梯次能源科技（杭州）有限公司
ECHELON ENERGY TECHNOLOGY(HANGZHOU)CO.,LTD

液冷双向一体机选型说明书
Liquid-Cooled Bidirectional Integrated Unit Selection Guide

OD-CN-BA3A-360Y 11+3 Series



Product Features

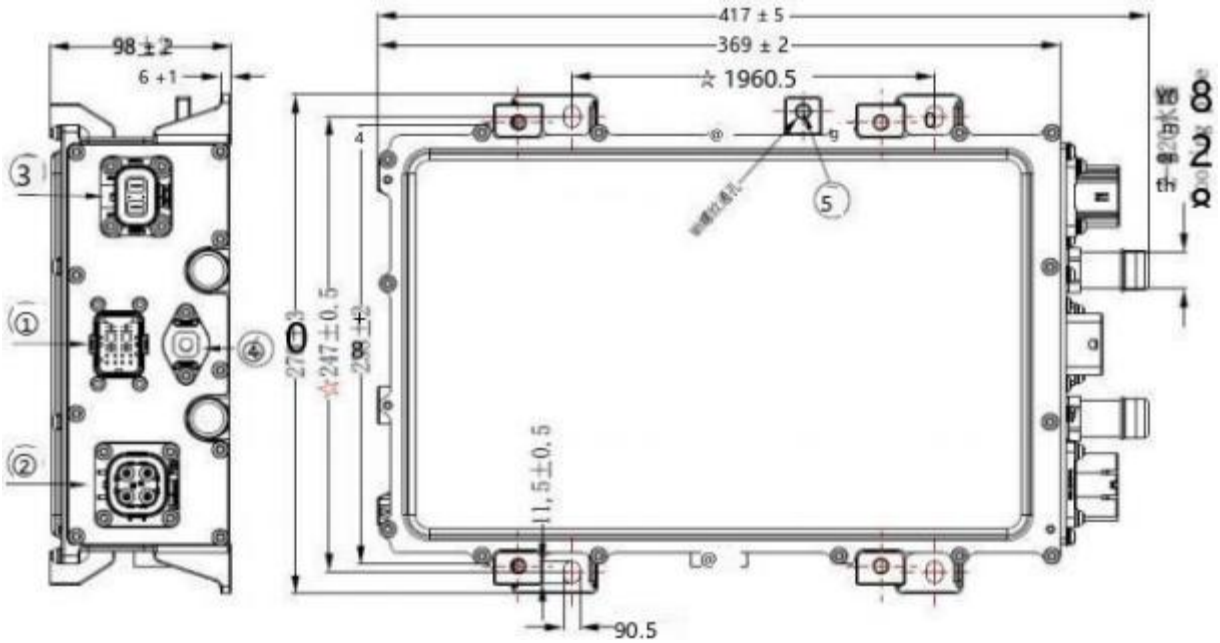
- 本体尺寸Body dimensions：369mmx238mmx98mm
- 整机重量Total weight：≤12KG
- 散热方式Cooling method：液冷，流量 Liquid cooling, flow rate≥10L/min
- 防护等级Protection level：IP67
- 支持逆变功能 Supports inverter function
- 支持在线升级和故障诊断 Supports online upgrade and fault diagnosis
- 全数字化软件设计、冗余式保护功能设计 Fully digital software design, redundant protection function design

主要参数 Main Parameters

项目 Item	技术规格 Technical specifications	备注 Remarks
OBC电气特性 Electrical Characteristics		
额定输出功率 Rated output power	11KW	
输入电压范围 Input voltage range	304-456VAC（三相四线 Three-phase four-wire)	单相 Single-phase 176-264VAC
输入电流 Input current	32A Max	
功率因数 Power factor	≥0.99 (220Vac,满载 full load)	
输出电压范围 Output voltage range	200-470VDC	可按客户实际电池要求配置 Can be configured according to customer's actual battery requirements
最大输出电流 Maximum output current	32A	
效率 Efficiency	≥94%	额定电压 Rated voltage
电压精度 Voltage accuracy	±1%	
电流精度 Current accuracy	±3%	
逆变特性 Inverter characteristics		
输入电压范围 Input voltage range	250-470VDC	
输出电压 Output voltage	220VAC(±5%)（单相 Single-phase)	
功率 Power	3.3KVA (单相 Single-phase)	可定制 Available upon request 6KVA
效率 Efficiency	≥93%	
输出谐波畸形 Output Harmonic Distortion THDv)	<3%（线性负载 linear load)	
动态响应 Dynamic Response	60ms（线性负载 Linear load)	
DCDC电气特性 Electrical Characteristics		
输入电压范围 Input voltage range	200-470VDC	
输入电流范围 Input Current Range	<16A	
效率 Efficiency	≥94%	
输出电压范围 Output voltage range	9-16V	
额定输出电压 Rated Output Voltage	14V	
额定输出电流 Rated Output Current	215A	

