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GEYA
格亚电气

一切为了用电安全

Dual Power Comprehensive Catalog

双电源综合目录

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浙江格亚电气有限公司
ZHEJIANG GEYA ELECTRICAL CO.LTD.

GEYA

GEYA 格亚电气

双电源自动转换开关

Dual power automatic transfer switch

G2R

01 集成驱动与通电部分
Integrated drive and power-on section

集成了驱动与通电部分，极大减小产品尺寸，成功申请并获得了国家发明专利

It integrates the drive and power supply parts,greatly reducing the product size Successfully applied for and obtained a national invention patent

02 单刀双掷拍合式
Single pole double throw racket type

采用单刀双掷拍合式触头结构，切换更迅速

Using single-pole double-throw patting contact structure, the switch is faster

03 转换时间<20ms
Conversion time < 20ms

线圈励磁驱动,转换时间<50ms 触头转换时间<20ms

Coil excitation drive, conversion time < 50ms Contact conversion time < 20ms

04 双安装方式
Dual mounting system

导轨/螺丝 双安装方式

Rail/screw mounting Dual mounting system

05 独立灭弧室
Individual arc extinguishing chamber

配备独立灭弧室，有效快速灭弧

Equipped with independent arc extinguishing chamber, effective and rapid arc extinguishing

配电设备的小型化意味着配电柜内安装密度的提升和柜体数量的有效优化可以有效降低建筑成本G2R系列智能自动转换开关采用极致体积优化设计并依然具备优异的电气、机械性能可安装在传统的PZ30柜内部。

The miniaturization of distribution equipment means that the increase in installation density inside the distribution cabinet and the effective optimization of the number of cabinets can effectively reduce building costs. The G2R series intelligent automatic transfer switch adopts extreme volume optimization design and still has excellent electrical and mechanical performance, which can be installed inside traditional PZ30 cabinets.

修订记录 Revision record					
版本 Version	修订原因/内容 Revision reasons/contents	实施日期 Implementation date	编制人 Compiler	审核人 Reviewer	批准人 Approver
B01	增加了过压、欠压功能	2024.8	徐双燕	林逸勉	林立
B02	增加了抗干扰能力， 修正了过压、欠压参数	2024.10	徐双燕	郑朝勇	林立

订单信息 Order Information		
订购代码 Ordering Code	110	230
G2R-63/2P	130200000018	130200000006

包装信息 Packing Information	
每箱数量 Units per Carton	48 pcs
产品/内盒/纸箱重量 Product / Inner box / Carton Weight	0.343kg/0.029kg/0.511kg
每箱净重/毛重 Net / Gross Weight per Carton	16.464kg/18.655kg
尺寸（高×宽×长） Dimensions(H xWx L)	[275x260x475 mm]

订单信息 Order Information		
订购代码 Ordering Code	110	230
G2R-63/4P	130200000019	130200000012

包装信息 Packing Information	
每箱数量 Units per Carton	30 pcs
产品/内盒/纸箱重量 Product / Inner box / Carton Weight	0.528kg/0.042kg/0.511kg
每箱净重/毛重 Net / Gross Weight per Carton	15.84kg/17.791kg
尺寸（高×宽×长） Dimensions(H xWx L)	[275x260x475 mm]

G2R

双电源自动转换开关

Automatic transfer switch

环保符合性: RoSH 2.0
Environmental Compliance: RoHS 2.0

G2R-63双电源自动转换开关属于PC级不频繁切换开关，两工位设计（常用A工作，备用B工作），适用于交流50-60Hz，额定电流6A-63A的交流电系统。双电源自动转换开关的主要作用是当用户主电源（常用电源A）发生异常后，产品自动投切至备用电源（备用电源b）继续工作，有效解决用户因断电引起的困扰。

G2R-63 automatic transfer switch is a PC class infrequent change-over switch, with two-station design (commonly used for A and standby for B), suitable for AC systems with AC 50-60hz and rated current 6A-63A. The main function of the automatic transfer switch is when the main power (common power supply A) fails, the ATS will automatically switch to the backup power (Backup power supply B) to continue working, which can effectively solve the troubles caused by power outages.

