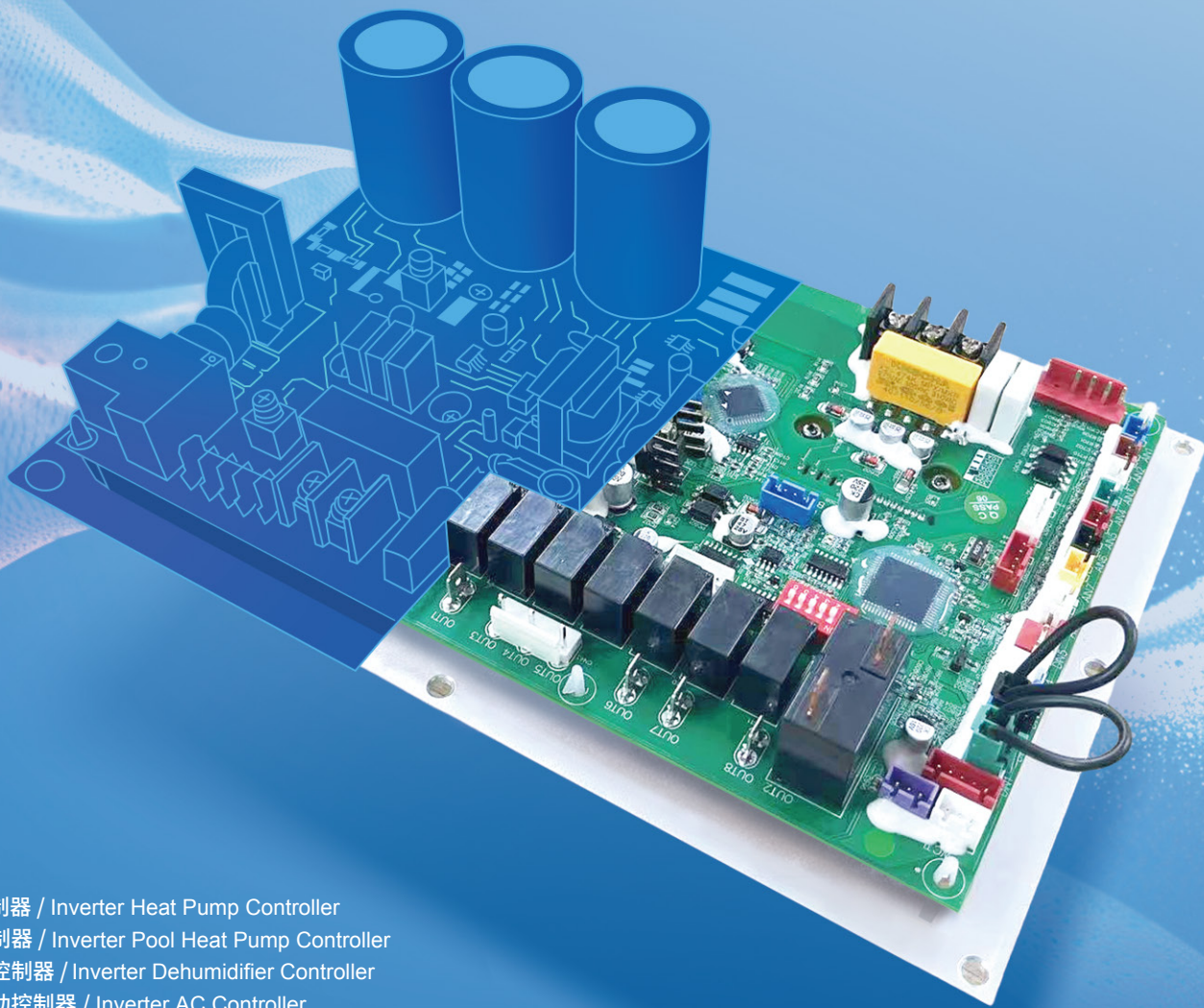




奥索兰

变频驱动绿色未来



变频热泵控制器 / Inverter Heat Pump Controller  
变频泳池控制器 / Inverter Pool Heat Pump Controller  
变频除湿机控制器 / Inverter Dehumidifier Controller  
变频空调驱动控制器 / Inverter AC Controller  
变频烘干机驱动控制器 / Inverter Dryer Controller  
冷冻冷藏车控制器 / Refrigerated Truck Thermostat

# 二十年专注变频

FOCUS ON INVERTER TECHNOLOGY FOR 20 YEARS

国家高新技术企业、专精特新企业



# 奥索兰

变频驱动绿色未来

## 愿景 Vision

成为全球领先的直流变频驱动控制解决方案提供商

To become a global leader in inverter technology solutions

## CORPORATE CULTURE 企业文化

## 使命 Mission

为全球高能耗场景带来高效、节能、环保革命

To bring energy efficiency and environmental revolution to high energy consumption scenarios worldwide.

## 价值观 Values

- 以客户为中心  
Customer-centric
- 诚信正直  
Integrity and honesty
- 追求卓越  
Pursuit of excellence
- 合作共赢  
Win-win cooperation
- 持续成长  
Continuous growth

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# RIEFINTRO 公司简介



## 集研发、生产、销售一体的现代化企业

A Modern Enterprise with R&D, Production, and Sales

自 2005 年 8 月成立以来，奥索兰一直秉承创新驱动、科技引领的理念，致力于成为全球领先的高效、节能、环保驱动控制解决方案提供商。近二十年的专业深耕，奥索兰在直流变频驱动技术领域积累了深厚的研发实力，是一家集研发、生产、销售于一体的高科技现代化企业。

Since its establishment in August 2005, ASL has adhered to the philosophy of innovation-driven and technology-led development, striving to become a global leader in efficient, energy-saving, and environmentally friendly inverter technology solutions. With twenty years of specialized experience, ASL has accumulated strong capabilities in the field of inverter technology, making it a high-tech modern enterprise that integrates research and development, production, and sales.

## 领先的全直流变频驱动控制方案

Full DC-Inverter Drive Control Solutions

- 掌握变频控制系统核心逻辑和直流变频驱动算法，实现 180 度正弦波控制，范围覆盖 1P 到 30P 压缩机。
- 软件、硬件具备 20 年以上家用及商用场景开发经验。

ASL's flagship product—the sine wave 180-degree full DC inverter controller—covers a range from 1kW to 30kW compressors, serving the commercial and residential markets with its exceptional performance and reliability.

## 覆盖丰富的直流变频应用场景

Covering a wide range of inverter technology application scenarios

围绕直流变频场景，我们发展了完善的配套产品线，致力于为客户提供一体化解决方案。目前，奥索兰解决方案已实现对泳池热泵、水环热泵、热泵热水器、低温采暖、除湿机、热泵烘干、冷冻冷藏运输车载空调、汽车变频控制等丰富场景的覆盖。

Focusing on DC variable frequency scenarios, ASL have developed a comprehensive product line to provide integrated solutions for our customers. Currently, ASL's solutions cover a wide range of applications, including pool heat pumps, water-loop heat pumps, heat pump water heaters, low-temperature heating, dehumidifiers, heat pump dryer, refrigerated transport vehicle air conditioning, and automotive variable frequency control DC products.

# MILESTONES 发展历程



GLOBALIZATION  
走向全球



奥索兰从成立之初就立足于全球市场，产品跟随客户整机出口到全球 120+ 国家和地区，在直流变频泳池的垂直市场份额占有率达到 60% 以上。

ASL has been positioned in the global market since its inception, with products exported along with customers' Heat Pumps to over 120 countries and regions worldwide. It holds a market share of over 60% in the vertical segment of DC inverter pool heat pump .

60%+ Market Share  
全球市占率

占有全球直流变频泳池热泵60%+市场份额  
60%+ global market share in DC Inverter Pool Heat Pump

120+ Countries & Regions  
国家和地区

奥索兰的直流变频控制器已经在120+国家各地区使用  
ASL's DC inverter controllers are being used in 120+ countries and regions

300,000+ Pieces  
块

变频驱动控制板年产量达到30w+块  
300,000+ pieces annual production of DC inverter controller PCBA

CERTIFICATE  
资质证书

- 国家高新技术企业证书  
National High Tech Enterprise Certificate
- 专精特新企业证书  
Specialized, Refined, Unique,  
and Innovative Enterprise Certificate
- 发明专利证书  
Patent
- ISO 质量体系认证  
ISO Quality Certificate
- 产品认证  
Product Certificate
- 软件认证  
Software Certificate
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Software Copyright



国家高新技术企业  
National High Tech Enterprise



专精特新企业  
Specialized, Refined, Unique,  
and Innovative Enterprise



发明专利  
Patent



发明专利  
Patent



TUV报告  
TUV Report



ETL报告  
ETL Report



UL报告  
UL Report



实用新型专利  
Patent



实用新型专利  
Patent



实用新型专利  
Patent



质量证书  
Quality Certificate



质量证书  
Quality Certificate



产品认证证书  
Product Certificate



产品认证证书  
Product Certificate



产品认证证书  
Product Certificate



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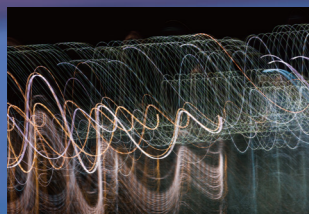
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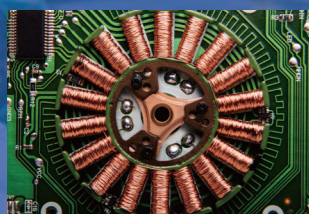
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### 180度正弦波控制技术 180-Degree Sine Wave Control Technology

ASL采用最先进的180度正弦波控制方案实现直流变频压缩机驱动,相比传统的120度方波控制,在效率、节能、噪音、振动、控制精度等方面具备显著优势。

ASL adopts the most advanced 180-degree sine wave control solution to drive DC inverter compressors. Compared to traditional 120-degree square wave control, it has significant advantages in efficiency, energy saving, noise, vibration, and control precision.



### 单转子压机转矩补偿 Single Rotor Compressor Torque Compensation

在单转子压缩机的运行过程中,气体流量和压力的变化会导致转矩需求的不稳定。使用传感器实时监测压缩机的运行状态,并根据反馈信息调整电机输入策略来补偿因负载变化或其他因素导致的转矩波动,减少能量损失,以确保压缩机的稳定性和效率。ASL采用先进的控制算法(如PID控制、模糊控制等)来动态调整转矩输出,确保压缩机在不同工况下都能保持最佳性能。

During the operation of a single rotor compressor, variations in gas flow and pressure can lead to unstable torque demands. By using sensors to monitor the operating status of the compressor in real-time, the motor input strategy can be adjusted based on feedback information to compensate for torque fluctuations caused by load changes or other factors, thereby reducing energy loss and ensuring the stability and efficiency of the compressor. ASL employs advanced control algorithms (such as PID control, fuzzy control, etc.) to dynamically adjust torque output, ensuring that the compressor maintains optimal performance under various operating conditions.



### 避开共振点 Avoiding Resonance Points

在压缩机驱动系统中,当系统的自然频率与外部激励频率相匹配时,会产生共振现象,可能会导致不良后果:

- 系统振动幅度显著增加,引发机械部件的疲劳和损坏
- 噪音水平显著上升
- 影响压缩机的输出功率和转速稳定性
- 干扰控制系统的正常运行,导致控制信号失真

ASL应用主动减震技术,实时调整系统参数以避免共振点,提高系统稳定性和可靠性。

In the compressor drive system, resonance occurs when the system's natural frequency matches the frequency of external excitation, which can lead to adverse consequences:

- The amplitude of system vibrations significantly increases, causing fatigue and damage to mechanical components.
- Noise levels rise significantly.
- The output power and speed stability of the compressor are affected.
- The normal operation of the control system is disrupted, leading to distortion of control signals.

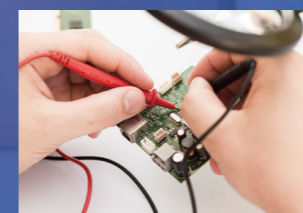
ASL employs active vibration reduction technology to adjust system parameters in real-time to avoid resonance points, thereby enhancing system stability and reliability.



### 弱磁控制 Weak Magnetic Control

弱磁控制应用于永磁同步电机(PMSM)中,通过降低电机内部的磁场强度,使得电机在高转速时能够维持较高的输出功率,避免在高转速下因磁饱和而导致的效率下降。ASL采用弱磁控制算法,允许电机在超出其正常运行范围的条件工作,从而扩展了电机的转速范围,提高了系统的灵活性。

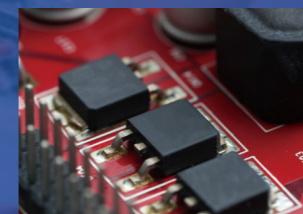
Weak magnetic control is applied in Permanent Magnet Synchronous Motors (PMSM) by reducing the internal magnetic field strength of the motor. This allows the motor to maintain high output power at high speeds, avoiding efficiency loss due to magnetic saturation at elevated speeds. ASL employs a weak magnetic control algorithm that enables the motor to operate under conditions beyond its normal operating range, thereby extending the motor's speed range and enhancing system flexibility.



### 电感量补偿 Inductance Compensation

压缩机的电感量会随压机电流的变化而变化。电感量不准确会影响压缩机的控制精度、响应速度、系统稳定性以及运行效率。ASL通过实时监测压缩机相电流,实时计算压机的电感量,并将数据反馈到控制系统实施补偿控制策略。

The inductance of the compressor varies with changes in the compressor current. Inaccurate inductance can affect the control precision, response speed, system stability, and operational efficiency of the compressor. ASL monitors the phase current of the compressor in real-time, calculates the inductance of the compressor, and feeds this data back to the control system to implement a compensation control strategy.



### 最大转矩控制(MPTA) Maximum Torque Control (MPTA)

最大转矩控制(Maximum Torque Control, MPTA)是一种电机控制策略,广泛应用于需要高性能和高效率的电动机驱动系统。ASL采用MPTA算法,在负载变化时快速调整压缩机的输出,确保迅速达到所需的转矩,从而提高加速性能,降低能耗,提高系统的整体效率。

- 最大转矩点: MPTA通过实时监测压缩机的状态,计算出在当前运行条件下的最佳电流和电压组合
- 动态调整: 根据负载变化和压缩机特性,动态调整控制参数,以确保在各种工况下都能达到最大转矩

Maximum Torque Control (MPTA) is a motor control strategy widely used in electric motor drive systems that require high performance and efficiency. ASL employs the MPTA algorithm to quickly adjust the compressor's output during load changes, ensuring rapid attainment of the desired torque, thereby improving acceleration performance, reducing energy consumption, and enhancing the overall efficiency of the system.

- Maximum Torque Point: MPTA calculates the optimal current and voltage combination under current operating conditions by monitoring the compressor's status in real-time.
- Dynamic Adjustment: Control parameters are dynamically adjusted based on load changes and compressor characteristics to ensure maximum torque is achieved under various operating conditions.

