



REVISION	DESCRIPTION	Date (DD-MM-YYYY)	PM
V0	First edition	1-Jun-22	ALISA CHEN

## MODEL NO.: AT3PD2K5C6K6-D14C380-W

Part Name: 3 in 1 PDU + 2.5KW DCDC+6.6KW OBC with inverter Mode

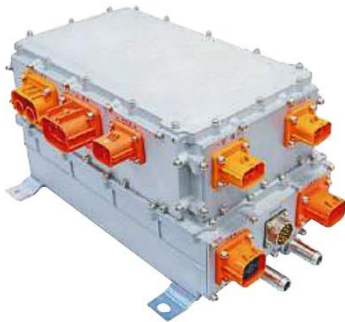


Image only

Protection Level : IP67  
 Dimensions (mm) : 329x211x180mm  
 Weight (KG) : ≤18KG

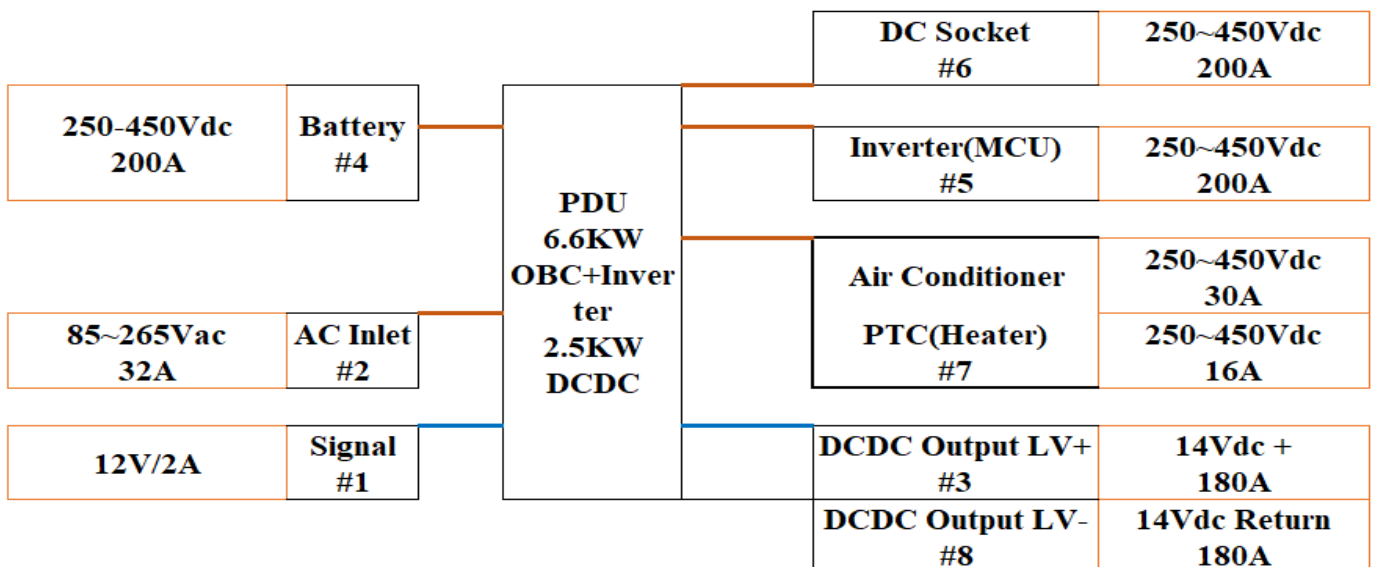
**Features**  
 On Board Charging Mode  
 Rated output power: 6.6KW  
 Input Voltage : 85-265VAC  
 Output voltage range : 250-450VDC

**Inverter mode**  
 Power: 6.6KVA  
 Input Voltage : 250-450VDC  
 Output voltage range : 220Vac(±5%)/50Hz

**DC/DC Mode**  
 Input voltage range : 250-450VDC  
 Input current range : <16A @240Vdc full load  
 Output voltage range : 9-16V  
 Rated power : 2.5KW