正常工作条件 Working Conditions

运行环境温度范围为-5℃~+40℃，且其24h内的平均温度值不超过+35℃，存储环境温度范围为-25℃℃~+55℃，短时间内(24h内)可达+70℃。
安装地点的海拔高度不超过2000m。
安装地点的空气相对温度在周围空气温度为+40℃时不超过50%，在较低温度下可以有较高的相对湿度。例如:在最湿月的平均最低温度为+20℃时，该月的月平均最高相对湿度可达90%。对由于温度变化而产生的凝露应采取适当的措施予以防止。
污染等级3级(有导电性污染，或由于凝露使干燥的非导电性污染变为导电性的)。ATS可以垂直或水平安装在柜体内，若有特殊安装要求需与我公司联系。产品外壳防护等级级为IP30。
过电压类别:主电路III类；控制和辅助回路II类。

The temperature range of the operating environment is -5°C~+40°C, and the average temperature within 24 hours shall be lower than +35°C, and the temperature range of the storage environment is -25°C~+55°C, which can be reached +70°C in a short time (within 24 hours)
The altitude of the installation site should be lower than 2000m.
The relative temperature at the installation site shall not exceed 50% when the ambient air temperature is +40°C.Higher relative humidity is possible at lower temperatures. For example: when the average minimum temperature of the wettest month is +20°C,the monthly average maximum relative humidity of that month can reach90% . Appropriate measures should be taken to prevent condensation due to temperature changes.
Pollution level 3 (conductive pollution, or dry non-conductive pollution becomes conductive due to condensation). ATS can be installed vertically or horizontally in the cabinet, if there are special installation requirements, contact us.
The protection grade of ATS case is IP30.
Overvoltage category: Main circuit category III; control and auxiliary circuit category II.

产品型号及含义 Product model and meaning

G	2	R —	63	□	□
企业代号 Company code	产品类别 Product Category	安装方式 Installation method	壳架等级 Case grade	极数 Pole	
浙江格亚电气有限公司 ZHEJIANG GEYA ELECTRICAL CO.,LTD	PC级自动转换开关电器(二工位) PC class automatic transfer switch (two stations)	导轨安装 Din-rail installation	63	2P/4P	额定工作电压 Rated working voltage: AC230V，AC110V 额定操作电流 Rated operating current: 6A/10A/16A/20A/25A/32A/40A/50A/63A

主要技术参数 Technical Specification

	63								
额定工作电流Ie(A) Rated operating current Ie(A)	06A	10A	16A	20A	25A	32A	40A	50A	63A
额定绝缘电压Ui Rated insulation voltage Ui	690V								
额定冲击耐受电压Uimp Rated impulse withstand voltage Uimp	8kV								
额定操作电压Ue Rated operating voltage Ue	AC230V/AC110V								
额定频率 Rated frequency	50/60Hz								
级别 Class	PC级别：可以接通和承载，同时不产生短路电流 PC class: can be switched on and loaded without generating short-circuit current								
极数 Pole number	2P				4P				
额定短路电流Iq Rated short-circuit current Iq	50kA								
短路保护装置(保险丝) Short circuit protection device (fuse)	RT16-00-63A								
控制电路 Control circuit	额定控制电压Us:AC230V/110V,50/60Hz 正常工作条件:85%Us-110%Us必须使用功率输出至少额定功率3000W及以上的逆变器（请使用正弦波。严重的电磁干扰可能导致产品故障） Rated control voltageUs:AC220V/110V,50/60Hz Normal working conditions:85%Us-110%Us You must use an inverter with a power output of at least 3000W (please use a sine wave Severe electromagnetic interference may cause the product to malfunction.)								
辅助电路 Auxiliary circuit	AC230V/110V 50/60Hz Ie=5A								
机械寿命 Mechanical life	≥8000次 ≥8000 times								
电气寿命 Electrical life	≥1500次 ≥1500 times								
使用类别 Usage category	AC-31B								

主要技术参数 Technical Specification

工作电压 Working voltage	工作频率 Working frequency	欠压动作值 Under-voltage action value	欠压恢复值 Under-voltage recovery value	过压恢复值 Overvoltage recovery value	过压动作值 Overvoltage action value	动作延迟 Action delay	恢复延迟 Recovery delay
110V	50/60Hz	85V	90V	135V	140V	10S	30S
230V	50/60Hz	175V	190V	250V	270V		
功能描述 Function description	双电源自动切换（I路优先）。过压、欠压保护。 当电压正常时，LED保持常亮。 电压异常时： 过压状态：每2秒闪2次。 欠压状态：每2秒闪1次。 当电压异常时，动作阶段有10秒的延迟。LED灯呈现呼吸灯效果（默认10秒）：欠压时，灯由亮变暗；过压时，灯由暗变亮。 Dual power supply automatic switching (I channel priority). Overvoltage and undervoltage protection. When the voltage is normal, the LED remains constantly lit. When the voltage is abnormal: Overvoltage state: The LED flashes twice every 2 seconds. Under-voltage state: The LED flashes once every 2 seconds. When the voltage is abnormal, there is a 10-second delay in the action stage. The LED light shows a breathing light effect (default 10 seconds) : when the voltage is low, the light changes from bright to dark; when the voltage is high, the light changes from dark to bright.						