# PRODUCT CLASSIFICATION 产品分类

直流变频热泵系列  
Inverter Heat Pump  
Product Series

直流变频除湿机系列  
Inverter Dehumidifier  
Product Series



ASL  
产品系列  
ASL Product Series

小家电系列  
Home Appliances  
Product Series

冷冻冷藏车系列  
Refrigerated Truck Product Series

直流变频空调系列  
Inverter AC Product Series

## 直流变频热泵系列 Inverter Heat Pump Product Series

主控板 System Control PCBA	热泵三联供主控板 Heat Pump System Control PCBA		低温热泵主控板 Low-Temperature Heat Pump Control PCBA		
	泳池机主控板 Pool Heat Pump System Control PCBA		水源热泵主控板 High-Temperature Hot Water Machine		
压缩机驱动板 Inverter Compressor Driver PCBA	220v单相 Single Phase 220V	1.5kW / 1.8kW / 2.4kW / 2.8kW / 3kW / 4kW / 5kW / 6kW / 6.5kW / 7.5kW / 8kW			
	220v三相 220V Three Phase	15kW以下 Less than 15kW			
	380v三相 Three Phase 380V	3kW / 4kW / 5kW / 6kW / 7kW / 8kW / 10kW / 12kW / 15kW / 18kW / 25kW			
散热方式 Cooling Method	风冷散热 Air Cooling		液冷散热 Liquid Cooling		
清洁能源模式 Green Power Mode	市电/太阳能混合供电 AC/solar power hybrid	太阳能/储能模式 Solar Power/Energy Storage Hybrid Mode	纯太阳能 Pure Photovoltaic Drive	三合一模式 3IN1 Multi-function	
主控、驱动一体板 Integrated PCBA (Combine main controller, compressor driver together into one board)	热泵一体板 Heat Pump Integrated PCBA		单相 1.5kW/2kW/3.5kW/4kW/4.5kW Single Phase 1.5kW/2kW/3.5kW/4kW/4.5kW		
	泳池机 Pool Heat Pump Integrated PCBA		单相 1.5kW/2kW/2.8kW/3.5kW/4kW/4.5kW Single Phase 1.5kW/2kW/2.8kW/3.5kW/4kW/4.5kW		
	烘干机一体板 Heat Pump Dryer Integrated PCBA		单相3kW / 单相4kW Three Phase 3-8 kW		
线控器 Wire Thermostat	86盒触摸屏线控器 86 Type Touch Screen Wire Thermostat		86盒触摸按键线控器 86 Type Touch Button Wire Thermostat		
	4.3寸线控器 4.3 Inch Touch Screen Wire Thermostat		7寸线控器 7 Inch Touch Screen Wire Thermostat		
配套产品 Accessory Products	大泉传感器 Ohizumi Sensor	线束 Cables	电抗器 Reactor	PFC电感 PFC Inductor	滤波板 Filter Board

直流变频除湿机系列  
Inverter Dehumidifier Product Series

变频除湿机控制板  
Inverter Dehumidifier Controller PCBA

小家电系列  
Home Appliances Product Series

各类小家电控制板  
Home Appliances Controller PCBA

冷冻冷藏车系列  
Refrigerated Truck Product Series

车载温度控制器  
Refrigerated Truck Thermostat

新能源车载温度控制器  
EV Refrigerated Truck Thermostat

直流变频空调系列  
Inverter Air Conditioner Series

厨房空调控制板  
Kitchen AC Controller PCBA

窗机空调控制板  
Window Air Conditioner Controller PCBA



INVERTER HEAT PUMP  
PRODUCT SERIES

## 直流变频热泵系列

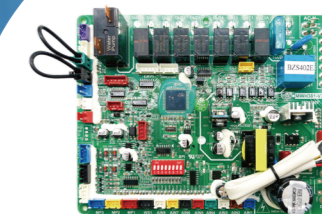


## 方案特点 Solution Technical Advantages

- ☑ 独家专利技术设计  
Exclusive Patent Technology Design
- ☑ 先进的低频转矩补偿控制技术、弱磁自适应技术、低温变频启动技术  
Advanced Low-Frequency Torque Compensation Control Technology, Weak Magnetic Adaptive Technology, Low-Temperature Variable Frequency Start Technology
- ☑ 自适应技术、低温变频启动技术、参数自适应、电流自适应  
Parameter Adaptation, Current Adaptation
- ☑ 支持欧洲智能电网 SG-Ready  
Supports European Smart Grid SG-Ready Standard
- ☑ 多重过电流保护  
Multiple Overcurrent Protection
- ☑ 功率器件多重温度保护  
Multiple Temperature Protection for Power Devices
- ☑ 全面覆盖市面上所有变频压缩机品牌型号  
Comprehensive Coverage of All Brands and Models of Inverter Compressors on the Market
- ☑ 支持 R290 冷媒防泄漏防爆检测  
Supports R290 Refrigerant Leak and Explosion Prevention Detection



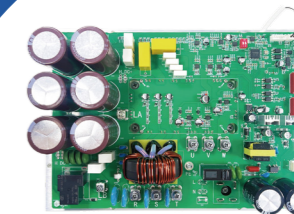
线控器  
Wire Thermostat



热泵主控板  
Heat Pump Main Control Board



配套产品 (电抗器、大  
泉温度传感器)  
Accessory Products



直流变频压缩机  
驱动板  
Inverter Compressor  
Driver PCBA

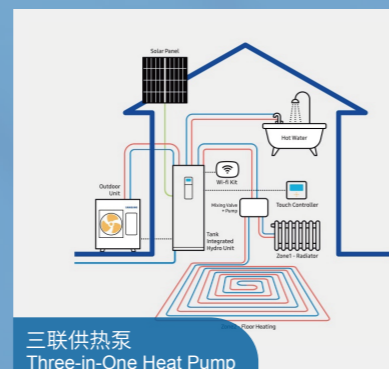
## 变频热泵整套方案

Inverter Heat Pump  
Complete Solution

## USAGE SCENARIOS 适用场景



泳池热泵  
Pool Heat Pump



三联供热泵  
Three-in-One Heat Pump



热水机 / 冷水机  
Water Heater/Water Cooler



地暖  
Floor Heating



除湿机  
Dehumidifier



热泵烘干机  
Heat Pump Dryer



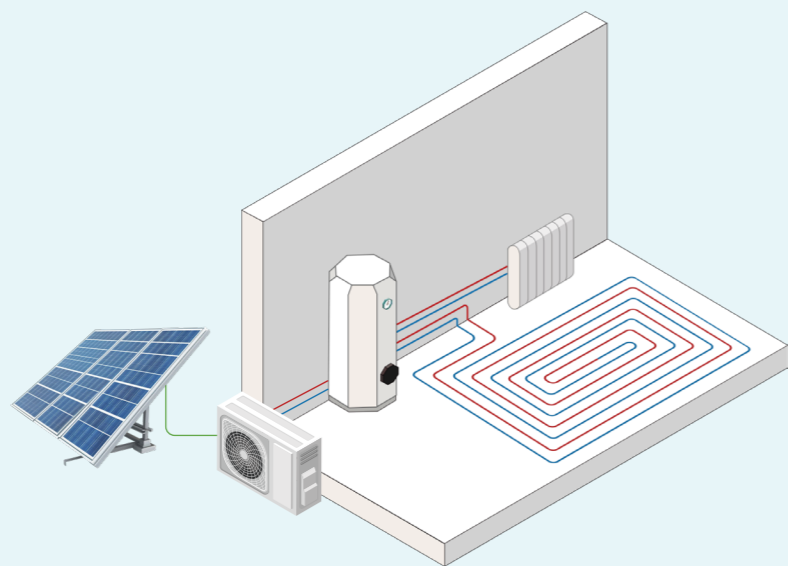
# 太阳能热泵模式

## Solar Heat Pump Modes

### A 纯太阳能模式

#### Pure Photovoltaic Drive

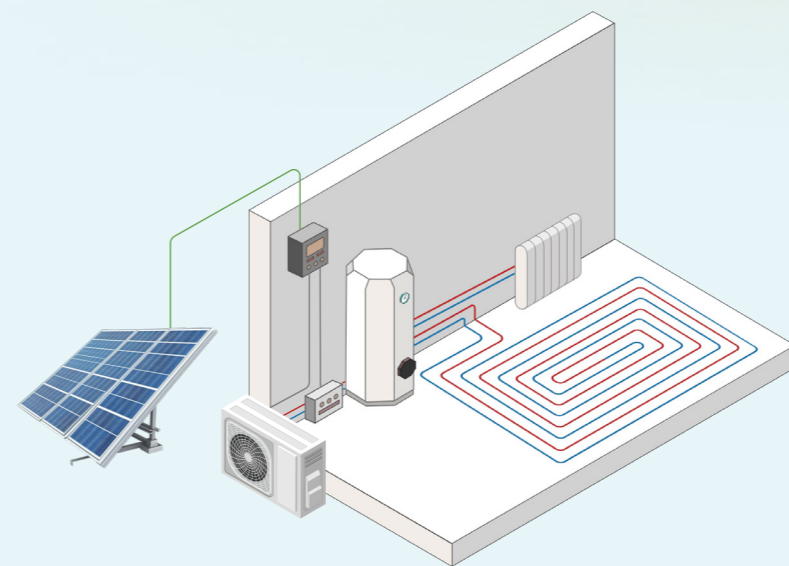
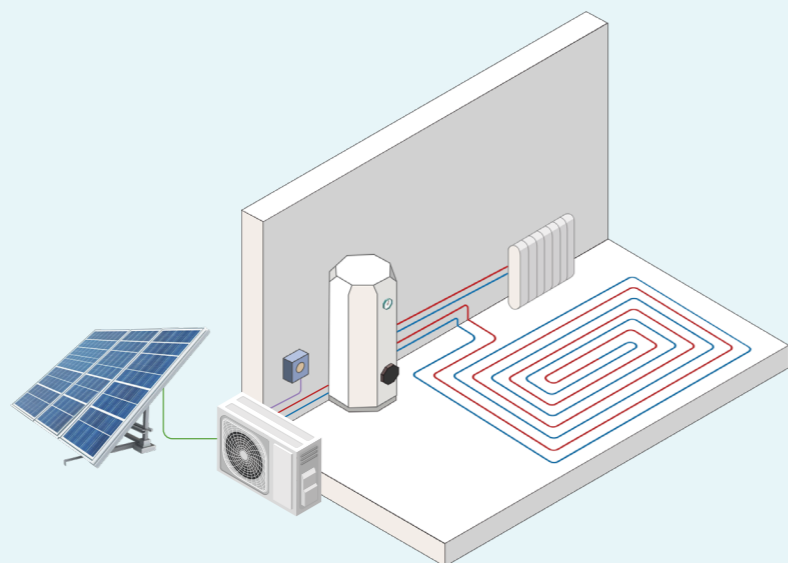
100%太阳能供电  
Off grid, 100% Green Energy



### B 太阳能-电网混合模式

#### AC/DC Hybrid

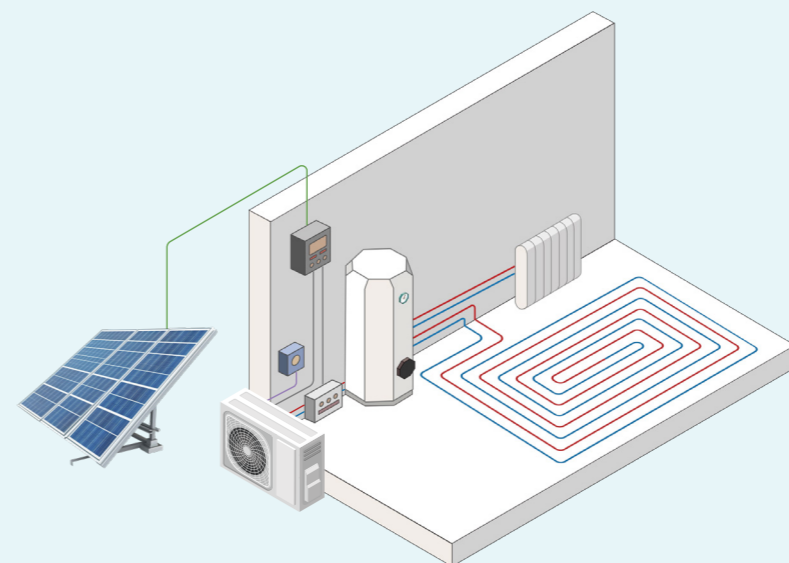
优先使用太阳能, 太阳能电压不足时使用  
电网供电。  
AC/DC hybrid power with the priority of solar energy.



### C 太阳能-储能混合模式

#### Off-grid DC48V/24V

不依赖电网。使用太阳能直接供电,  
或使用储能供电。  
Off Grid, 100% Green Energy Electric power stored in

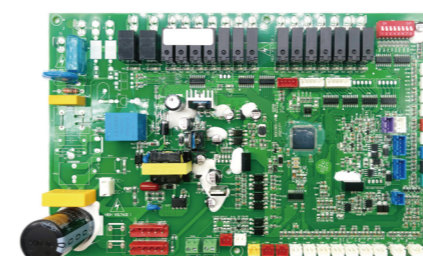
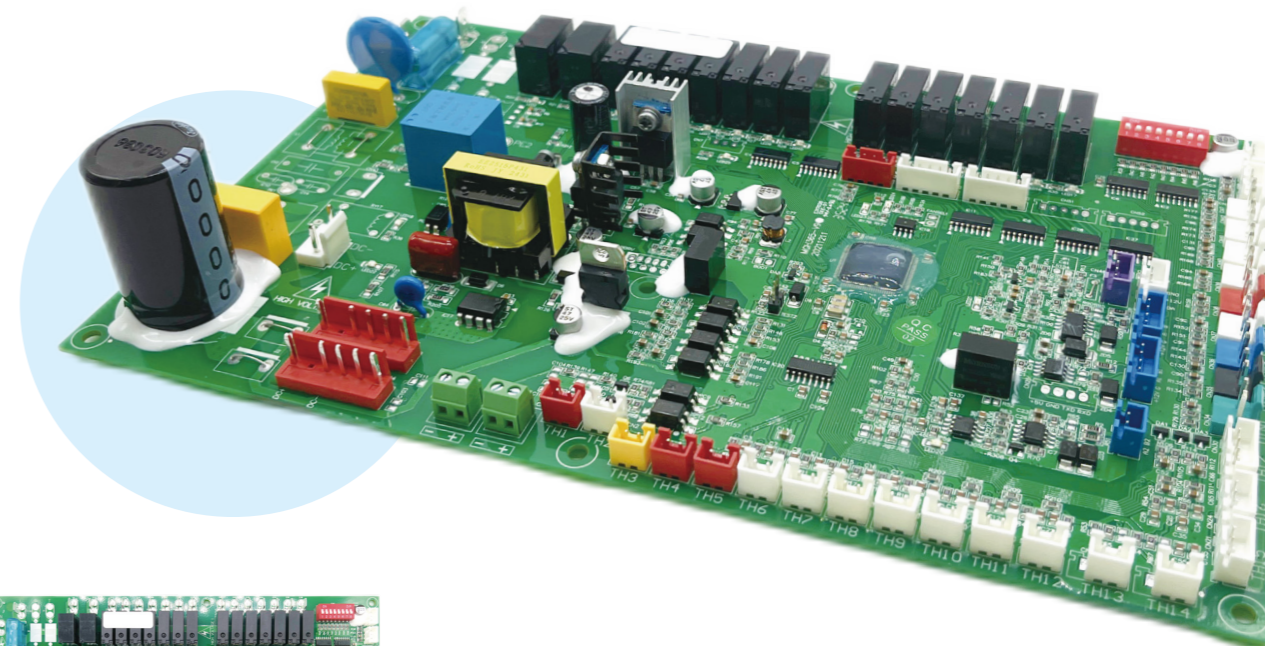


### D 三合一混合模式

#### 3IN1 Multi-function

使用太阳能/储能/电网混合供电。  
用电优先级: 太阳能>储能>电网。  
Hybrid mode with the priority of Solar Energy,  
Energy Storage, AC main power.