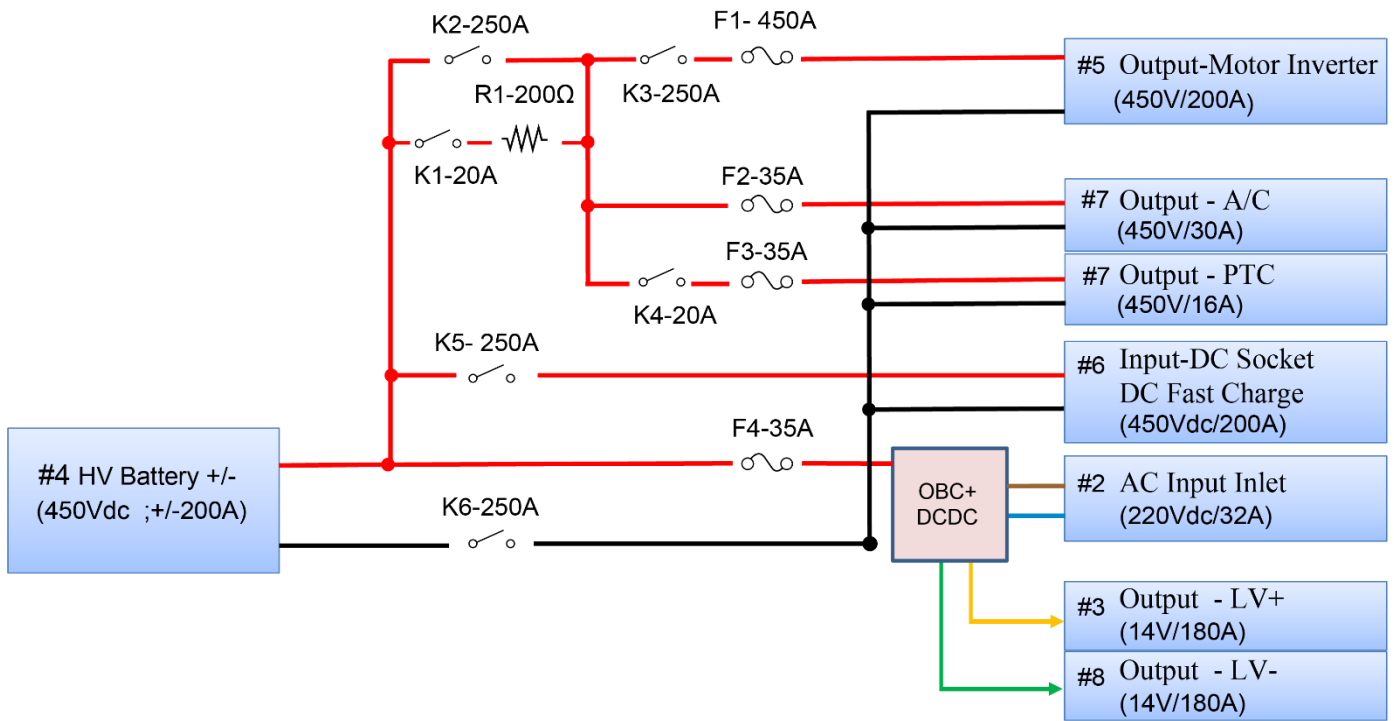
**Communication Method: CAN Bus**  
 Full digital software design, redundant protection function design

### AT3HD2K5CB6K6-D14C380-W Prameter





Schematic



Device parameters

Part Name	Fuse	Symbol	Contactor	Symbol	Resistor	Symbol
Air Conditioner (A/C)	35A	F2	/	/	/	/
PTC(Positive)	35A	F3	20A	K4	/	/
OBC	35A	F4	/	/	/	/
Pre charge(Positive)	/	/	20A	K5	200Ω	R1
Battery Main contactor(Positive)	/	/	250A	K2	/	/
DC fast charge Socket (Positive)	/	/	250A	K1	/	/
DC fast charge Socket (Negative)	/	/	250A	K6	/	/
MCU(Positive)	450A	F1	250A	K3	/	/