注意事项 Notes

带电环境禁止非专业人员操作

输入电源必须按照正确的相序连接，不能使用1P断路器独立控制N线和L线。要切换电源，需要同时操作N线和L线。否则，可能会出现产品故障。

双电源属于应急切换开关，切换速度和频率不宜过高，如果有测试需要，切换时间不能小于1分钟一次的频率。

双电源开关内置弹簧互锁机构，严禁非专业人员在通电情况下手动切换开关，错误的操作会导致触头损耗，导致使用寿命下降。

接入电源时，需按照产品标识的零线、火线位置接入。输入电源必须严格按照相序接入。

必须使用功率输出至少额定功率为3000W及以上的逆变器(请使用正弦波。严重的电磁干扰可能导致产品故障)。

在手动操作中，由于操作员的开/关速度不同，因此无法保证产品开关性能。在手动操作中，可能会发生过多的银合金损失。 因此，只有在切断所有电源以检查和维护操作系统及联系信息后，才能将选择器开关拉到手动位置。通常，请将拨动开关拉到电动位置。需要手动操作时，将拨动开关拉到手动位置。 手动操作完成后，将拨动开关从手动位置拉到自动位置。

Non-professionals are prohibited from operating in electrified environments

The input power supply must be connected in the correct phase sequence. A single-pole (1P) circuit breaker must not be used to independently control the neutral (N) line and live (L) line. To switch the power supply, both the N and L lines must be operated simultaneously. Otherwise, product malfunctions may occur.

The dual power supply serves as an emergency transfer switch, and its switching speed and frequency should not be too high. If testing is required, the switching interval must not be less than one minute per operation.

The dual power switch incorporates a built-in spring interlock mechanism. Non-professionals are strictly prohibited from manually operating the switch while energized, as improper handling may cause contact wear and reduced service life.

When connecting the power supply, neutral (N) and live (L) wires must be terminated according to product labeling. The input power supply must strictly adhere to the correct phase sequence.

An inverter with a rated output power of at least 3000W must be used (pure sine wave inverters required. Severe electromagnetic interference may cause product failure).

During manual operation, the opening/closing speed cannot be guaranteed due to differences in operator speed. Excessive loss of silver alloy may occur during manual operation. Therefore, the selector switch should only be pulled to the Manual position after all power has been cut off to inspect and maintain the operating system and contact information.Normally, keep the toggle switch pulled to the Electric position.

When manual operation is required, pull the toggle switch to the Manual position.After manual operation is completed, pull the toggle switch from the Manual position to the Automatic position.

安装 Installation

ATS的安装与调试中的各项工作应由专业人士和了解该开关设备的人员进行，工作中必须考虑相应的保护和预防措施。开关主回路的接线方式必须使引线不受任何压力或强力作用。安装调试前应先查验开关有无损坏或其它任何有危害性的环境影响，同时应检查可能在运输中造成的线头松动，清除脏污，尤其是绝缘件表面的脏污，这些脏污可能是由于在运输过程中透过包装材料或在存储过程中造成的。在连接一次回路时应注意两路电源的相序一致，连接二次回路时应严格按照该说明书中列出的接线图，同时注意控制电源电压等级；开关安装时必须有良好的接地。考虑到人身安全与开关切换的快速性，调试手柄仅作调试用，用户切勿用调试手柄带负荷操作。调试时应先用手柄操作开关，若无异常，再用手动按钮电动操作，无异常后进行正式运行。

安装环境：将 ATS 安装在干净、干燥且气流充足的表面上。

电气连接：确保所有连接都牢固，以防止过热和火灾危险。

遵守当地法规：确保符合适用的当地电气规范，以确保安全性和可靠性。

遵守这些准则可确保 ATS 的安全运行，

The installation and debugging of ATS should be carried out by professionals and personnel familiar with the switchgear, and corresponding protection and preventive measures must be considered during the work. The wiring method of the main circuit of the switch must ensure that the leads are not subjected to any pressure or strong force. Before installation and debugging, the switch should be checked for any damage or other harmful environmental effects. At the same time, any loose wire heads that may be caused during transportation should be checked to remove dirt, especially on the surface of insulation parts. These dirt may be caused by passing through packaging materials during transportation or during storage. When connecting the primary circuit, attention should be paid to ensuring that the phase sequence of the two power sources is consistent. When connecting the secondary circuit, strict adherence to the wiring diagram listed in this manual should be followed, and attention should be paid to controlling the voltage level of the power supply; The switch must be installed with good grounding. Considering personal safety and the speed of switch switching, the debugging handle is only for trial use. Users should not use the debugging handle to operate under load. When debugging, the switch should be operated with a handle first. If there are no abnormalities, the manual button should be used for electric operation. After there are no abnormalities, the official operation can be carried out.

