



REVISION	DESCRIPTION	DATE(MM/DD/YY)	RELEASED BY	APPROVED BY
V0	FIRST RELEASE	10/12/2022	Shell Li	Alisa Chen

Approval No.:

Part Number	Protocol No.	Customer Name	Signature / Stamp	Date
	OBC: AT5ME DCDC: AT5IS			

Specification

CHARGING STANDARD	Part Name	Model No.	Part Number
SAE	Combo 2kw dcdc+6.6kw obc with inverter mode_sae_12VDC	ATD2KCB6K6-D14380-W	bu21.h.atd2kcb6k6-d14c380-w_s

1. Charger parameters

6.6 KW On Board Charger		
Ite ms	Parameter	
1	Charging Mode	SAE(AC Type 1)
2	LV (VCU) wake up	12Vdc/200mA
3	PP/CP function	Supported
4	PP/CP detected via	OBC
5	OBC Wake-up method	AC+CP+EN wake up
6	OBC Output start method	CAN control
7	Actuator(E-Lock)	without Actuator (E-Lock)
8	Actuator(E-Lock) controlled by	Without supported
9	Charging Inlet(Socket) Temperature sensor	Without sensor



10	Frame format	Extended ID
11	Byte order	Motorola
12	Baud rate	500Kbps
13	OBC with / without interlock function	Without
14	CAN Protocol No.	AT5ME
15	CAN bus matrix File Name	cc-03_EA22-054_ATD2KC6K6-D14C380-W_6.6KW OBC_CAN_protocol 500Kbps, Motorola, Extended -V0_20220713

2KW DC/DC Converter		
Item	Parameters	
1	DCDC control method	VCC connect to battery +, EN connect with ON position
2	Frame format	Standard ID
3	Byte order	Intel
4	Baud rate	500Kbps
5	Wakeup DCDC	Hard wire/High Voltage
6	DCDC with / without interlock function	without
7	DCDC Output activation method	CAN
8	CAN Protocol No.	AT5IS
9	CAN bus matrix File Name	cc-04_EA22-054_ATD2KC6K6-D14C380-W_2.5KW DCDC_CAN protocol 500Kbps, Intel, Standard-V1_20221012

2. Electrical characteristics

On Board Charger Charging Mode		
Specification		Remark
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	
Max output current	20A	
Efficiency	$\geq 94\%$	Rated voltage
Voltage accuracy	$\pm 1\%$	



Current accuracy	$\pm 1\%$	
Inverter mode		
Input voltage range	250-450VDC	
Output voltage	220Vac($\pm 5\%$)/50Hz	
Power	6kVA	
Efficiency	$\geq 94\%$	
Output harmonic distortion (THDv)	$< 3\%$ (Linear load)	
Dynamic Response	60ms (Linear load)	
Leakage current protection threshold	$\leq 30\text{mA}$	
DC/DC mode		
Input voltage range	250-450VDC	
Input current range	$< 16\text{A}$ @240Vdc full load	
Efficiency	$\geq 94\%$	
Output voltage range	9-16VDC	
Rated output voltage	14V	
Rated output current	180A	
Rated power	2KW	
Peak power	2.4KW	
Voltage ripple	300mV Max	
Others		
Low voltage wake up	12Vdc&200mAmax (WAKE_UP Signal)	Wake BMS/VCU
Wake-up method	AC+CP+EN	Support reservation charging
Communication method	CAN-BUS	
Quiescent Current	$\leq 1\text{mA}$	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, communication fault protection	
EMC characteristics	GB/T18387-2008, EN 55022	
Operating temperature	-40-85°C	Coolant inlet temperature



Dimensions	326x211x83mm	
Protection level	IP67	
Cooling method	Liquid cooling, flow $\geq$ 8L/min	
Weight	$\leq$ 9KG	

3. Labels of product

Label on unit



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ANNREN TECHNOLOGIES CO., LTD.

OBC+DCDC

Combo 2kw dcdc+6.6kw obc

Part Name: With inverter mode_sae_12VDC

Model No.: H-ATD2KCB6K6-D14380-W-S

Part No.: bu21.h.atd2kcb6k6-d14c380-w_s

S/N:

Input Voltage: OBC:85-265VAC
DCDC:250-450VDC

Output Voltage: OBC:250-450VDC
DCDC:14VDC

Output Current: OBC: 32A
DCDC:145A

Output Power: OBC:6.6KW
DCDC:2KW



Label on the outer box

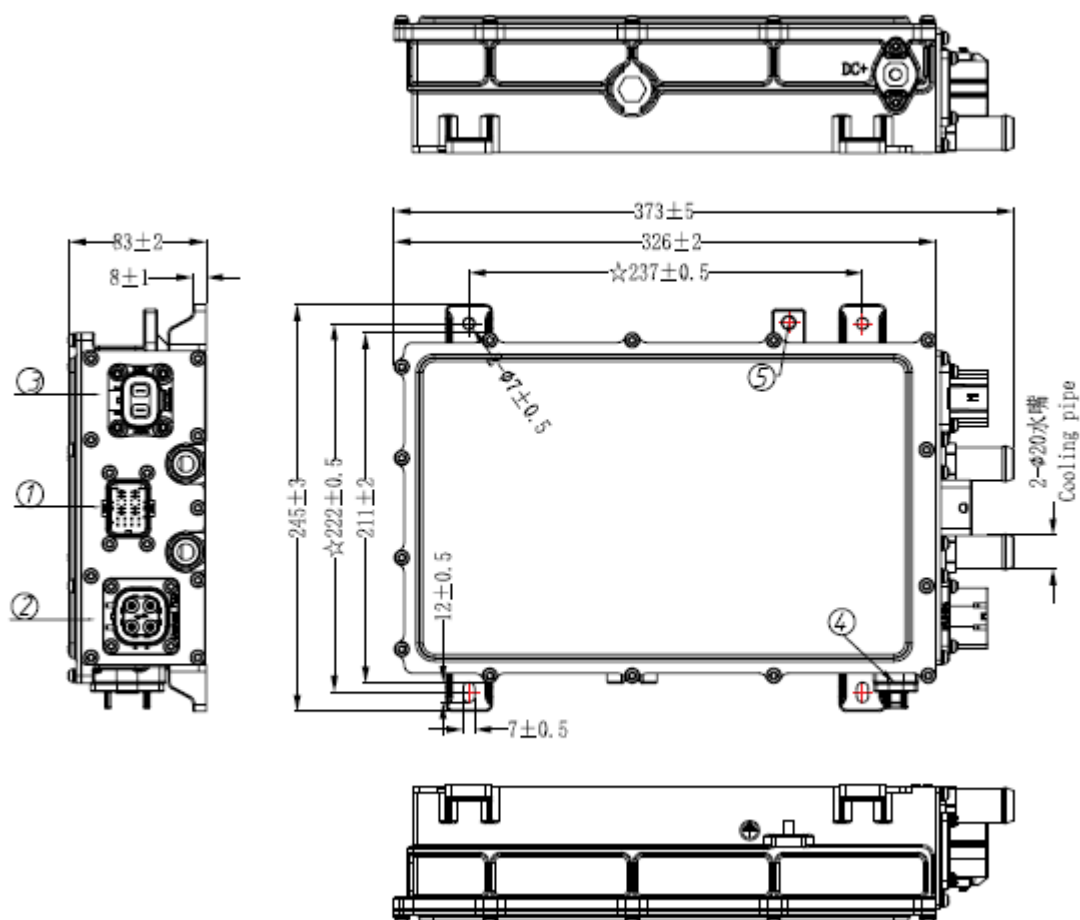


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ANNREN TECHNOLOGIES CO., LTD.

SOW	PO number
PO No.	PO20221007-1
Part No.	bu21.h.atd2kcb6k6-d14c380-w_s
Model No.	H-ATD2KCB6K6-D14380-W-S
Part Name	Combo 2kw dcdc+6.6kw obc with inverter mode_sae_12VDC
Quantity	1
Carton Size	Actual Size
Gross Weight	Actual Weight
Production Line#	Line number
QC #	Name
Date Code(S/N)	Production date



Structural Parameters

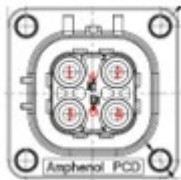
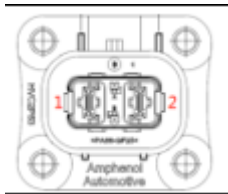
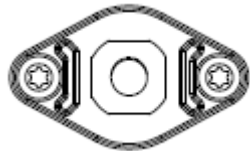
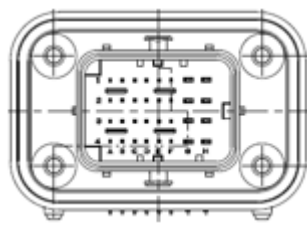


Connector Information

Position	Pinout definition	Maker	Receptacle model no.	Plug model no.
1	Signal control	TE	2334366-2	2137299-8
2	AC input	Amphenol	HVSL364024A	HVSL364064A106I
3	DC output	Amphenol	HVC2P63MV406	HVC2P63FS406
4	Low voltage output	Guoweitong	GH01-F200-1NNB-T21	M8 specification copper lug



Connector pin definition (component side)

AC input (2)		DC output (3)		Low voltage output (4)			
							
1	L	1	Output +	+	LV Output +		
2	NC	2	Output -				
3	NC	A	NC (HVIL_IN)				
4	Neutral	B	NC (HVIL_OUT)				
A	NC (HVIL_IN)						
B	NC (HVIL_OUT)						
	Ground wire to shell						
Signal control (1)							
							
1A	CAN1-H	2A	WAKE_UP	3A	NC (NTC1+)	4A	NC (HVIL_IN)
1B	CAN1-L	2B	PP_OUT(Low resistance)	3B	NC (NTC2+)	4B	NC (HVIL_OUT)
1C	EN_OBC	2C	EN_inverter	3C	NC	4C	CAN2-H(Reserved)
1D	EN_DC	2D	NC	3D	NC (NTC-)	4D	CAN2-L(Reserved)
1E	PP	2E	NC	3E	NC (LOCK feedback1)	4E	NC
1F	CP	2F	NC	3F	NC (LOCK feedback2)	4F	NC
1G	VCC+	2G	NC	3G	NC (LOCK+)	4G	NC
1H	GND	2H	NC	3H	NC (LOCK-)	4H	NC