SYSTEM CONTROL PCBA FOR HEAT PUMP  
三联供热泵主控板

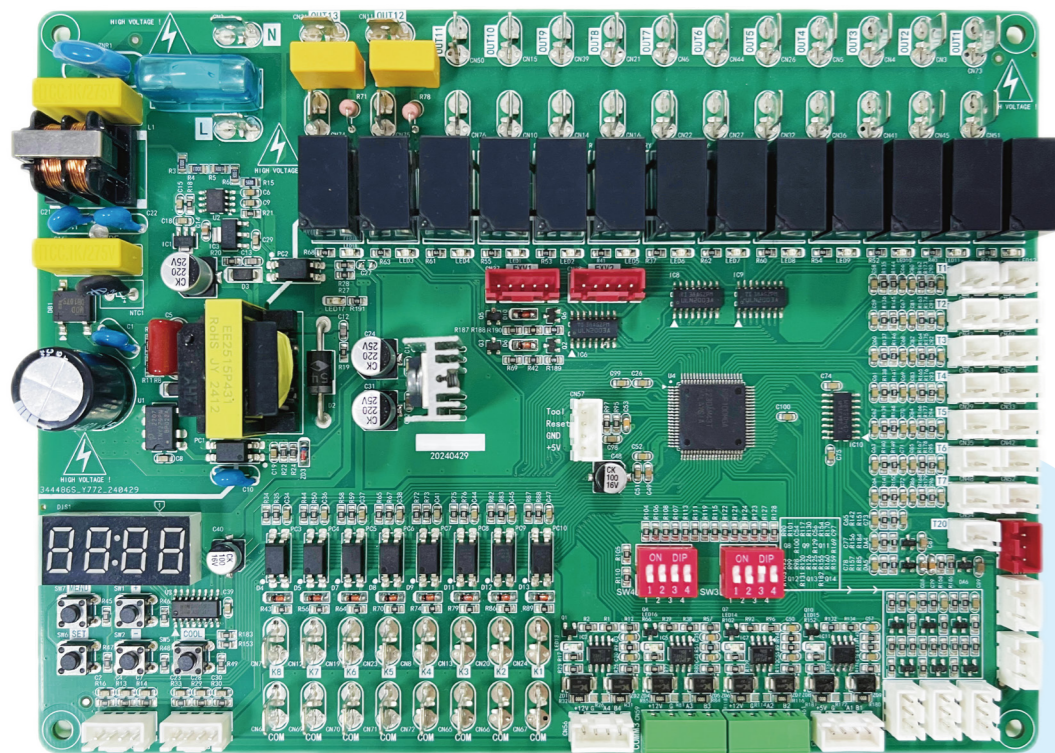


SYSTEM CONTROL PCBA  
主控板

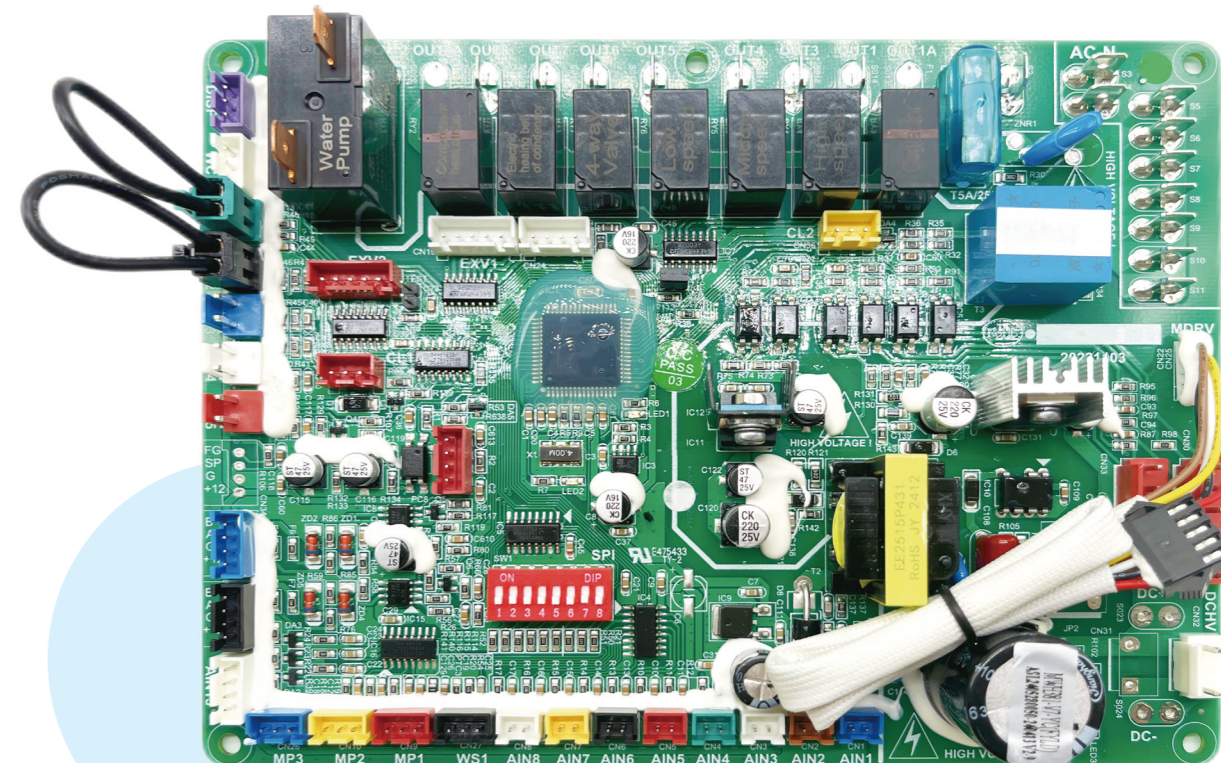
适用范围 Range of Application	三联供热泵、热水机、冷水机 Air to Water Heat Pump, Water Heater, Water Cooler, Floor Heating	存储温度范围 Storage Temperature Range	-30~60°C	流量计 Flow Meter	2路 2 channels
额定电压 Rated Voltage	单相AC220V/三相AC380V/太阳能供电 Single Phase AC220V/ Three Phase AC380V/ Solar Power Supply	开关量输入 On-off Input	9路 9 channels	通信接口 Communication Interface	RS485*3
工作电压范围 Operating Temperature Range	AC175V-AC265V	模拟量输入 Analog Input	17路(其中4路可配置为压力检测) 17 channels(4 channels can be configured for pressure detection)	APP控制 APP-Controlled	支持 Supports
工作电源频率 Operating Power Frequency	50/60HZ	继电器输出 Relay Output	16路 16 channels	认证 Certificate	TUV
工作温度范围 Operating Temperature Range	-30~55°C	直流风机输出 DC Blowers Output	2路 2 channels	定制类型 Customized	支持定制 Supports
工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	膨胀阀输出 Expansion Valve Output	4路 4 channels	冷媒 Refrigerant Type	R410; R32; R290
		水泵PWM控制 PWM Control for Water Pump Output	2路 2 channels	功能 Functions	制冷、制热、生活热水 Cooling, Heating, Hot Water
				尺寸 Dimension	251*161*41.6mm



LOW TEMPERATURE HEAT PUMP CONTROL PCBA  
低温热泵主控板



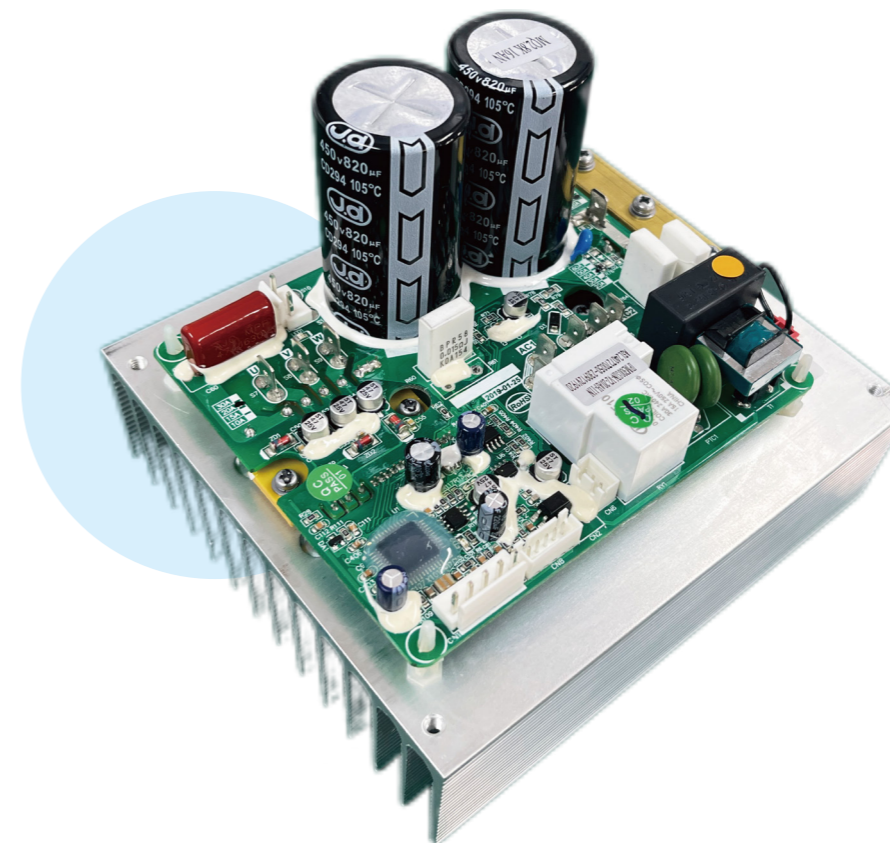
SYSTEM CONTROL PCBA FOR POOL HEAT PUMP  
泳池主控板



适用范围 Range of Application	低温热泵 Air to Water Heat Pump, Water Heater, Water Cooler, Floor Heating	存储温度范围 Storage Temperature Range	-30~60°C	通信接口 Communication Interface	RS485*4
额定电压 Rated Voltage	单相AC220V/三相AC380V Single Phase AC220V/ Three Phase AC380V/ Solar Power Supply	开关量输入 On-off Input	8路 8 channels	APP控制 APP-Controlled	支持 Supports
工作电压范围 Operating Temperature Range	AC175V-AC265V	模拟量输入 Analog Input	17路 17 channels	认证 Certificate	TUV 9 channels
工作电源频率 Operating Power Frequency	50/60HZ	继电器输出 Relay Output	13路 13 channels	定制类型 Customized	支持定制 Supports
工作温度范围 Operating Temperature Range	-30~55°C	膨胀阀输出 Expansion Valve Output	2路 2 channels	冷媒 Refrigerant Type	R410; R32; R290
工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	流量计 Flow Meter	1路 1 channels	功能 Functions	制冷、制热、生活热水 Cooling, Heating, Hot Water
		水泵PWM控制 PWM Control for Water Pump Output	3路 3 channels	尺寸 Dimension	251*161*41.6mm

适用范围 Range of Application	泳池机 Swimming Pool Heat Pump	存储温度范围 Storage Temperature Range	-30~60°C	流量计 Flow Meter	1路 1 channel
额定电压 Rated Voltage	单相AC220V/三相AC380V Single Phase AC220V/ Three Phase AC380V/ Solar Power Supply	开关量输入 On-off Input	5路 5 channels	通信接口 Communication Interface	RS485*2
工作电压范围 Operating Temperature Range	AC175V-AC265V	模拟量输入 Analog Input	11路 (其中3路可配置 为压力检测) 11 channels (3 channels can be configured for pressure detection)	APP控制 APP-Controlled	支持 Supports
工作电源频率 Operating Power Frequency	50/60HZ	继电器输出 Relay Output	8路 8 channels	认证 Certificate	TUV
工作温度范围 Operating Temperature Range	-30~55°C	直流风机输出 DC Blowers Output	2路 2 channels	定制类型 Customized	支持定制 Supports
工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	膨胀阀输出 Expansion Valve Output	2路 2 channels	冷媒 Refrigerant Type	R410; R32; R290
		水泵PWM控制输出 PWM Control for Water Pump Output	1路 1 channels	功能 Functions	制冷、制热 Cooling, Heating
				尺寸 Dimension	186*140*34.6mm

SINGLE PHASE 1.5KW/1.8KW/2.8KW INVERTER COMPRESSOR DRIVE PCBA  
单相1.5kW/1.8kW/2.8kW变频驱动板

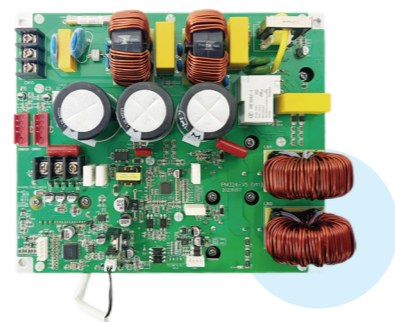
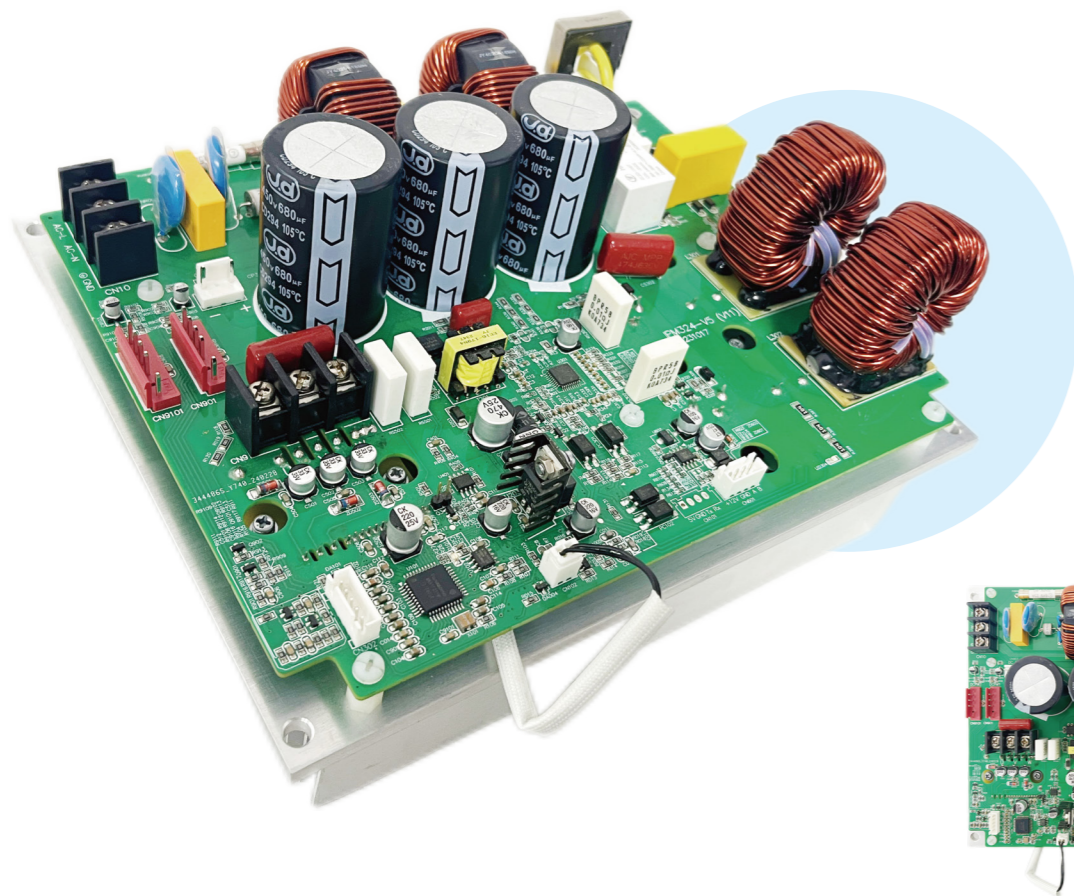


COMPRESSOR DRIVE  
PCBA FOR HEAT PUMP  
变频驱动板

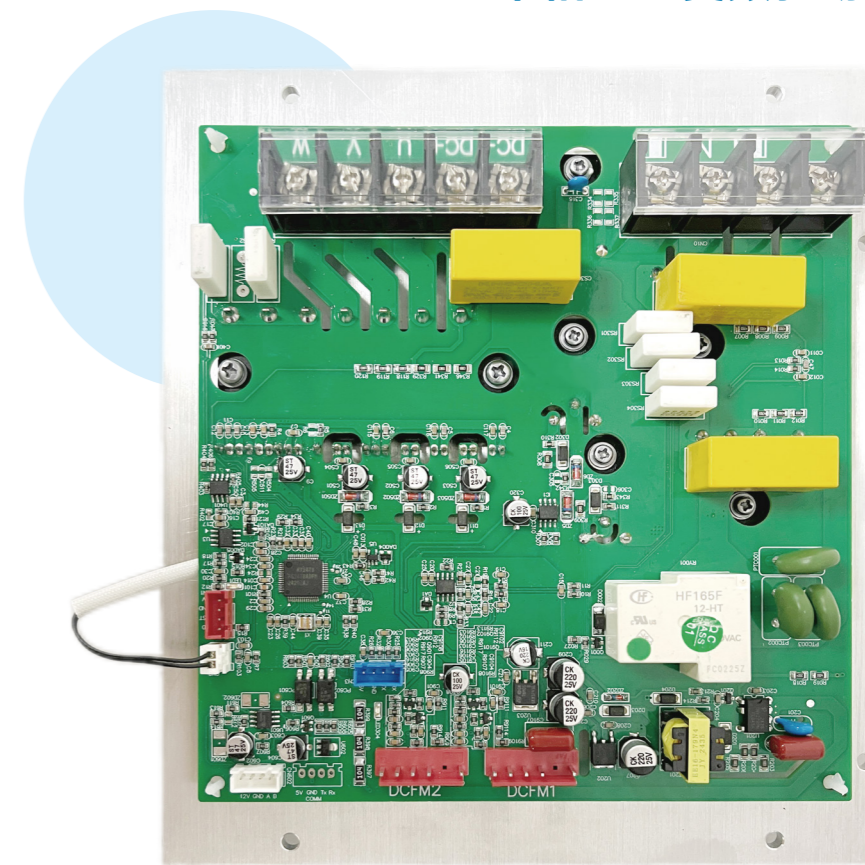
产品名称 Product Name	单相1.5kW/1.8kW/2.8kW 变频驱动板 Single Phase 1.5kW/ 1.8kW/2.8kW Variable Frequency Drive PCBA	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	功率因数 Power Factor	0.99	外形尺寸 Dimension(with radiator fins)	160*142*117.1mm
工作电压范围 Operating Voltage Range	AC175V-AC265V	输出效率 Output Efficiency	0.93至0.95 0.93-0.95		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	1.5KW	适用冷媒 Refrigerant Type	R410; R290; R32		
散热方式 Heat-dissipating Method	风冷 Air Cooling	工作温度范围 Operating Temperature Range	-30~55°C		