## Electrical characteristics

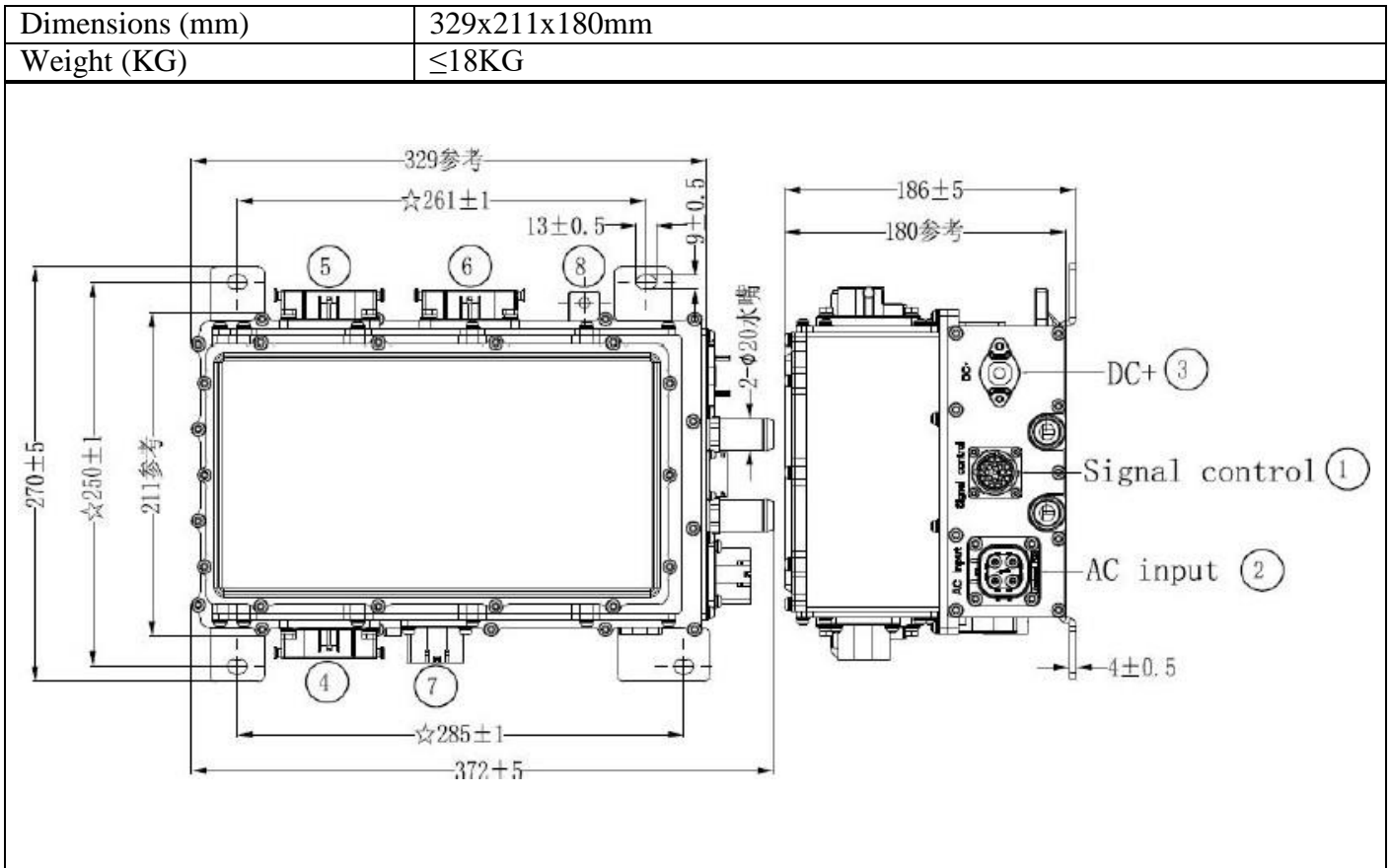
Specifications	Parameters	Remark
<b>OBC Charging mode</b>		
Rated output power	6.6KW	
Input voltage range	85-265VAC	
Input Current	32A Max	
Power factor	≥0.99(220Vac, Fully loaded)	
Output voltage range	250-450VDC	Can be configured according to customer's actual battery
Max output current	20A	
Efficiency	≥94%	Rated voltage
Voltage accuracy	±1%	
Current accuracy	±1%	
<b>Inverter mode</b>		
Input voltage range	250-450VDC	
Output voltage	220Vac(±5%)/50Hz	
Power	6.6kVA	
Efficiency	≥94%	
Output harmonic distortion (THD <sub>v</sub> )	<3% (Linear load)	
Dynamic Response	60ms (Linear load)	
Leakage current protection threshold	≤30mA	
<b>DC/DC mode</b>		
Input voltage range	250-450VDC	
Input current range	<16A @240Vdc full load	
Efficiency	≥94%	
Output voltage range	9-16V	
Rated output voltage	14V	
Rated output current	180A	
Rated power	2.5KW	
Peak power	3.0KW	
Voltage ripple	300mV Max	



