

Product Name	6.6KW OBC+1.5KW DCDC+PDU 3 in 1
Model No.	AR-1K5C6K6-D14C380/540-HW-AR01
Power	OBC: 6.6KW DCDC: 15KW
Input Voltage	OBC: 90~264V DCDC: 250~450/400~750VDC
Output Voltage	OBC: 250~450/420~650VDC CDC: 14VDC
Output Current	OBC: 20A DCDC: 109A
Efficiency	OBC: 95% DCDC: 95%
Module Low Voltage (VDC)	12
Module Low Current (A)	200Ma/2A
Size (mm)	430X326X218mm
Cooling System	Water
IP Rating	IP67
Scope	Various new energy vehicles
Hardware	Small size, light weight and stable performance
Firmware	Full digital software design, redundant protection function design

Features

DC/DC Features

- ◆ Output power : 1.5KW
- ◆ Input voltage :
250~450/400~750VDC
- ◆ Output voltage : 14VDC
- ◆ Communication method: CAN

AC/DC Converter (OBC)

- Output power : 6.6KW
- Input voltage : 90~264VAC
- Output range :
250~450/420~650VDC
- Communication method: CAN c



The main technical parameters

1. OBC, DCDC technical parameters

Item		Technical specifications		Remark
		DCDC Technical Parameters	OBC Technical Parameters	
Output Power		1.5KW	6.6KW	
Input voltage range		250-450VDC	90~264VAC	
Output voltage range		14VDC	250-450 VDC	
Output voltage accuracy		± 0.2 VDC	$\pm 1\%$	
Output current		109A	20A (max)	
Current accuracy		/	$\pm 3\%$	Half load or more
effectiveness		$\geq 95\%$	$\geq 95\%$	Rated voltage full load
Low voltage output		/	12VDC/1Amax	
Auxiliary power VCC		6-18 VDC	/	
Output voltage ripple		≤ 500 mV _{PK-PK}	/	
Other protection features		Input over-voltage, output over-voltage, output over-current and short-circuit protection (extension and snoring), over-temperature self-recovery	Input over-voltage, output over-voltage, over-temperature protection, over-current protection, output short-circuit protection, reverse battery protection, communication fault protection, internal fault protection	
Diel ectr	Input to output	2500VDC/1min 1mA max	2000VDC /1min 10mA Max	

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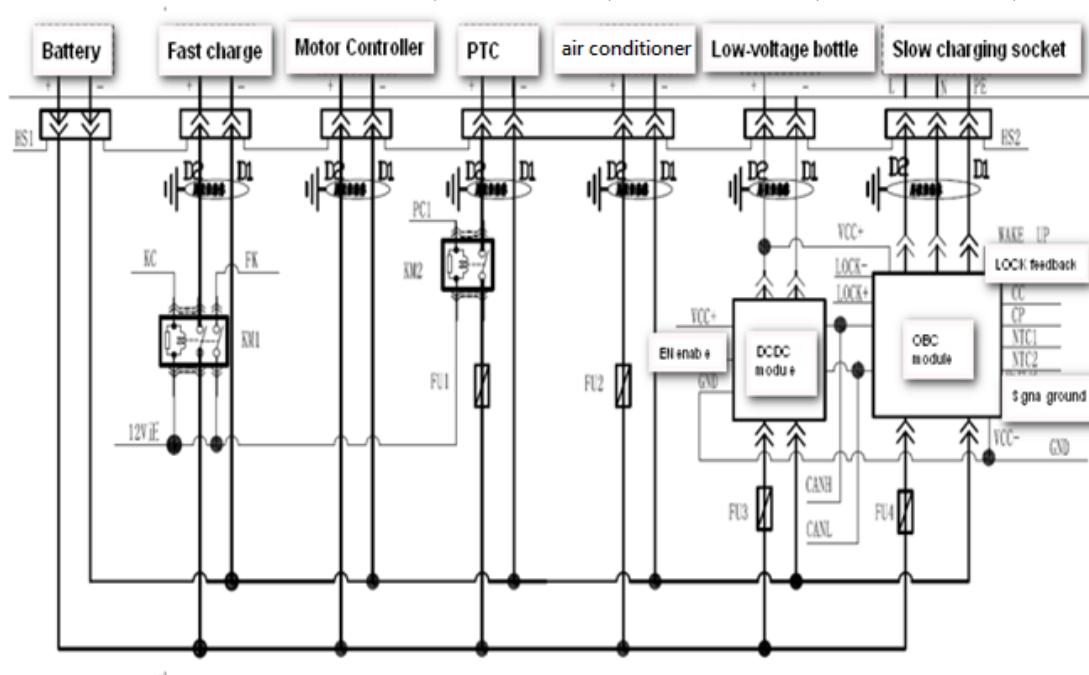
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ic stre ngth	Input to the outer casing	2500VDC/1min 1mA max	1500VAC /1min 10mA Max	
	Input to output	/	3000VAC /1min 10mA Max	
Insu lati on resi stan ce	Input to output	$\geq 20M\Omega$	$\geq 20M\Omega$;	
	Input to the outer casing	$\geq 20M\Omega$	$\geq 20M\Omega$;	
Elec trom agne tic comp atib ilit y	Radiation emission	GB/T 18655-2010 Class 3	GB/T18387 2008 EN55022 CLassB	
	Conducted emission	GB/T 18655-2010 Class 3		
	Static immunity	GB/T 19951-2005		
	Radiation immunity	GB/T 18655-2010 Class 3		
	High current injection	GB/T 17619-1998		
	Fast burst immunity	GB/T 17626.4-2008 1KV		

