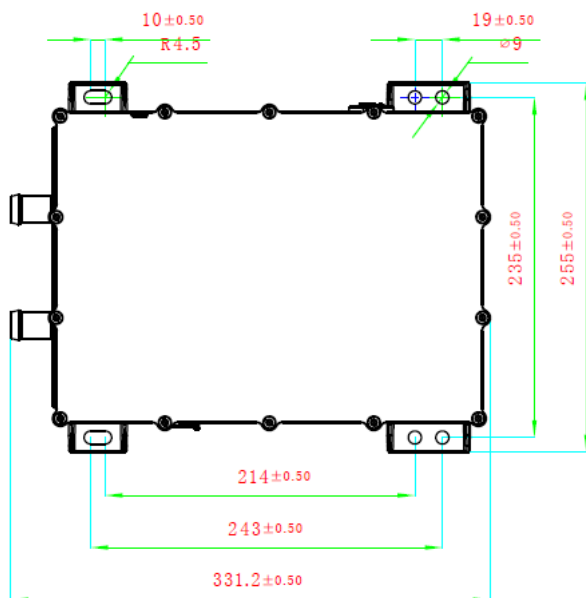




250~420V in 28V out 6KW DC/DC Converter Liquid

Model No.: ATRD6K-355S28W



Features

1. Output Power(KW): 6
2. Input Voltage Range(VDC): 250 ~ 420
Nominal Input Voltage(VDC): 355
3. Output Voltage Range(VDC): 27 ~ 28.5
Rated Output Voltage(VDC): 28
4. Output Current Continuous(A): 0~220
5. Output Current Max(A): 220
6. Weight(KG): 8.5 ±0.5
7. Cooling System: Liquid
8. IP Rating: IP67
9. CAN compatibility: CAN2.0 B
10. Enclosure: Aluminum alloy
11. Isolated: Supported
12. Software: Digital software design
13. Online Upgrade & Fault Diagnosis: Supported

1. Electrical Characteristics

1.1. Electrical Characteristics

14. Precharge circuit	Built-in
15. Precharge resistor	120R
16. Inrush current	≤11A
17. Bus capacitors	24uF
18. Voltage regulation accuracy	±0.2V
19. Typical efficiency	≥92%
20. Output peak power(Vdc)	36

Others

1. Response time	≤200mS
2. Run-up time	<1s
3. Output ripple and noise	≤300mVp-p (The band width of oscilloscope should be 20MHz. The probe is in parallel with a 10uF electrolytic capacitor and a 104 ceramic capacitor(test with over 50A load.)
4. Static loss current	<1mA (The leakage current when high voltage power supply and 12Vdc control power supply are not connected, and output end is in parallel with a 14Vdc battery.)



5. Enable signal range	8-32V
Protection characteristics	
6. Input/output voltage protection	Input/output OVP/UVLP Can be self-recovering
Output short circuit protection	Hiccup, self-recovery when the fault is clear
Input power on sequence	1.high voltage first, and then control signals 2.control signals first, and then high voltage 3.high voltage and control signals are at the same time In above 3 kinds input power on sequence, the power supply can work normally, and no protection or damage.
Over temperature protection	When the water inlet temperature is over 75°C, output will be linear derating with temperature. When the temperature is over 85°C, power supply will turn off output. When temperature is under 80°C, output will be self-recovery.
Environmental condition	
Working temperature	-40°C~+85°C
Storage temperature	-40~95°C
Relative humidity	5%~95%
Altitude	0~3000m
Dust proof and waterproof	IP67
Cooling	Fan cooling/water cooling
Control method	CAN control and EN high level are efficiency relationship
Safety characteristics	
Dielectric strength	input—output 3000VDC Input-to-Protective Earth 3000VDC can bear DC 3500V for 1 minute, leakage current≤1mA, no breakdown, no flashover
Insulation resistance	input—output ≥50MΩ test with input-output 1000Vdc, normal atmospheric pressure and relative humidity 90%
Charge dissipation capacity	≤60 10 minutes after DCDC power off
Vibration Resistance	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
Impact Resistance	ISO 16750,4.2.2.2 See Requirements 6.5 in GB/T15139-1994
Resistance to Industrial solvents	Metal parts have a good corrosion protection layer
Salt Spray Resistance	See GB/T 2423.17
EMC characteristics	
7. Electromagnetic immunity	GB/T17619-1998 chap4