Others		
Low voltage wake up	12Vdc&200mAmax ( WAKE_UPSignal )	Wake : BMS/VCU
Wake-up method	CAN、 AC、 PP/CP	Support scheduled charging
Communication method	CAN-BUS	
Quiescent Current	≤1mA	Consume battery current in sleep/stop state.
Protection characteristics	Input over-voltage, output over-voltage, over- temperature protection, over-current protection,  Output short circuit protection, communicationfault protection	
EMC characteristics	GB/T18387-2008, EN 55022	
Operating temperature	-40-85°C	Coolant inlet temperature
Dimensions	329x211x180mm	
Protection level	IP67	
Cooling method	Liquid cooling, flow≥8L/min	
Weight	≤18KG	



## Structure Parameter

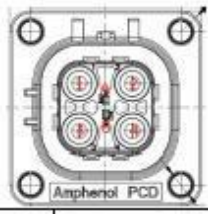
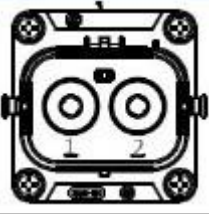
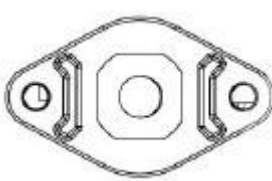
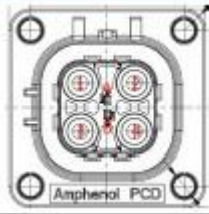
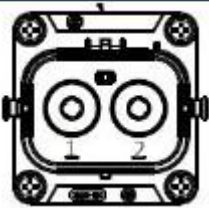
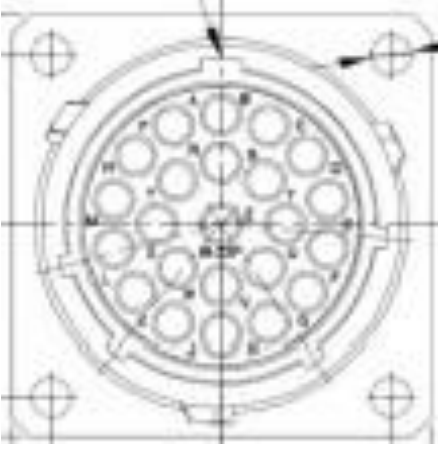


## Connector Information

Item	Pinout definition	Maker	Receptacle model no.	Plug model no.
1	AC input	Amphenol	HVSL364024A106I	HVSL364064A106I
2	Battery	Yonggui	YGC1079-EV-P(2+2)RC/I	YGC1079-EV-S(2+2)PW/I
3	Fast charge	Yonggui	YGC1079-EV-P(2+2)RC/I	YGC1079-EV-S(2+2)PW/I
4	Motor	Yonggui	YGC1079-EV-P(2+2)RC/II	YGC1079-EV-S(2+2)PW/II
5	Signal control	Amphenol	RT001823PN03	RT061823SNHEC03
6	Low voltage output	Guoweitong	GH01-F200-1NNB-T21	M8 size copper lugs
7	Air conditioner	Amphenol	HVSL364024B104I	HVSL364064B104I
8	PTC			



Connector pin definition (component side)

AC input		DC output		Low voltage output		AC/PTC		Battery/Fast charge	
									
1	FireWire	A	output negative	+	Low voltage positive (35mm <sup>2</sup> )	1	Air conditioner negative	A	output positive
2	NC	B	output positive			2	Air conditioner positive	B	output negative
3	Ground wire					3	PTC Negative		
4	Zero line					4	PTC positive		
Signal control									
									
A	CAN1-L	G	GND_LDC_CON	N	Pre charge contactor positive	V	EN_DC		
B	VCC+	H	NTC1+	P	Fast charge contactor positive	W	Battery Main contactor positive		
C	EN_OBC	J	GND_LDC_CON	R	CC_OUT (low impedance)	X	Fast charge contactor Positive		
D	CC	K	NTC2+	S	Interlock_IN	Y	Fast charge contactor Negative		
E	CP	L	CAN1-H	T	NC	Z	MCU contactor positive		
F	WAKE_UP	M	PTC contactor positive	U	Interlock_Out				