2. High voltage distribution parameters

2-1. High-voltage power distribution electrical schematic (customized by customer)



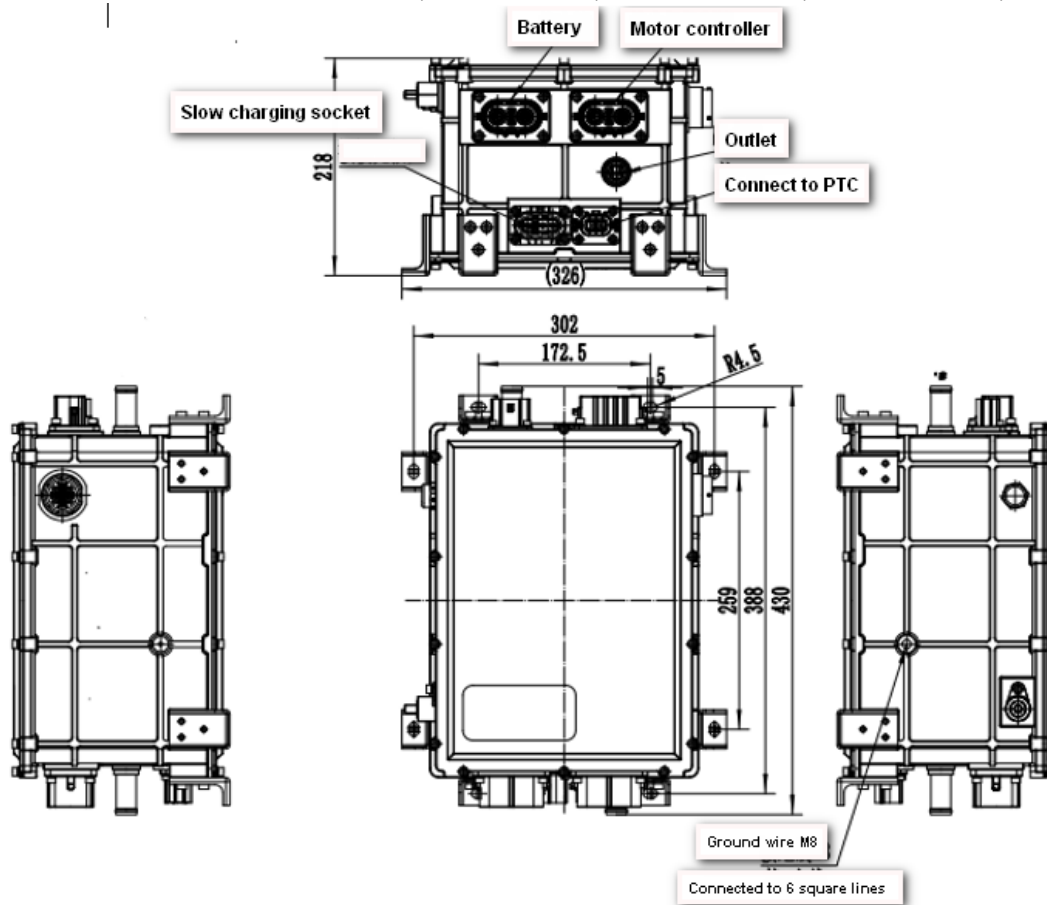
2-2. Fuse parameters (customized by customer)

Name	Specification requirements	Manufacturer model	Remarks
PTC Fuse	25A 500V	EV1845-25A-M6	
Air conditioner fuse	32A 500V	EV1845-32A-M6	
DCDC Fuse	25A 500V	EV1845-25A-M6	
OBC Fuse	32A 500V	EV1845-32A-M6	
.....			