SINGLE PHASE 4KW INVERTER COMPRESSOR DRIVE PCBA  
单相4kW变频驱动板



SINGLE PHASE 6KW INVERTER COMPRESSOR DRIVE PCBA  
单相6kW变频驱动板

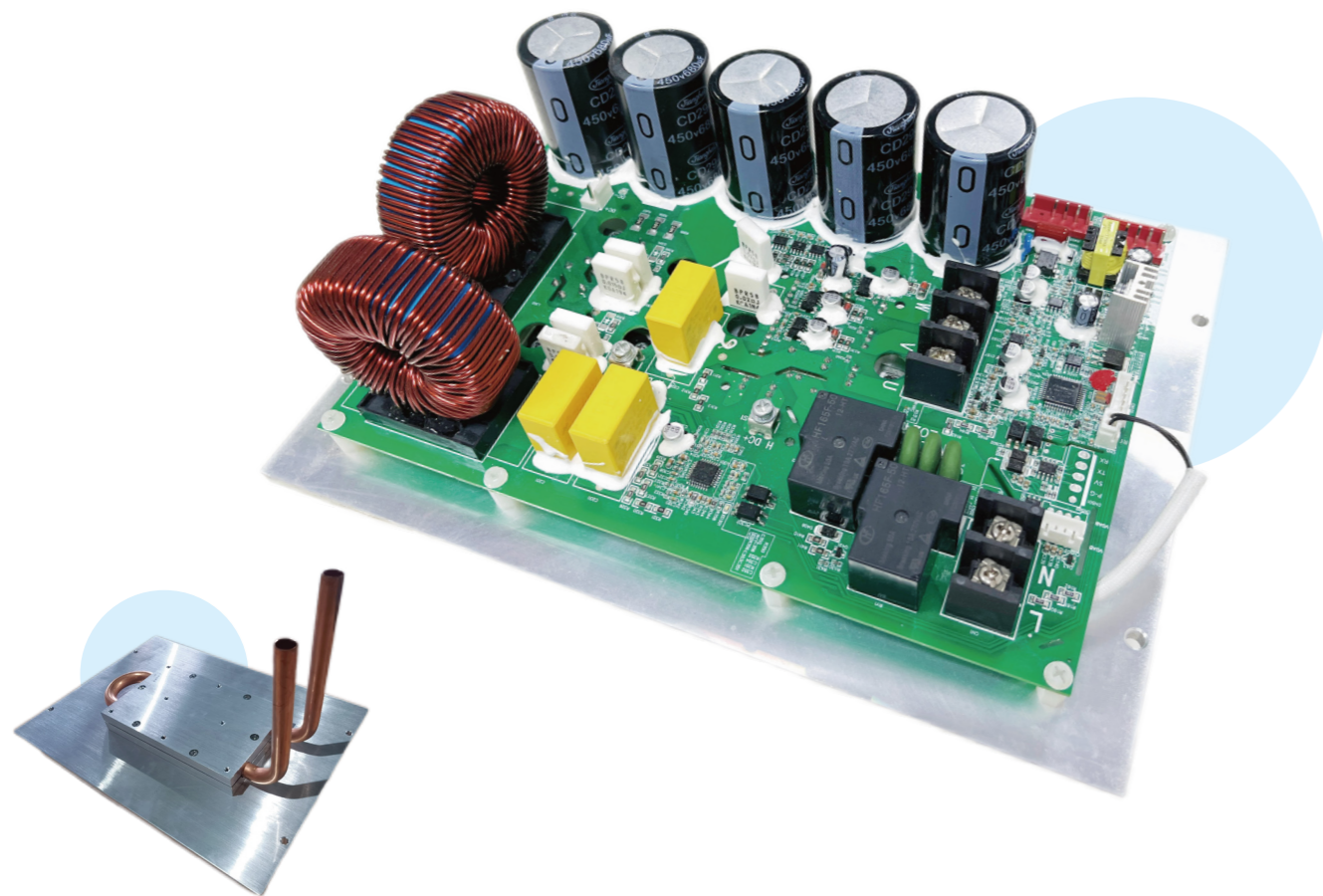


产品名称 Product Name	单相4kW变频驱动板 Single Phase 4kW Variable Frequency Drive PCBA	散热方式 Heat-dissipating Method	风冷 Air Cooling	工作温度范围 Operating Temperature Range	-30~55°C
产品特征描述 Feature Description	交错式PFC with crossing PFC	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	功率因数 Power Factor	0.99	外形尺寸 Dimension(with radiator fins)	230*195*116.1mm
工作电压范围 Operating Voltage Range	AC175V-AC265V	输出效率 Output Efficiency	0.93至0.95 0.93-0.95		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	4kW	适用冷媒 Refrigerant Type	R410; R290; R32		

产品名称 Product Name	单相6kW变频驱动器 Single Phase 6kW Inverter Compressor Drive PCBA	散热方式 Heat-dissipating Method	风冷 Air Cooling	工作温度范围 Operating Temperature Range	-30~55°C
产品特征描述 Feature Description	分体电容 Split Capacitance Board	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	功率因数 Power Factor	0.95	外形尺寸 Dimension(with radiator fins)	194*195*102.5mm
工作电压范围 Operating Voltage Range	AC170V-AC270V	输出效率 Output Efficiency	0.98至0.99 0.98-0.99		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	6kW	适用冷媒 Refrigerant Type	R410; R290; R32		



SINGLE PHASE 7.5KW INVERTER COMPRESSOR DRIVE PCBAA  
单相7.5kW变频驱动板



SINGLE PHASE 8KW INVERTER COMPRESSOR DRIVE PCBA  
单相8kW变频驱动板

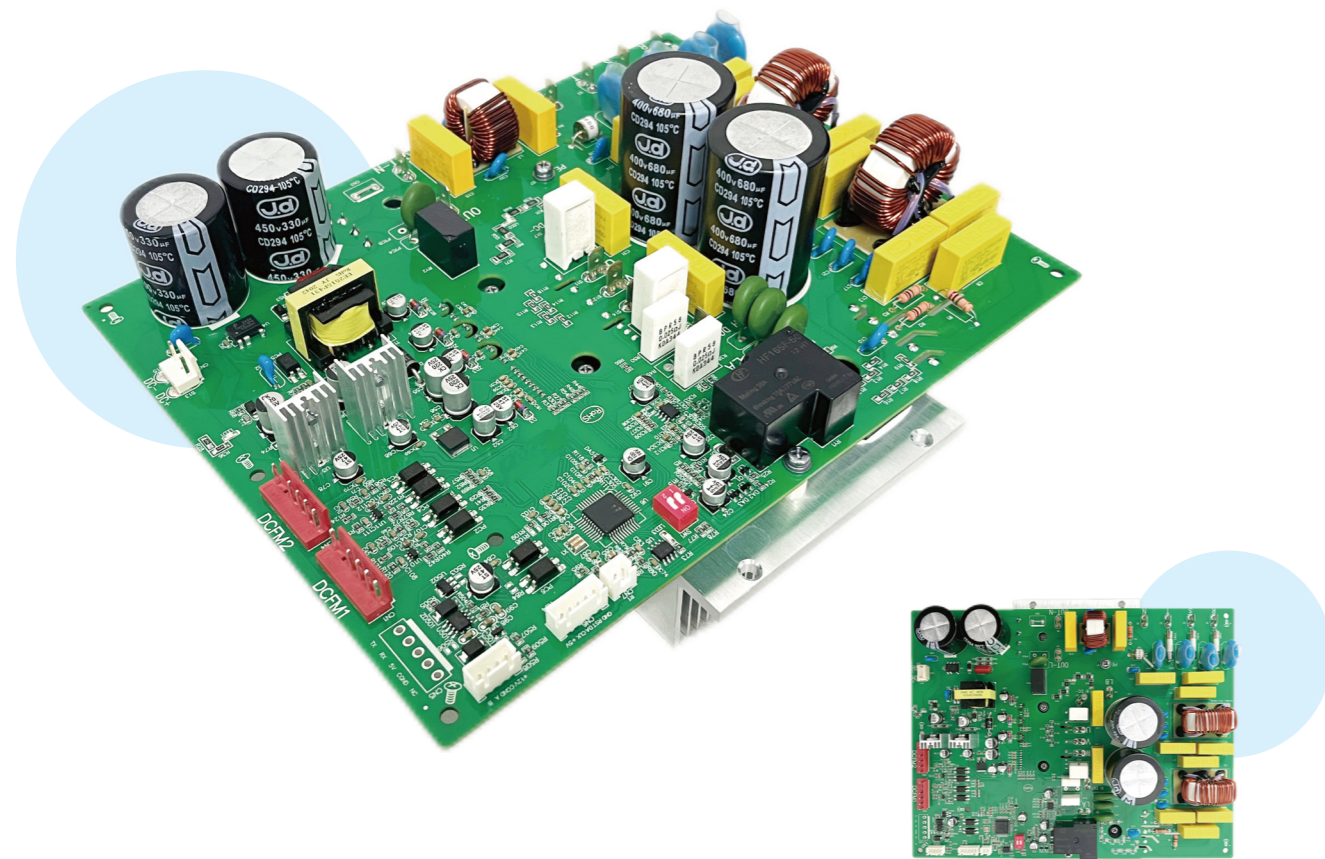


产品名称 Product Name	单相7.5kW变频驱动板 Single Phase 7.5kW Inverter Compressor Driver PCBA	散热方式 Heat-dissipating Method	风冷/液冷 Air Cooling/Liquid Cooling	工作温度范围 Operating Temperature Range	-30~55°C
产品特征描述 Feature Description	交错式PFC with crossing PFC	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	功率因数 Power Factor	0.99	外形尺寸 Dimension(with radiator fins)	280*204.8*137.4mm
工作电压范围 Operating Voltage Range	AC175V-AC265V	输出效率 Output Efficiency	0.93至0.95 0.93-0.95		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	7.5KW	适用冷媒 Refrigerant Type	R410; R290; R32		

产品名称 Product Name	单相8kW变频驱动器 Single Phase 8kW Inverter Compressor Drive PCBA	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	功率因数 Power Factor	0.95	外形尺寸 Dimension(with radiator fins)	328*210*125mm
工作电压范围 Operating Voltage Range	AC170V-AC270V	输出效率 Output Efficiency	0.97至0.99 0.97~0.99		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	8kW	适用冷媒 Refrigerant Type	R410; R290; R32		
散热方式 Heat-dissipating Method	风冷 Air Cooling	工作温度范围 Operating Temperature Range	-30~55°C		



THREE PHASE 3KW INVERTER COMPRESSOR DRIVE PCBA  
三相3kW/4kW变频驱动板



THREE PHASE 4KW/5KW/6KW/7KW/8KW INVERTER COMPRESSOR DRIVE PCBA  
三相4kW/5kW/6kW/7kW/8kW变频驱动板



产品名称 Product Name	三相3kW/4kW变频驱动器 Three Phase 3kW/4kW Inverter Compressor Drive PCBA	散热方式 Heat-dissipating Method	风冷 Air Cooling	工作温度范围 Operating Temperature Range	-30~55°C
产品特征描述 Feature Description	太阳能供电 Solar Power Supply	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	三相AC380V Three Phase AC 380V	功率因数 Power Factor	0.95	外形尺寸 Dimension(with radiator fins)	248*212*99.6mm
工作电压范围 Operating Voltage Range	AC303V-AC456V	输出效率 Output Efficiency	0.93至0.95 0.93-0.95		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	3kW/4kW	适用冷媒 Refrigerant Type	R410; R290; R32		

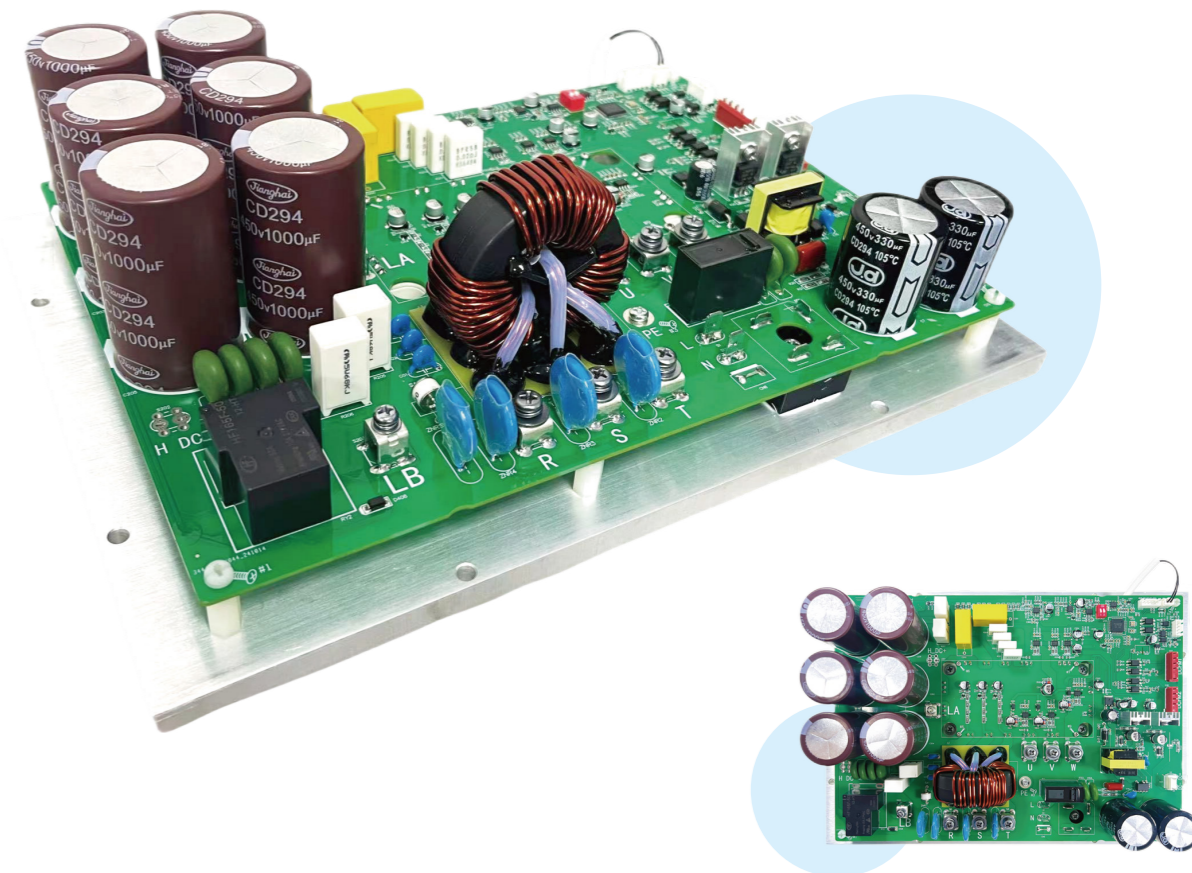
产品名称 Product Name	三相4kW/5kW/6kW/ 7kW/8kW变频驱动器 Three Phase 4kW/5kW/6kW/7kW/8kW Inverter Compressor Drive PCBA	散热方式 Heat-dissipating Method	风冷/液冷 Air Cooling/Liquid Cooling	工作温度范围 Operating Temperature Range	-30~55°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
额定电压 Rated Voltage	三相AC380V Three Phase AC 380V	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
工作电压范围 Operating Voltage Range	AC303V-AC456V	功率因数 Power Factor	0.95	外形尺寸 Dimension(with radiator fins)	规格一: 315*195*123.6mm 规格二: 240*240*110mm 规格三: 305*185*150mm 315*195*123.6mm / 240*240*110mm/ 305*185*150mm
工作电源频率 Operating Power Frequency	50/60HZ	输出效率 Output Efficiency	0.93至0.95 0.93-0.95	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS
额定输入功率 Rated Power Input	4-8kW	适用冷媒 Refrigerant Type	R410; R290; R32		