额定功率 Rated Power	3KW	
电压纹波 Voltage Ripple	300mV Max	
其他电气特性 Other Electrical Characteristics		
工作温度 Operating Temperature	-40-85℃	冷却液入口温度 Coolant Inlet Temperature
低压供电 Low Voltage Power Supply	9-32V	
低压唤醒 Low Voltage Wake-up	12Vdc&200mAmax（WAKE_UP信号 signal)	唤醒 BMS/VCU Wake-up BMS/VCU
唤醒方式 Wake-up Method	CAN、CC/CP、EN(硬线使能) CAN, CC/CP, EN (hardwired enable)	支持预约充电 Supports Scheduled Charging
通讯方式 Communication Method	CAN-FD	
静态电流 Quiescent Current	≤1mA	休眠/停机状态下消耗蓄电池的电流 Battery Current Consumption in Sleep/Stop State
保护特性 Protection Characteristics	输入过欠压，输出过欠压、过温保护、过流保护、输出短路保护、通讯故障保护 Input Over/Under Voltage, Output Over/Under Voltage, Over Temperature Protection, Overcurrent Protection, Output Short Circuit Protection, Communication Failure Protection	
电磁兼容特性 Electromagnetic Compatibility Characteristics	GB/T18387-2008，EN 55022	

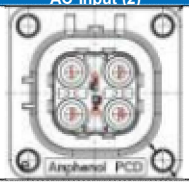
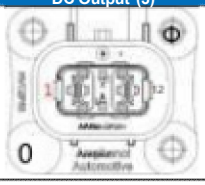
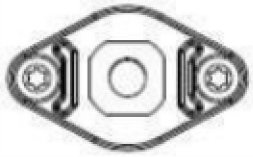
结构尺寸
Dimensions

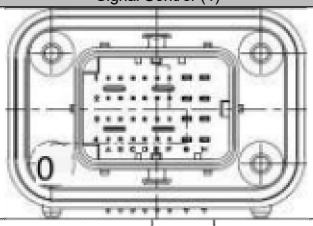


连接器信息
Connector Information

位置 Location	功能 Function	品牌 Brand	产品连接器型号 Product Connector Model	客户连接器型号 Customer Connector Model
2	交流输入 AC Input	安费诺 Amphenol	HVSL364024A	HVSL364064A106I
3	直流输出 DC Output	安费诺 Amphenol	HVC2P63MV406	HVC2P63FS406
1	信号控制 Signal Control	泰科 Tyco	2334366-2	2137299-8
4	低压输出 Low Voltage Output	国威通 Guoweitong	GH17-F200-1ANB-T01	M8规格铜耳 M8 specification copper lugs

连接器接口定义
Connector Interface Definition

交流输入（2） AC Input (2)		直流输出（3） DC Output (3)		低压输出（4） Low Voltage Output (4)	
					
1	L1/single phase	1	Output +	+	LVOutput +
2	L2	2	Output -		
3	L3	A	HVIL_IN REST_IN		
4	N	B	HVIL_OUT		
A	HVIL_IN REST_IN				
B	HVIL_OUT				
	地线接外壳 Ground to Housing				

信号控制（1） Signal Control (1)							
							
1A	CAN1-H	2A	WAKE_UP	3A	NTC1+	4A	HVIL_IN REST_IN
1B	CAN1-L	2B	CC_OUT(低阻) CC_OUT (Low impedance)	3B	NTC2+	4B	HVIL_OUT
1C	EN_OBC	2C	EN_逆变 EN_inverter	3C	NTC3+	4C	CAN2-H(预留) CAN2-H (Reserved)
1D	EN_DC	2D	NC	3D	NTC-	4D	CAN2-L(预留) CAN2-L (Reserved)
1E	CC	2E	NC	3E	LOCK 反馈 1 LOCK Feedback 1	4E	NC
1F	CP	2F	NC	3F	LOCK 反馈 2 LOCK Feedback 2	4F	NC
1G	VCC+	2G	NC	3G	LOCK+	4G	NC
1H	GND	2H	NC	3H	LOCK-	4H	NC