2-3. Contactor parameters (customized by customer)

Name	Specification requirements	Manufacturer model	Remarks
Fast charge contactor	150A 500V	GL150HAANA (national power)	
PTC contactor	20A 500V	EV20(Sièrè)	
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Structural parameters



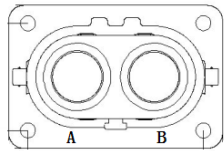
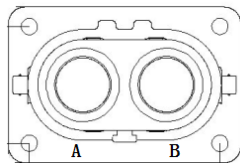
Electrical Interface

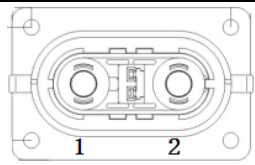
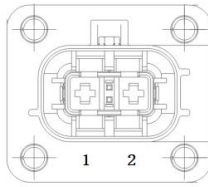
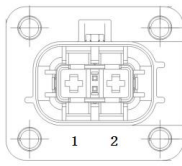
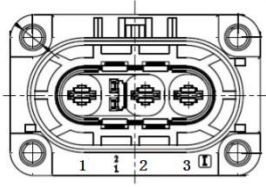
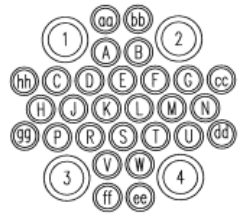
1. High voltage interface (customized by customer)

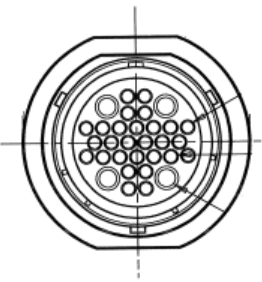
Item	Socket model	Plugin definition	Plug model	factory	Quantity	Plug note
1	YGC1127-EV-S (2+2) RD	Positive and negative battery	YGC1127-EV-S (2+2) PF	Yonggui	1	B positive A negative 35 square shielded line
2	YGC1127-EV-S (2+2) RC	Motor controller positive and negative	YGC1127-EV-S (2+2) PE	Yonggui	1	A positive B minus 35 square shielded wire

3	YGC998-EV-S (2+2) R/I	Fast charge positive and negative	YGC998-EV-S (2+2) PW/I	Yonggui	1	2 positive 1 negative, 25 square shielded wire
4	YGC939-EV-P2RB	PTC	YGC939-EV-S2PB	Yonggui	1	1 positive 2 negative connected 2.5 square shielded wire
5	YGC939-EV-P2RC	air conditioning	YGC939-EV-S2PC	Yonggui	1	1 positive 2 negative connected 2.5 square shielded wire
6	YGC989-EV-P3RD	Slow charging three-phase input	YGC989-EV-S3PH	Yonggui	1	1 connected to L 2 to N 3 to PE
7	C-GH02-P250-1NNB-T01	12V output is positive		Guoweitong	1	

2. Interface definition

Socket definition	Pin number	Interface definition	Description	Connector picture
battery	B	Power battery is positive		
	A	Power battery negative		
Motor Controller	A	Motor controller is positive		
	B	Motor controller negative		
Fast charging	1	Fast charge negative		

interface	2	Fast charge positive		
PTC	1	positive		
	2	negative		
air conditioning	1	positive		
	2	negative		
Slow charging interface	1	L		
	2	N		
	3	PE		
DCDC output interface	1	Low voltage 12 output is positive		
Control signal terminal	A	12V+		
	B	GND		
	C	Fast charge contactor feedback		
	D	Fast charge contactor coil negative		
	E	PTC contactor coil negative		
	F	DCDC EN enable		
	G	WAKE UP		
	H	CANH		
	L	CANL		
	M	CC		
	N	CP		
	P	High voltage interlock input		
	R	High voltage interlock output		
	K	AC charging		

		electronic lock power supply positive		
	T	AC charging electronic lock feedback		
	S	AC charging socket temperature detection 2		
	J			
	U	AC charging electronic lock power supply negative		
	W	AC charging socket temperature detection 1		
	V	Car charging signal ground		