THREE PHASE 10KW/12KW/15KW/16KW INVERTER COMPRESSOR DRIVE PCBA  
三相10kW/12kW/15kW/16kW变频驱动板



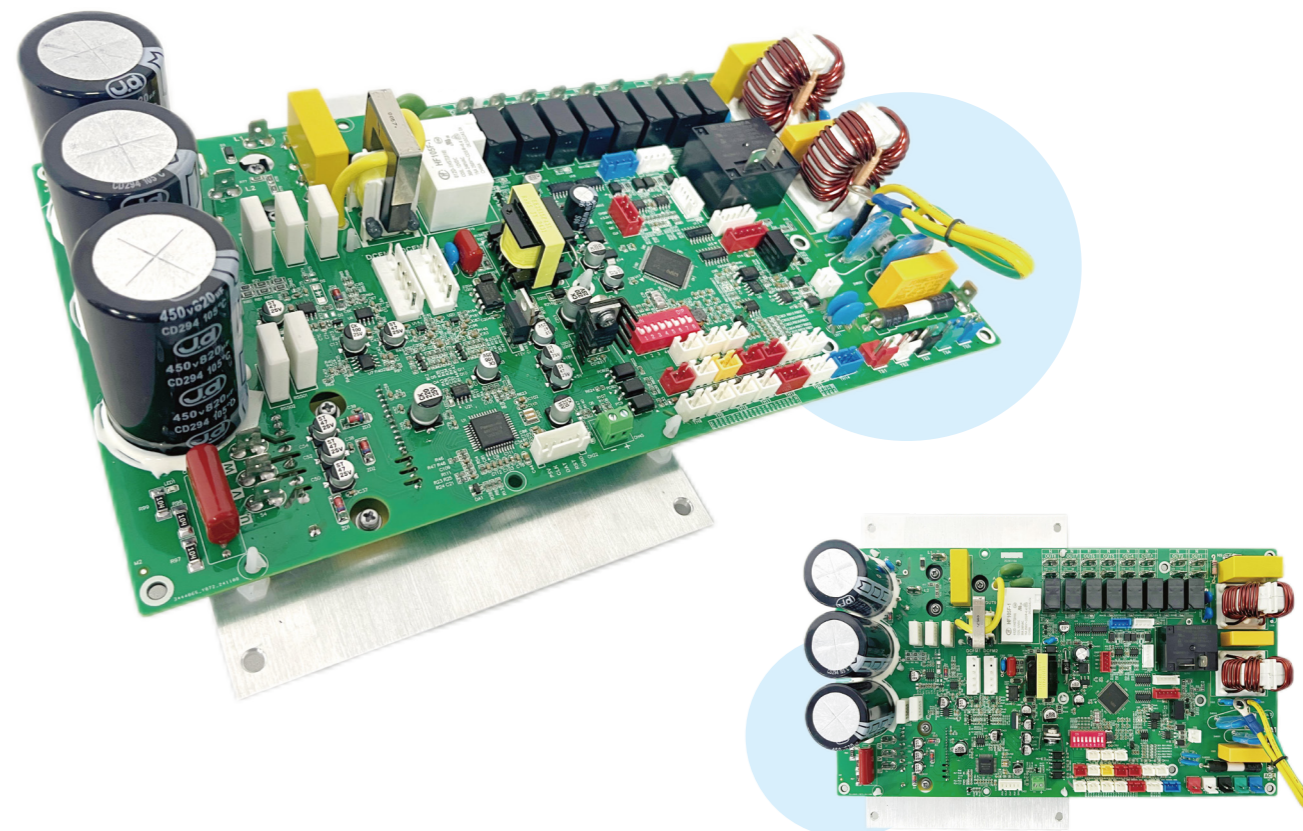
THREE PHASE 18KW-25KW INVERTER COMPRESSOR DRIVE PCBA  
三相18kW-25kW变频驱动板



产品名称 Product Name	三相10kW/12kW/15kW/ 16kW变频驱动器 Three Phase 10kW/12kW/ 15kW/16kW Inverter Compressor Drive PCBA	散热方式 Heat-dissipating Method	风冷/液冷 Air cooling/Liquid Cooling	工作温度范围 Operating Temperature Range	-30~55°C
产品特征描述 Feature Description	太阳能供电 Solar Power Supply	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	储存温度范围 Storage Temperature Range	-30~80°C
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
额定电压 Rated Voltage	三相AC380V Three Phase AC 380V	功率因数 Power Factor	0.95	外形尺寸 Dimension(with radiator fins)	规格一: 345*195*128.6mm 规格二: 230*220*130mm 345*195*128.6mm 230*220*130mm
工作电压范围 Operating Voltage Range	AC303V-AC456V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95		
工作电源频率 Operating Power Frequency	50/60HZ	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS		
额定输入功率 Rated Power Input	10kW/12kW/15kW/16kW	适用冷媒 Refrigerant Type	R410; R290; R32		

产品名称 Product Name	三相18-25kW变频驱动板 Three Phase 18kW-25kW Inverter Compressor Drive PCBA	散热方式 Heat-dissipating Method	风冷 Air Cooling	储存温度范围 Storage Temperature Range	-30~80°C
产品特征描述 Feature Description	滤波一体 PFC integrated	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)
产品使用场景 Usage Scenarios	热泵/泳池/除湿/烘干 Heat Pump/Pool Heat Pump/Dehumidifier/Dryer	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	功率因数 Power Factor	0.95
额定电压 Rated Voltage	三相AC380V Three Phase AC 380V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95	通信方式 Communication Mode	RS485 MODBUS协议 RS485, MODBUS
工作电压范围 Operating Voltage Range	AC303V-AC456V	适用冷媒 Refrigerant Type	R410; R290; R32	工作温度范围 Operating Temperature Range	-30~55°C
工作电源频率 Operating Power Frequency	50/60HZ				
额定输入功率 Rated Power Input	18-25kW				

1.5KW/2KW/3.5KW/4KW INTEGRATED PCBA FOR HEAT PUMP  
三联供热泵1.5kW/2kW/3.5kW/4kW一体板

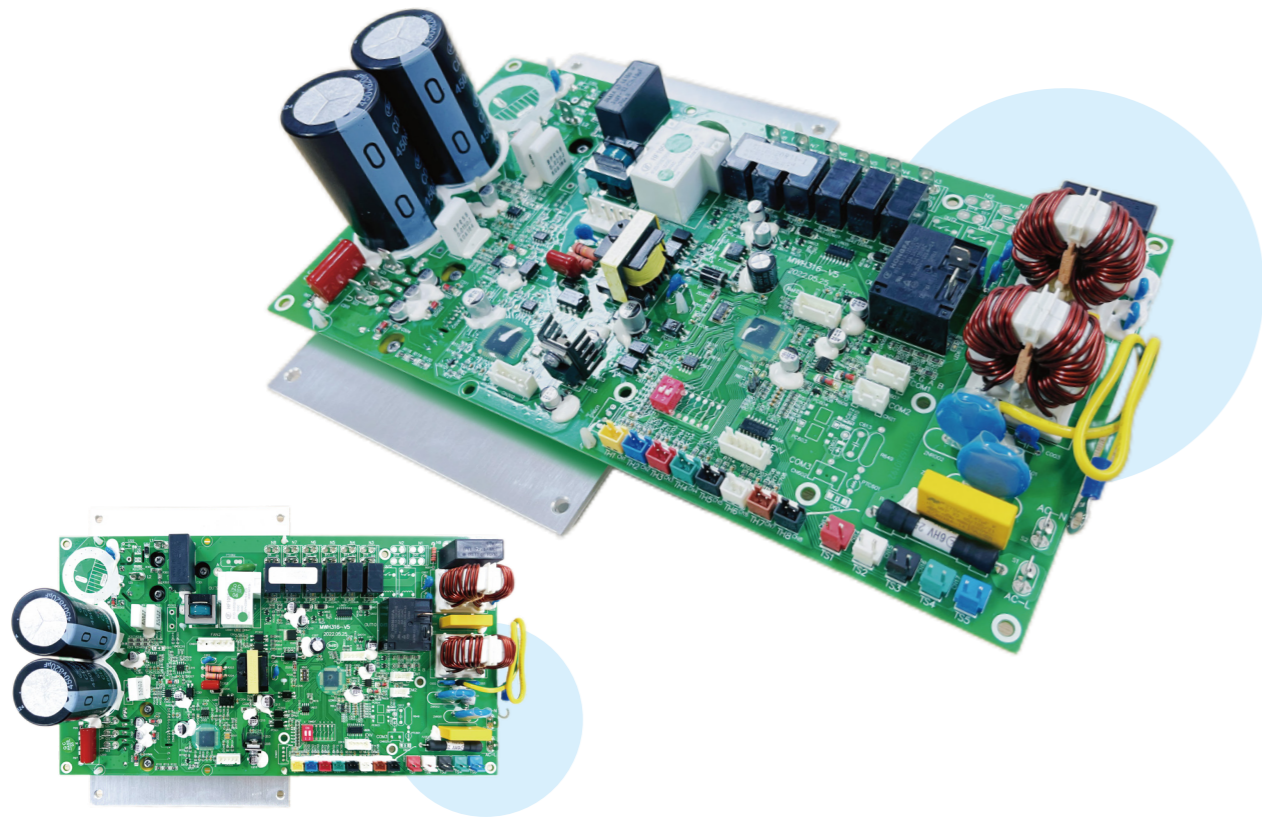


INTEGRATED PCBA  
FOR HEAT PUMP  
一体板

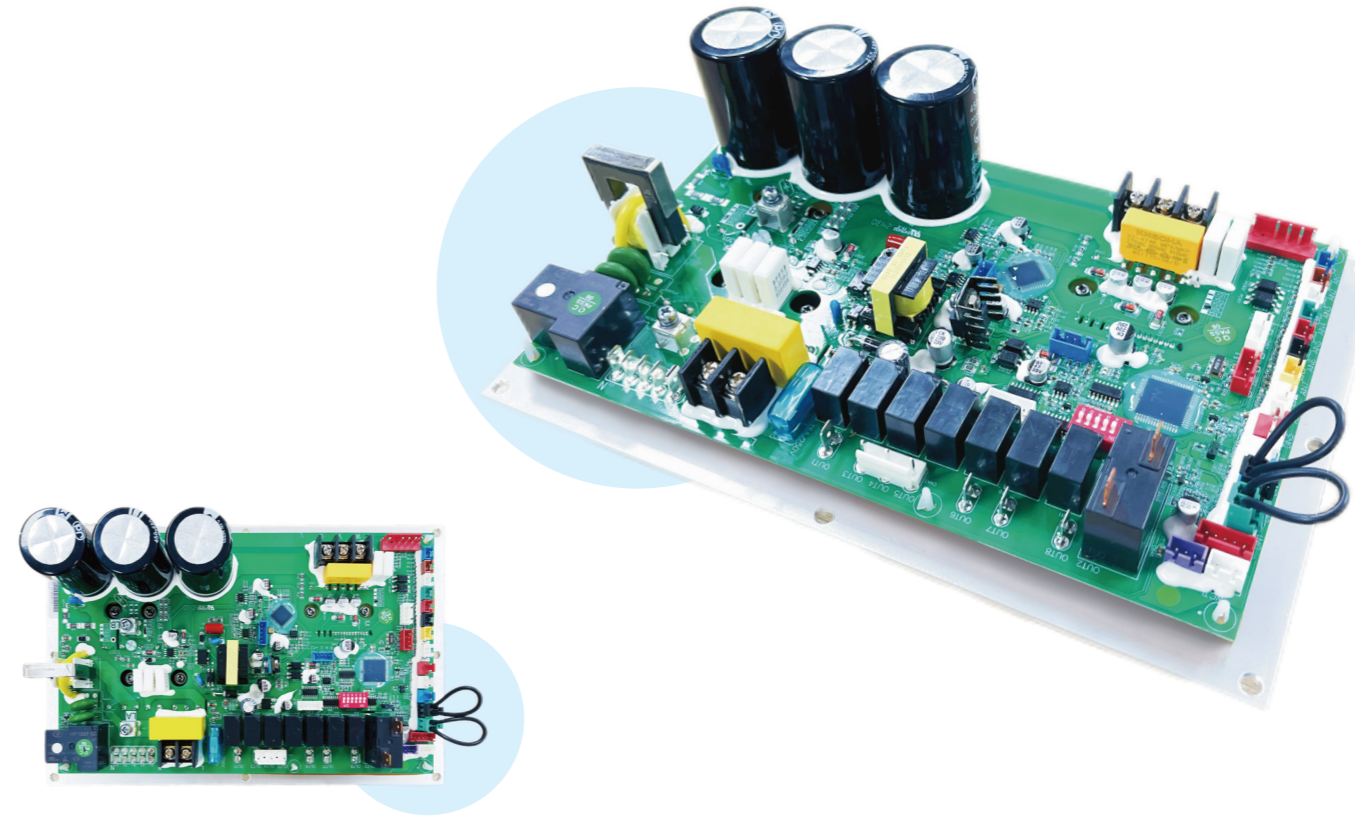
产品名称 Product Name	三联供热泵 1.5kW/2kW/3.5kW/4kW 单相一体板	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	8路 8 channels
	Single Phase 1.5kW/2kW/3.5kW/4kW Heat Pump Integrated PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	14路 14 channels
适用场景 Usage Scenarios	热泵 Heat Pump/Floor Heating/ Water Heater/Water Cooler	功率因数 Power Factor	0.99	继电器输出 Relay Output	9路 9 channels
		输出效率 Output Efficiency	0.93至0.95 0.93~0.95	直流风机输出 DC Blowers Output	2路 2 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	2路 2 channels
工作电压范围 Operating Voltage Range	AC175V-AC265V	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	1路 1 channels
工作电源频率 Operating Power Frequency	50/60HZ	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 2个 RS485*2
额定输入功率 Rated Power Input	1.5kW/2kW/3.5kW/4kW	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	288*200*107.1mm
散热方式 Heat-dissipating Method	风冷 Air Cooling				