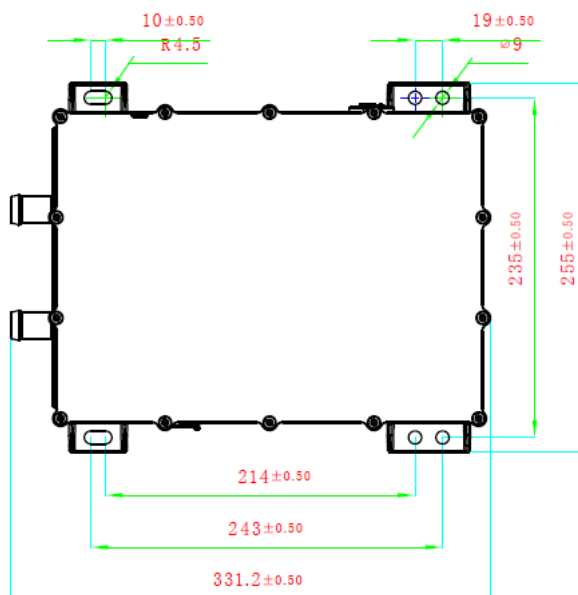
8. Electromagnetic disturbance

GB18655-2002chap 12 chap14

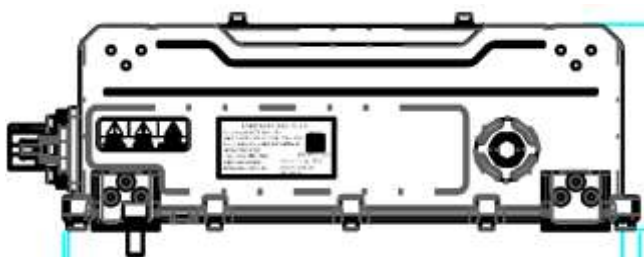
1. Dimensions and Weight

2. Product size

Top View



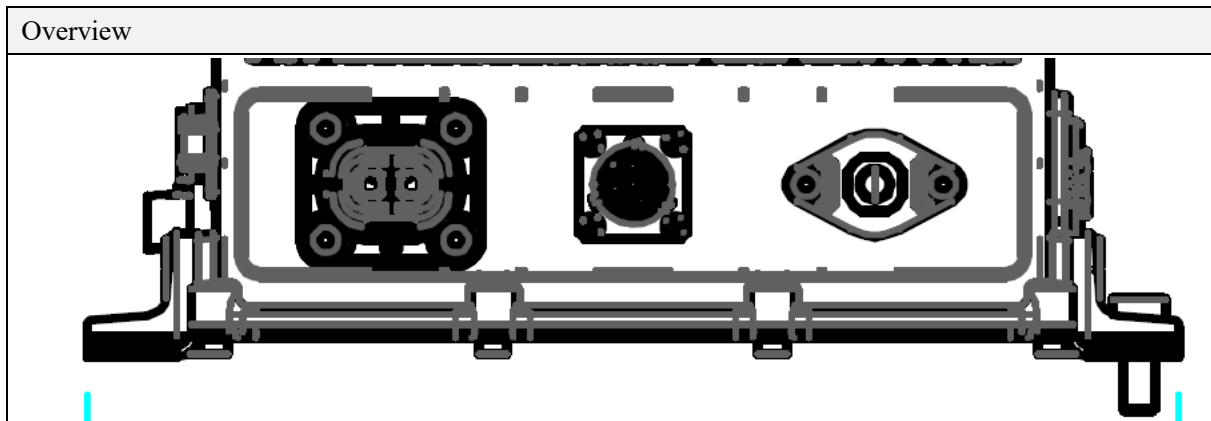
Side View



3. Define Connectors and Connection Terminals

Connectors Definition

Overview





PARAMETER		CONDITION	MANUFACTURER	MPN
Input connector (IN)		High-voltage connector with HVIL function Mating P/N: RED-T2PA H-2.5-A	Recodeal	RED-72PA H-2.5-A
Output connector (OUT)		High-current output connector Mating interface: M8 screw terminal	Guoweitong	GH01-F200-1NNB-T21
CAN BUS and signal interface (CTRL)		Panel-mounted signal connector Mating P/N: RT06128 SNHEC03	Amphenol	RT00128 PN03
CONNECTOR	PIN	SIGNAL / FUNCTION	NOTE	
RED-72PA H-2.5-A	1	INPUT-	2.5 mm ² ; High-voltage input negative	
	2	INPUT+	2.5 mm ² ; High-voltage input positive	
	A	HVIL	0.75 mm ² ; High-Voltage Interlock Loop	
	B	HVIL	0.75 mm ² ; High-Voltage Interlock Loop	
RT00128 PN03	A	CAN_H	0.75 mm ² ; CAN Wake-Up	
	B	+24 V	0.75 mm ² ; KL30	
	C	MAX	0.75 mm ² ; KL15 Hardwired Enable / Wake-Up	
	D	CAN_L	0.75 mm ² ; CAN Wake-Up	
	E	-24 V	0.75 mm ² ; KL31	
	F	NC	Wire size: TBD; Not Connected	
	G	NC	Wire size: TBD; Not Connected	
	H	CAN_GND	Wire size: TBD; CAN Ground	
GH01-F200-1NNB-T21	—	OUTPUT+	70 mm ² ; Connect to Guoweitong connector; M8 screw terminal	
	—	OUTPUT-	70 mm ² ; Connect to battery negative terminal; M8 screw terminal	