1.5KW/2KW/3.5KW/4KW INTEGRATED PCBA FOR SWIMMING POOL HEAT PUMP  
泳池热泵1.5kW/2kW/3.5kW/4kW一体板



3.5KW/4.5KW INTEGRATED PCBA FOR SWIMMING POOL HEAT PUMP  
泳池热泵3.5kW/4.5kW一体板

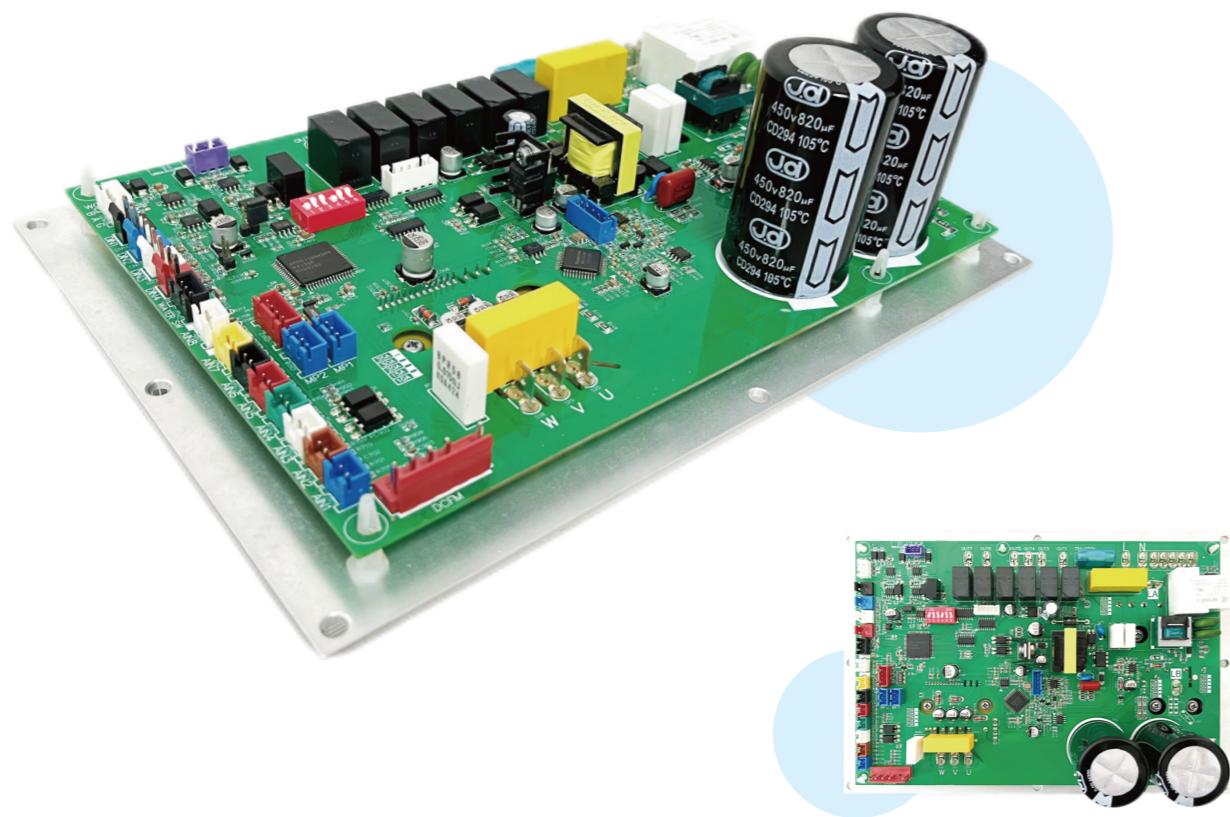


产品名称 Product Name	泳池热泵 1.5kW/2kW/3.5kW/4kW 单相一体板 Single Phase 1.5kW/2kW/3.5kW/4kW Swimming Pool Heat Pump Integrated PCBA	压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	5路 5 channels
适用场景 Usage Scenarios	泳池 Swimming Pool Heat Pump	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	5路 5 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	功率因数 Power Factor	0.99	继电器输出 Relay Output	7路 7 channels
工作电压范围 Operating Voltage Range	AC175V-AC265V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95	直流风机输出 DC Blowers Output	1个 1 channels
工作电源频率 Operating Power Frequency	50/60HZ	冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	1个 1 channels
额定输入功率 Rated Power Input	1.5kW/2kW/3.5kW/4kW	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	无 None
散热方式 Heat-dissipating Method	风冷 Air Cooling	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 1个 RS485*1
		工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	288*200*107.1mm

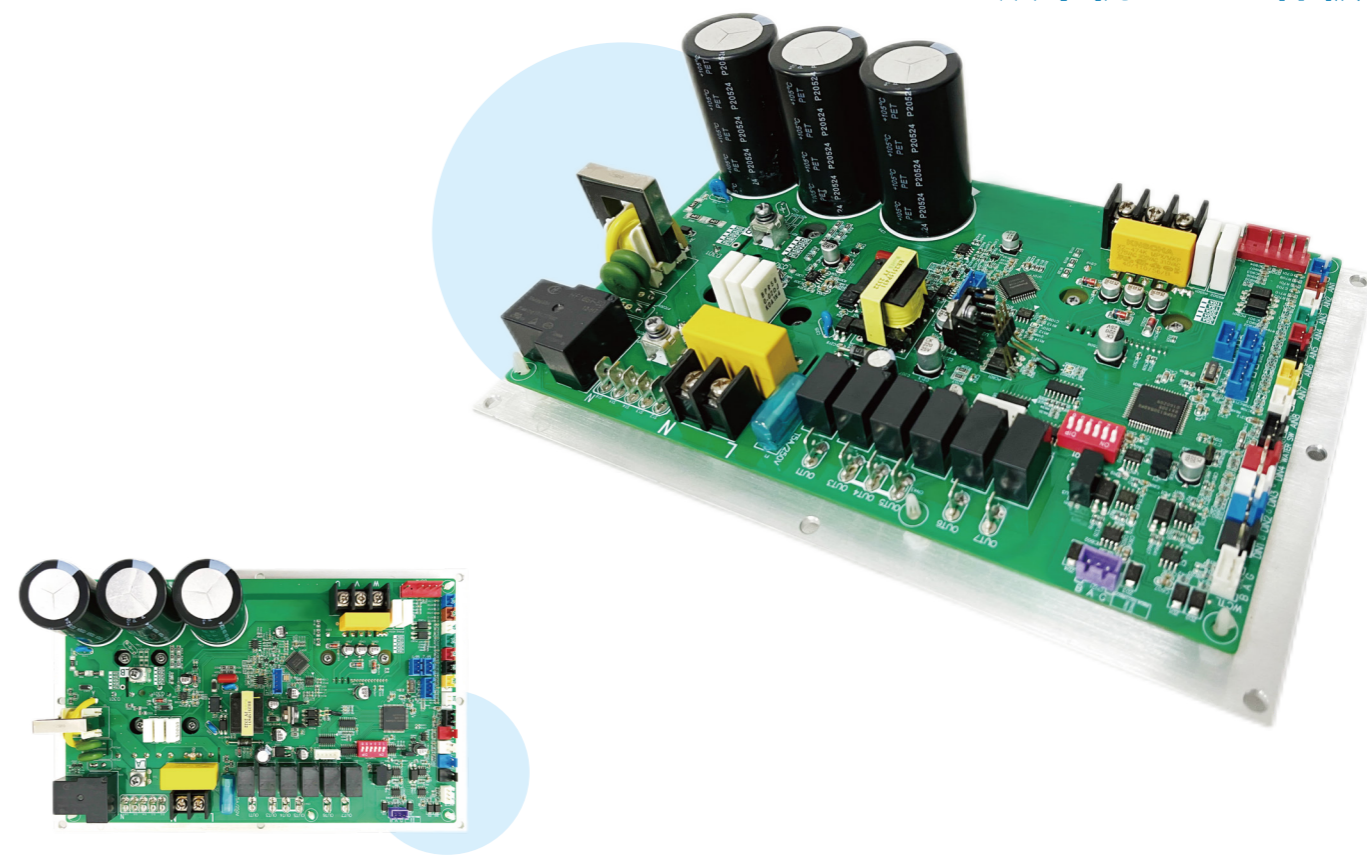
产品名称 Product Name	泳池热泵3.5kW/4.5kW 单相一体板 Single Phase 3.5kW/ 4.5kW Pool Heat Pump Integrated PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	7路 7 channels
适用场景 Usage Scenarios	泳池 Swimming Pool Heat Pump	功率因数 Power Factor	0.99	继电器输出 Relay Output	8路 8 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95	直流风机输出 DC Blowers Output	1个 1 channel
工作电压范围 Operating Voltage Range	AC175V-AC265V	冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	1个 1 channel
工作电源频率 Operating Power Frequency	50/60HZ	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	无 None
额定输入功率 Rated Power Input	3.5kW/4.5kW	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 1个 RS485*1
散热方式 Heat-dissipating Method	风冷 Air Cooling	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	264*170*107.1mm
压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	5路 5 channels		



### 3KW INTEGRATED PCBA FOR HEAT PUMP DRYER 烘干机3kW一体板



### 4KW INTEGRATED PCBA FOR HEAT PUMP DRYER 烘干机4kW一体板

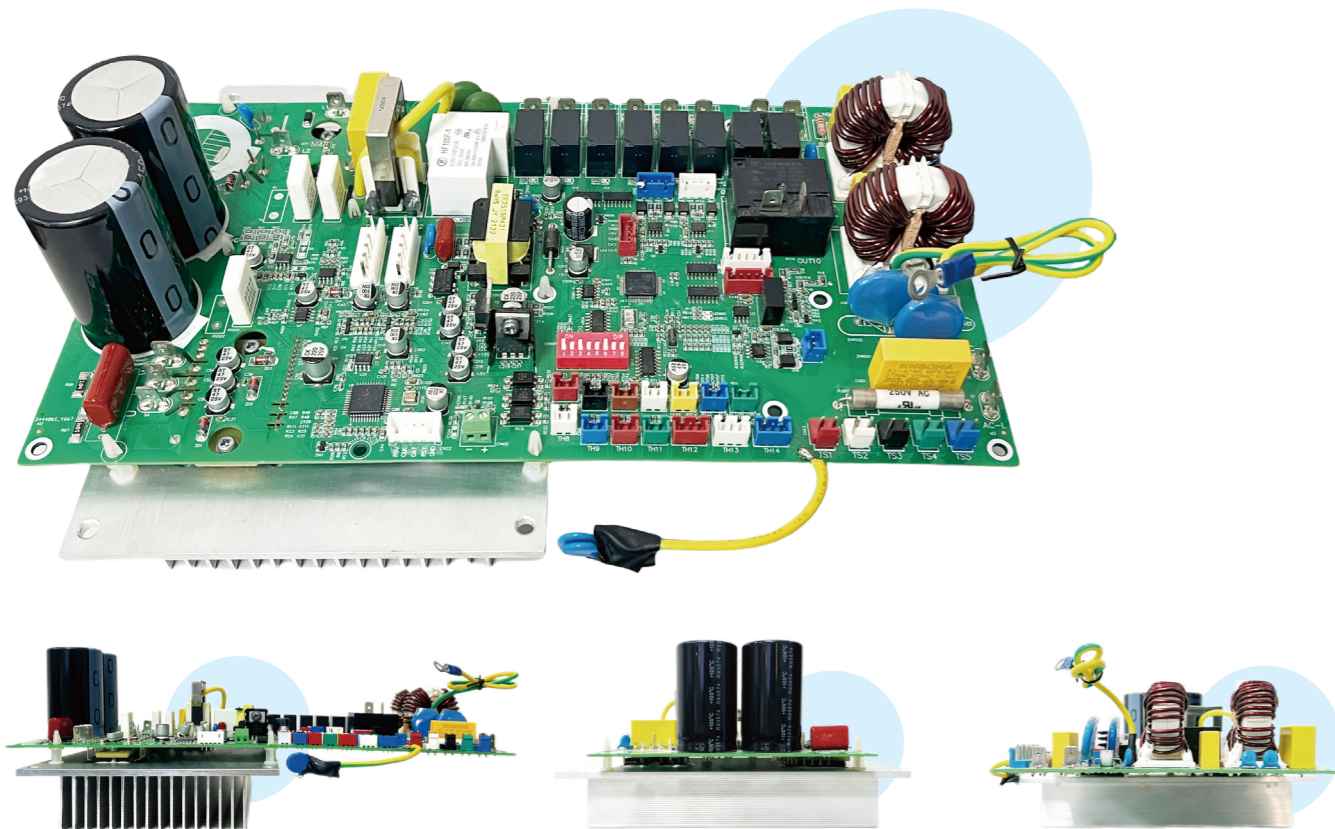


产品名称 Product Name	烘干机3kW单相一体板 Single Phase 3kW Heat Pump Dryer Integrated PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	11路 11 channels
适用场景 Usage Scenarios	烘干 Heat Pump Dryer	功率因数 Power Factor	0.99	继电器输出 Relay Output	6路 6 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95	直流风机输出 DC Blowers Output	1个 1 channels
工作电压范围 Operating Voltage Range	AC175V-AC265V	冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	1个 1 channels
工作电源频率 Operating Power Frequency	50/60HZ	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	无 None
额定输入功率 Rated Power Input	3kW	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 2个 RS485*2
散热方式 Heat-dissipating Method	风冷 Air Cooling	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	244*170*106.1mm
压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	4路 4 channels		

产品名称 Product Name	烘干机4kW单相一体板 Single Phase 4kW Heat Pump Dryer Integrated PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	11路 11 channels
适用场景 Usage Scenarios	烘干 Heat Pump Dryer	功率因数 Power Factor	0.99	继电器输出 Relay Output	6路 6 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95	直流风机输出 DC Blowers Output	1个 1 channel
工作电压范围 Operating Voltage Range	AC175V-AC265V	冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	1个 1 channel
工作电源频率 Operating Power Frequency	50/60HZ	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	无 None
额定输入功率 Rated Power Input	4KW	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 2个 RS485*2
散热方式 Heat-dissipating Method	风冷 Air Cooling	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	264*170*107.1mm
压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	4路 4 channels		



INTEGRATED PCBA FOR LOW TEMPERATURE HEAT PUMP  
低温热泵一体板



WIRE THERMOSTAT  
线控器

产品名称 Product Name	低温热泵4.5kW单相一体板 Single Phase 4.5kW Low Temperature Heat Pump Integrated PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	13路 13 channels
		功率因数 Power Factor	0.99	继电器输出 Relay Output	9路 9 channels
适用场景 Usage Scenarios	低温热泵 Low Temperature Heat Pump	输出效率 Output Efficiency	0.93至0.95 0.93-0.95	直流风机输出 DC Blowers Output	2个 2 channels
		冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	2个 2 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	1个 1 channel
工作电压范围 Operating Voltage Range	AC175V-AC265V	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 2个 RS485*2
工作电源频率 Operating Power Frequency	50/60HZ	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	288*200*107.1mm
额定输入功率 Rated Power Input	4.5kW	开关量输入 On-off Input	8路 8 channels		
散热方式 Heat-dissipating Method	风冷 Air Cooling				
压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor				



IPS TOUCH SCREEN WIRE THERMOSTAT  
触摸IPS屏线控器



LCD SCREEN TOUCH BUTTON WIRE THERMOSTAT  
LCD液晶屏触摸按键线控器



产品名称 Product Name	触摸IPS屏线控器 IPS Touch Screen Wire Thermostat	显示方式 Display Method	IPS屏 IPS Screen	通信接口 Communication Interface	RS485*1
输入电压 Input Voltage	DC12V±5%	分辨率 Resolution	480*480	可选功能 Optional Function	WIFI
额定功率 Rated Power	<5W	交互方式 Interaction	单点触摸 Single Point Touch Screen	认证 Certificates	CE,RoHS
通信协议 Communication Protocol	Modbus-RS485	工作温度范围 Operating Temperature Range	-20~70°C	UI	需提供UI UI Provided by Customer
远程控制 Remote Control	APP控制 App Controlled	储存温度范围 Storage Temperature Range	-30~70°C		
外形尺寸 Dimension	88x88x18mm	工作湿度范围 Operating Humidity Range	0%-90% RH		

产品名称 Product Name	LCD液晶屏触摸按键线控器 LCD Screen Touch Button Wire Thermostat	外形尺寸 Dimension	100x100x26mm	工作湿度范围 Operating Humidity Range	0%-90% RH
输入电压 Input Voltage	DC12V±5%	显示方式 Display Method	段码式LCD液晶 Segment LCD	通信接口 Communication Interface	RS485*1
额定功率 Rated Power	<2W	交互方式 Interaction	触摸按键 Touch Button	可选功能 Optional Function	WIFI
通信协议 Communication Protocol	Modbus-RS485	工作温度范围 Operating Temperature Range	-20~70°C		
远程控制 Remote Control	APP控制 APP Controlled	储存温度范围 Storage Temperature Range	-30~70°C		



86 TYPE TOUCH BUTTON WIRE THERMOSTAT(MIXED COLORS)

86盒触摸按键线控器(拼色款)



86 TYPE TOUCH BUTTON WIRE THERMOSTAT

86盒触摸按键线控器



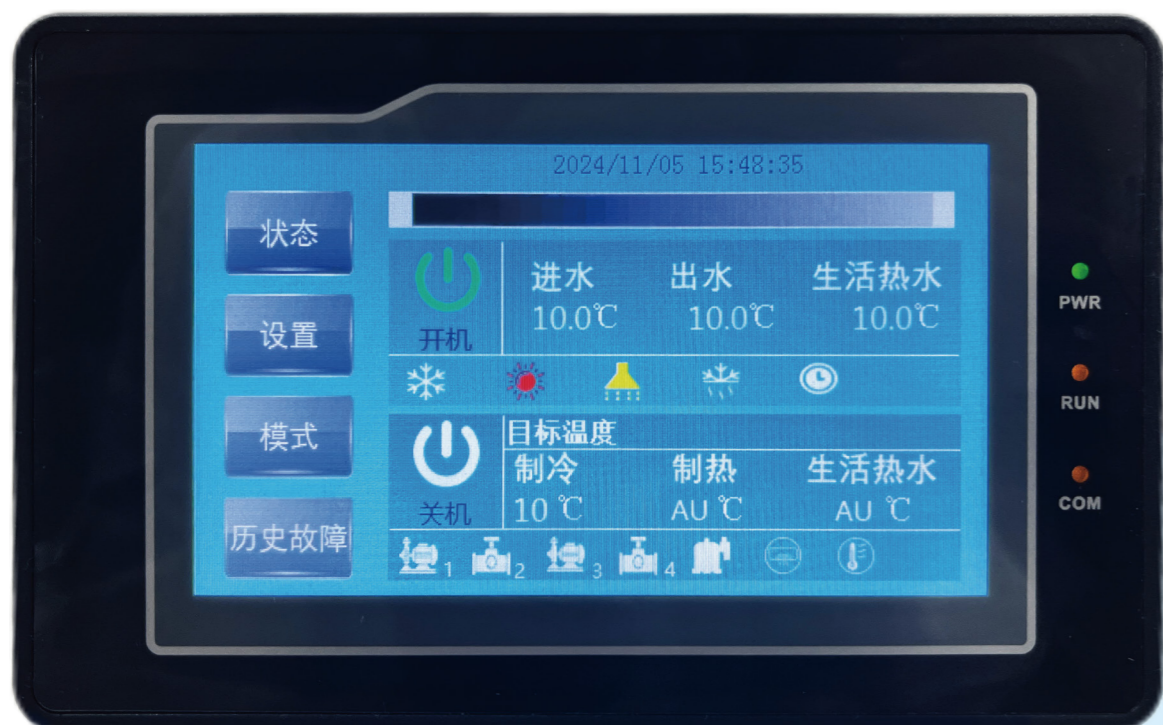
产品名称 Product Name	86盒触摸按键线控器 (拼色款) 86 Type Touch Button Wire Thermostat(mixed colors)	外形尺寸 Dimension	86x86x20mm	工作湿度范围 Operating Humidity Range	0%-90% RH
输入电压 Input Voltage	DC12V±5%	显示方式 Display Method	段码式LCD液晶 Segment LCD	通信接口 Communication Interface	RS485*1/ASL通讯协议 RS485*1
额定功率 Rated Power	<2W	交互方式 Interaction	触摸按键 Touch Button	可选功能 Optional Function	WIFI
通信协议 Communication Protocol	Modbus-RS485	工作温度范围 Operating Temperature Range	-20~70°C		
远程控制 Remote Control	APP控制 APP Controlled	储存温度范围 Storage Temperature Range	-30~70°C		

产品名称 Product Name	86盒触摸按键线控器 86 Type Touch Button Wire Thermostat	外形尺寸 Dimension	86x86x20mm	工作湿度范围 Operating Humidity Range	0%-90% RH
输入电压 Input Voltage	DC12V±5%	显示方式 Display Method	段码式LCD液晶 Segment LCD	通信接口 Communication Interface	RS485*1
额定功率 Rated Power	<2W	交互方式 Interaction	触摸按键 Touch Button	可选功能 Optional Function	WIFI
通信协议 Communication Protocol	Modbus-RS485	工作温度范围 Operating Temperature Range	-20~70°C		
远程控制 Remote Control	APP控制 APP Controlled	储存温度范围 Storage Temperature Range	-30~70°C		



4.3 INCH TOUCH SCREEN WIRE THERMOSTAT

4.3寸触摸屏线控器



7 INCH TOUCH SCREEN WIRE THERMOSTAT

7寸触摸屏线控器



产品名称 Product Name	4.3寸触摸屏线控器 4.3 Inch Touch Screen Wire Thermostat	显示方式 Display Method	TFT屏 TFT Screen	工作湿度范围 Operating Humidity Range	0%-90% RH
输入电压 Input Voltage	DC12V±5%	分辨率 Resolution	480*272	通信接口 Communication Interface	RS485*1
额定功率 Rated Power	<3W	交互方式 Interaction	单点触摸 Single Point Touch Screen	认证 Certificates	符合CE/FCC认证标准 CE,FCC
通信协议 Communication Protocol	Modbus-RS485	工作温度范围 Operating Temperature Range	-20~70°C	UI	需提供UI UI Provided by Customer
外形尺寸 Dimension	170*105*33mm	储存温度范围 Storage Temperature Range	-30~70°C		

产品名称 Product Name	7寸触摸屏线控器 7 Inch Touch Screen Wire Thermostat	显示方式 Display Method	TFT屏 TFT Screen	储存温度范围 Storage Temperature Range	-30~70°C
输入电压 Input Voltage	DC12V±5%	分辨率 Resolution	800*480	工作湿度范围 Operating Humidity Range	0%-90% RH
额定功率 Rated Power	6W	交互方式 Interaction	单点触摸 Single Point Touch Screen	通信接口 Communication Interface	RS485*2
通信协议 Communication Protocol	Modbus-RS485	工作温度范围 Operating Temperature Range	-20~70°C	可选功能 Optional Function	WIFI/4G二选一 WIFI,4G
远程控制 Remote Control	APP控制 APP Controlled	储存温度范围 Storage Temperature Range	-30~70°C	UI	需提供UI UI Provided by Customer
外形尺寸 Dimension	226*163*38mm	工作湿度范围 Operating Humidity Range	0%-90% RH		

OHIZUMI SENSORS  
大泉温度传感器

OHIZUMI



HEAT PUMP SOLUTION  
ACCESSORIES

热泵方案配套产品

产品名称 Product Name	传感器 Sensor	产品系列 Product Series	
品牌 Brand	大泉 Ohizumi		<ul style="list-style-type: none"> <li>• 空调温度传感器: 室内机进风口; 室外机、热交换器温度感应、压缩机过热温度感应、压缩机表面温度感应</li> <li>• 冰箱温度控制及除霜传感器</li> <li>• 热水器用传感器</li> <li>• 微波炉用传感器</li> <li>• 流量传感器</li> <li>• 湿度传感器</li> <li>• 高温传感器</li> <li>• 水位、液位传感器</li> <li>• Air Conditioner Sensor: inlet, outlet, room thermo, outdoor ambient thermo, Evaporator thermo, Compressor over heat sensor, Compressor surface temperature sensor</li> <li>• Thermo or defroster sensor for refrigerators</li> <li>• Temperature sensor for hot water boiler</li> <li>• Temperature sensor for electronic oven</li> <li>• Flow Sensor</li> <li>• Humidity Sensor</li> <li>• Water/other liquid level detector</li> </ul>
认证 Certificates	RoHS		
材质 Material	铜, 环氧树脂 Copper, Epoxy Resin		



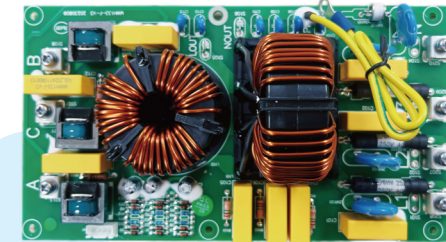
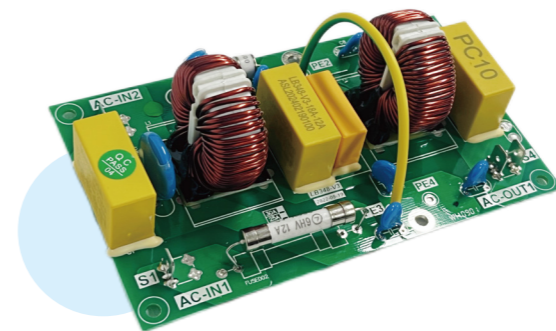
CABLES

线束、线缆



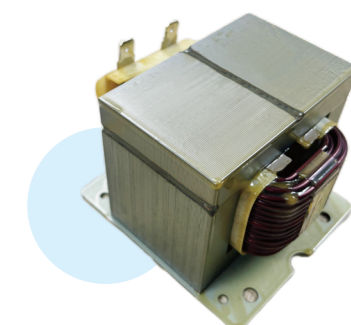
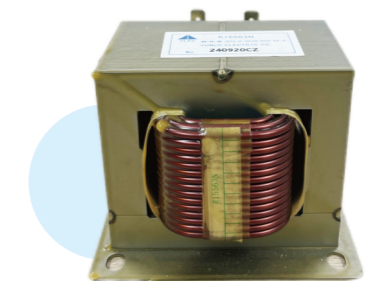
FILTER BOARD

滤波板



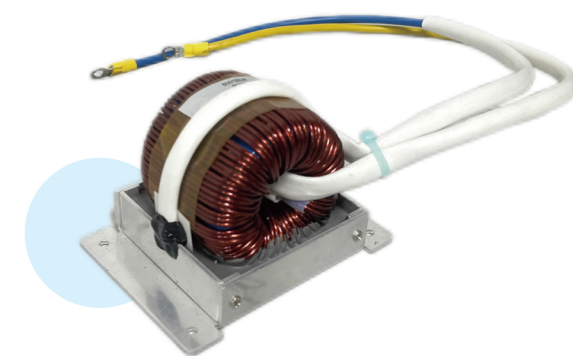
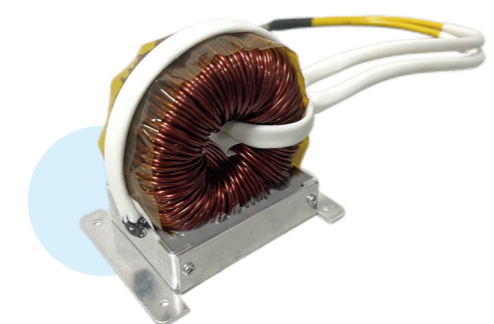
REACTOR

电抗器



PFC INDUCTOR

PFC电感



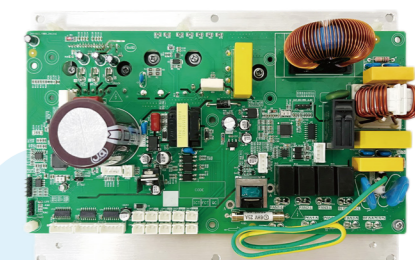


INVERTER AIR CONDITIONER SERIES  
直流变频空调系列

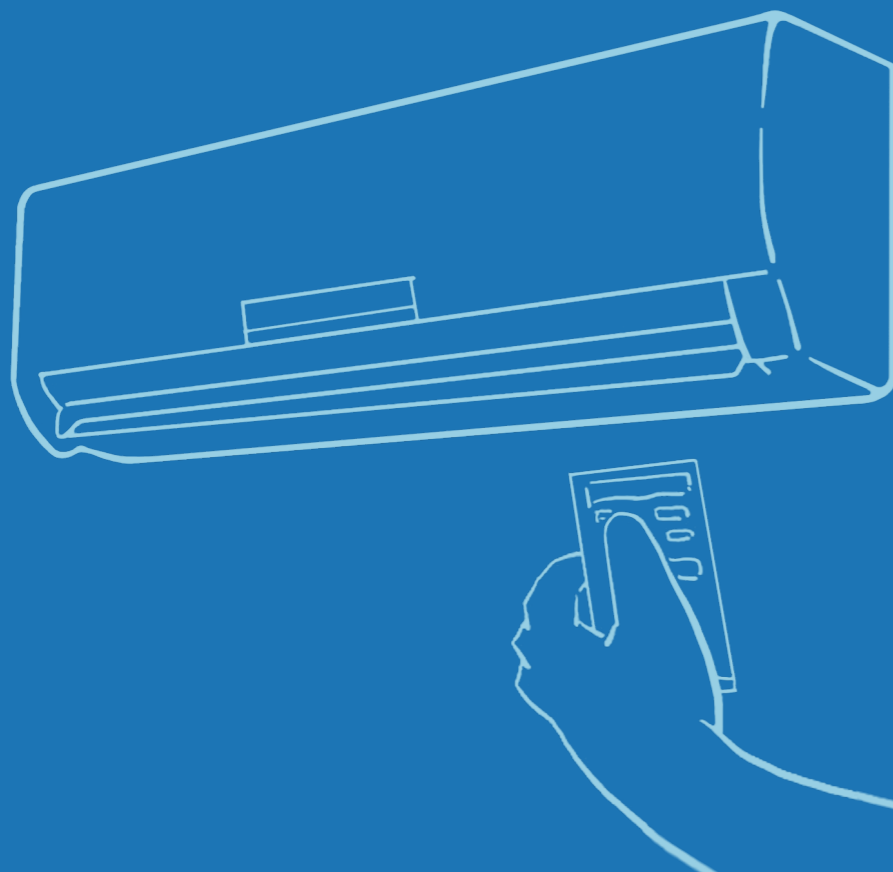


奥索兰:变频驱动绿色未来  
ASL: Inverter tech drives green future

KITCHEN AC CONTROLLER PCBA  
厨房空调控制板



INVERTER AIR  
CONDITIONER SERIES  
直流变频空调系列



产品名称 Product Name	1.5kW厨房空调控制板 1.5kW Kitchen AC Controller PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	6路 6 channels
适用场景 Usage Scenarios	厨房、室内 Kitchen, Indoor	功率因数 Power Factor	0.99	继电器输出 Relay Output	4路 4 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	输出效率 Output Efficiency	0.93至0.95 0.93-0.95	膨胀阀输出 Expansion Valve Output	1个 1 channel
工作电压范围 Operating Voltage Range	AC175V-AC265V	冷媒 Refrigerant Type	R410;R290;R32	通信接口 Communication Interface	RS485 1个 RS485*1
工作电源频率 Operating Power Frequency	50/60HZ	工作温度范围 Operating Temperature Range	-30~55°C	步进电机接口 Stepper Motor Interface	2
额定输入功率 Rated Power Input	1.5kW	储存温度范围 Storage Temperature Range	-30~80°C	外形尺寸 Dimension(with radiator fins)	245*130*85mm
散热方式 Heat-dissipating Method	风冷/液冷 Air Cooling/Liquid Cooling	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)		
压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	3路 3 channels		

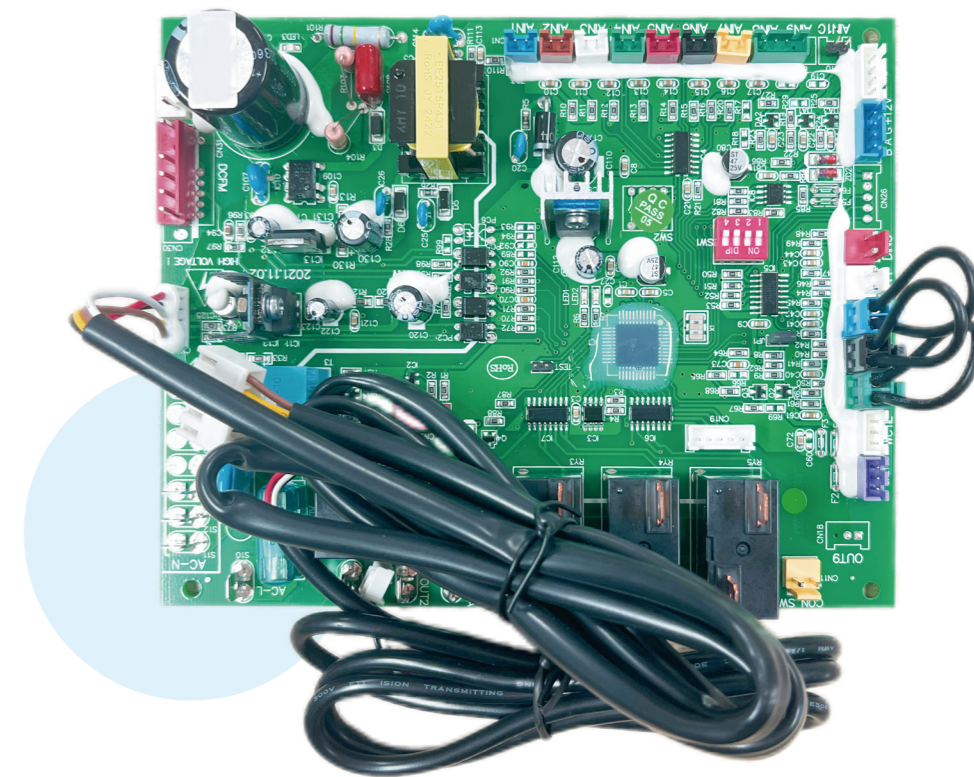


INVERTER DEHUMIDIFIER SERIES  
直流变频除湿机系列



奥索兰:变频驱动绿色未来  
ASL: Inverter tech drives green future

INVERTER DEHUMIDIFIER CONTROLLER PCBA  
直流变频除湿机控制板



INVERTER DEHUMIDIFIER SERIES  
直流变频除湿机系列



产品名称 Product Name	变频除湿机控制板 Inverter Dehumidifier Controller PCBA	输出机械频率范围 Range of Output Mechanical Frequency	20Hz-120Hz	模拟量输入 Analog Input	6路 6 channels
适用场景 Usage Scenarios	室内 Indoor	功率因数 Power Factor	0.99	继电器输出 Relay Output	4路 4 channels
额定电压 Rated Voltage	单相AC220V Single Phase AC 220V	输出效率 Output Efficiency	0.93至0.95 0.93~0.95	直流风机输出 DC Blowers Output	1个 1 channel
工作电压范围 Operating Voltage Range	AC175V-AC265V	冷媒类型 Refrigerant Type	R410;R290;R32	膨胀阀输出 Expansion Valve Output	1个 1 channel
工作电源频率 Operating Power Frequency	50/60HZ	工作温度范围 Operating Temperature Range	-30~55°C	调速水泵 Pump	无 None
额定输入功率 Rated Power Input	1~6KW (不含电加热器) (without electric heater)	储存温度范围 Storage Temperature Range	-30~80°C	通信接口 Communication Interface	RS485 1个 RS485*1
散热方式 Heat-dissipating Method	风冷 Air Cooling	工作湿度范围 Operating Humidity Range	10%~95% (无结霜和凝露) (No frosting and condensation)	外形尺寸 Dimension(with radiator fins)	174*140*40mm
压缩机类别 Compressor Type	BLDC/PMSM压缩机 BLDC/PMSM Compressor	开关量输入 On-off Input	5路 5 channels		

INTEGRATED PCBA  
FOR HEAT PUMP

## 冷冻冷藏车系列

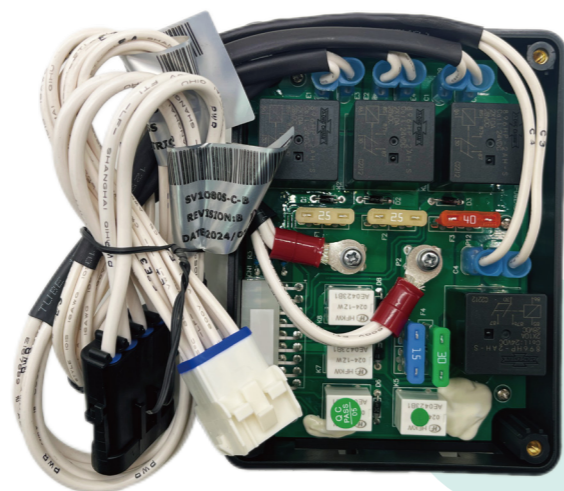
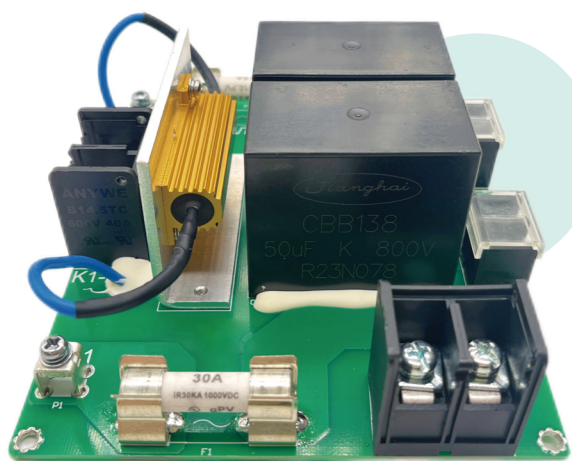
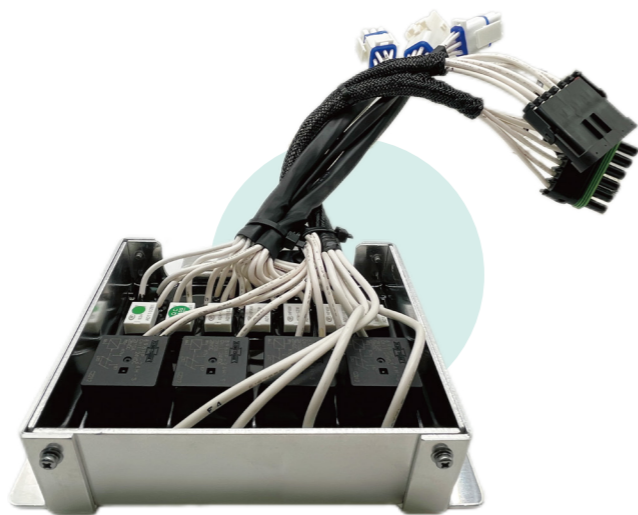
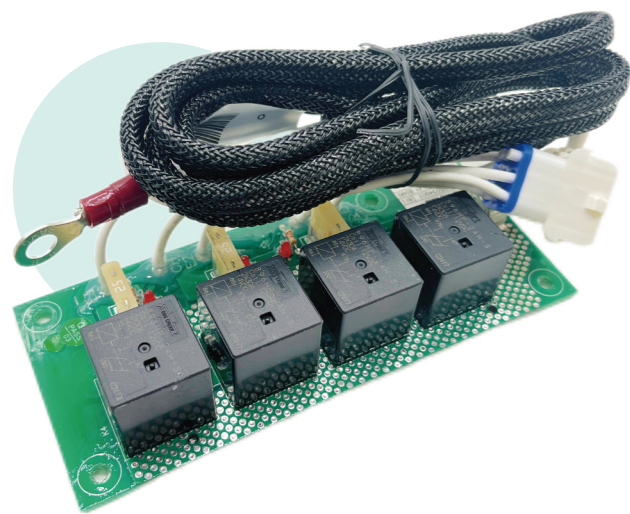




REFRIGERATED TRUCK SERIES  
冷冻冷藏车系列



REFRIGERATED TRUCK THERMOSTAT, EV REFRIGERATED TRUCK THERMOSTAT  
冷冻冷藏车控制器、新能源冷冻冷藏车控制器



产品名称 Product Name	运输制冷机组控制器 Transport Refrigeration Unit Controller
使用场景 Usage Scenarios	燃油、新能源车冷冻冷藏机组 / 集装箱冷冻冷藏机组 / 航空集装箱冷冻冷藏机组 / 平板车发电机组 Fuel and new energy vehicle refrigeration units / container refrigeration units / aviation container refrigeration Refrigeration units / flatbed generator sets
主要功能 Main Functions	控制机组, 制冷、制热、除霜和使用备电等 Control units for refrigeration, heating, defrosting, and using backup power, etc.
附加功能 Accessory Functions	带有CAN或RS485接口, 可连接移动通信终端, 实现远程监控。带有语音功能模块, 可以用语音控制机组和发出提示等。 Equipped with CAN or RS485 interfaces, can be connected to mobile communication terminals for remote monitoring. Featured a voice function module, allowing voice control of the unit and issuing prompts, etc.



REFRIGERATED TRUCK SERIES  
冷冻冷藏车系列



奥索兰: 变频驱动绿色未来  
ASL: Inverter tech drives green future



USAGE SCENARIOS  
适用场景





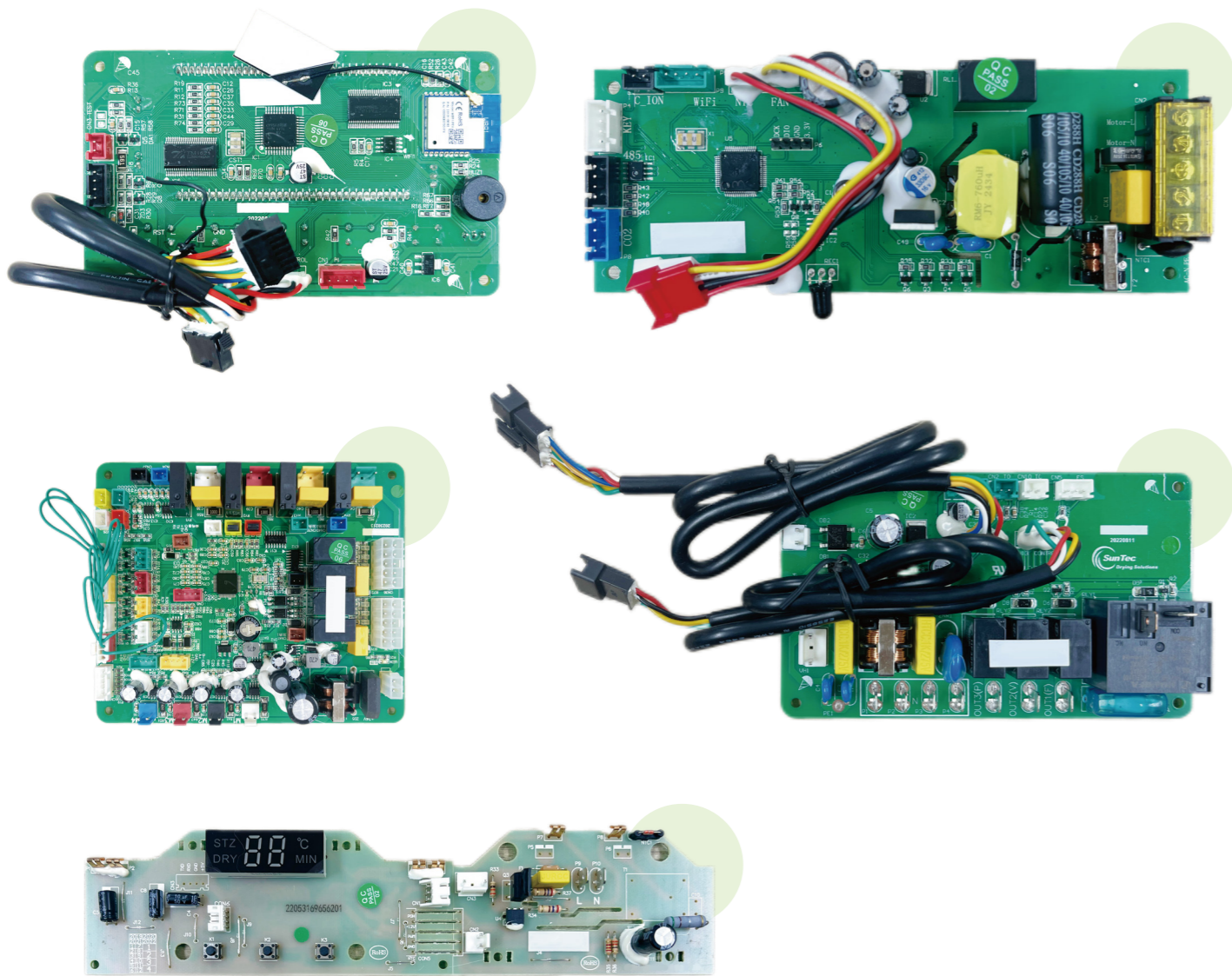
HOME APPLIANCES SERIES

小家电产品系列



HOME APPLIANCES PCBA

小家电控制板



USAGE SCENARIOS  
适用场景



类型 Type	功能 Function
<b>新风机、穿墙机控制板</b> Energy Recovery Ventilator PCBA; Single Room Energy Recovery Ventilator PCBA	<b>进风, 出风, 循环风, 多机联动</b> Inlet Air, Outlet Air, Recirculated Air, Multi-Machine Linkage
<b>油炸机控制板</b> Fryer System Control PCBA	<b>定时油炸, 自动升降摇篮, 烹饪结束计时</b> Timed Frying, Automatic Lifting Cradle, Cooking End Timer
<b>烘鞋机控制板</b> Shoes Dryer System Control PCBA	<b>臭氧, 烘干</b> Ozone, Drying
<b>保温柜控制板</b> Thermal Cabinet System Control PCBA	<b>定时加热, 到时提醒</b> Timed Heating with Reminder Alert

**ADVANCED R&D AND PRODUCTION EQUIPMENT**  
**先进的研发和生产设备**

**R&D EQUIPMENT**  
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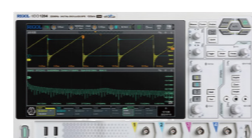
可编程高低温恒温恒湿柜  
Programmable High and Low Temperature Constant Humidity Chamber



10KVA/50KVA交流变频电源  
10KVA/50KVA AC Variable Frequency Power Supply



直流稳压电源  
DC Regulated Power Supply



高精度混合信号示波器  
High-Precision Mixed Signal Oscilloscope



泄漏电流测试仪  
Leakage Current Tester



多功能安规测试仪  
Multifunction Safety Testing Instrument



Tektronix数字存储示波器  
Tektronix Digital Storage Oscilloscope



单相隔离变压器  
Single-Phase Isolation Transformer



数字电桥  
Digital Bridge



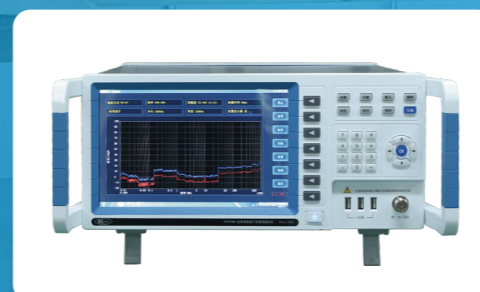
单相/三相功率计  
Single-Phase/Three-Phase Power Meter



单相/三相功率计  
Single-Phase/Three-Phase Power Meter



耐压测试仪  
Dielectric Strength Tester



EMI屏蔽实验室  
EMI shielding laboratory



EMS设备  
EMS equipments

PRODUCTION EQUIPMENT  
生产设备



日东十温区回流焊  
Ten-Zone Reflow Oven



无铅波峰焊机  
Lead-Free Wave Soldering Machine



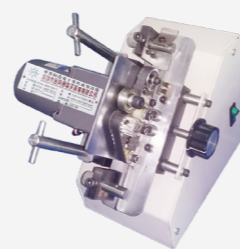
自动上下板机  
Automatic PCB Loader/Un-loader



电容切脚机  
Capacitor Lead Cutting Machine



全自动印刷机  
Fully Automatic SMT Screen Printer



IC整脚机  
IC Lead Straightening Machine



格林叠板机  
Stacking Machine



AOI检测仪  
AOI Tester

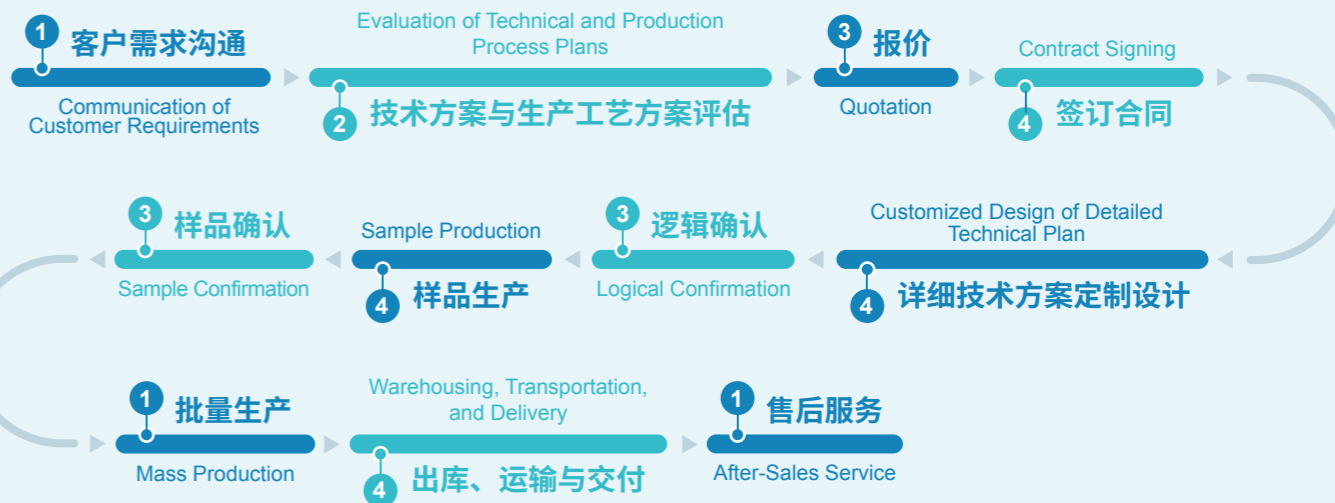


跳线成型机  
Jumper Wire Forming Machine



贴片机  
Pick and Place Machine

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客户服务流程



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Building Living Quality

**DSL** 戴思乐

The logo consists of the letters 'ASL' in a bold, blue, sans-serif font. A stylized orange and blue swoosh underline is positioned beneath the 'A'.

**奥索兰**

变频驱动绿色未来  
Inverter Tech Drives Green Future

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