Installation environment: Install ATS on a clean, dry, and well ventilated surface.

Electrical connections: Ensure that all connections are secure to prevent overheating and fire hazards.

Comply with local regulations: Ensure compliance with applicable local electrical codes to ensure safety and reliability.

Adhering to these guidelines can ensure the safe operation of ATS,

维护与保养 Maintenance and upkeep

维护和检查应由专业人员进行。切断所有电源之前。为确保ATS的良好性能，应在使用后的6个月内进行首次维护和检查。然后每年至少维护和检查一次。在恶劣的安装条件下，应增加维护和检查的频率。

a：如果维护和检查项目失败，请清除灰尘。

b：请检查电触头部件是否变形和损坏，并清除表面。

c：及其周围的金属颗粒和烧焦。接触表面上的锈蚀，酸化和灰尘可能会导致接触不良，因此请执行一些手动操作并测量必要的接触电阻。

d：如果ATS潮湿或长时间空置，请在打开电源之前将其干燥。清除灰尘后，使用500V兆欧表测量正常电源和交流电源的绝缘电阻。负载侧和两极，包括绝缘电阻，在使用带电部件和金属板时，绝缘电阻不应小于10MQ。

苯丙胺类兴奋剂应与正常工作条件在相同的环境中存放，并采取防尘，防潮和防撞措施。

Maintenance and inspection should be carried out by professionals.In order to ensure the good performance of the ATS, the first maintenance and inspection should be carried out within 6 months after use. Then do the maintenance and inspection at least once a year. In harsh installation conditions, the frequency of maintenance and inspection should be increased.

a: If the maintenance and inspection items fail, please remove the dust.

b: Please check whether the electrical contact parts are deformed and damaged, and clean the surface.

c: metal particles and burnt around it. Rust, acidification and dust on the contact surfaces can cause poor contact, so do some manual work and measure the necessary contact resistance.

d: If the ATS is wet or left unused for a long time, please dry it before turning on the power. After removing the dust, use a 500V megohmmeter to measure the insulation resistance of the normal power supply and the AC power supply. The load side and two poles, including the insulation resistance, when using live parts and metal plates, the insulation resistance should not be less than 10MQ.

专业检查：聘请合格人员定期检查ATS，验证其是否正常运行。

日常清洁：定期清除灰尘和碎屑，以确保最佳性能。

电气触点检查：检查电气触点是否磨损或损坏，并拧紧任何松动的连接，以保持可靠运行。

湿度控制：保持干燥的环境，以防止与水分相关的故障

绝缘测试：定期测试绝缘电阻，以验证是否符合安全标准。

正确储存：将ATS储存在受保护的环境中，在不使用时避免灰尘、湿度和身体伤害。

遵守这些完善的维护程序可确保ATS的安全有效功能。

Professional Inspection: Engage qualified personnel to regularly inspect the ATS, verifying proper operation.

Routine Cleaning: Periodically remove dust and debris to ensure optimal performance.

Electrical Contact Check: Inspect electrical contacts for wear or damage and tighten any loose connections to maintain reliable operation.

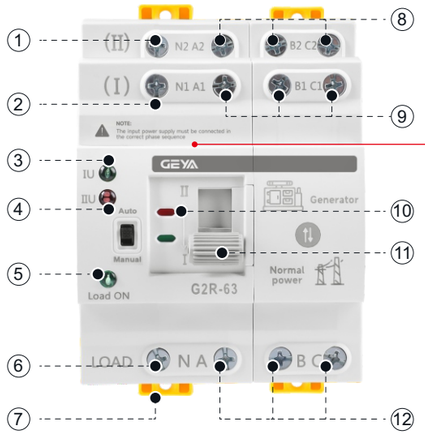
Humidity Control: Maintain a dry environment to prevent moisture-related malfunctions

Insulation Testing: Routinely test insulation resistance to verify adherence to safety standards.

Proper Storage: Store the ATS in a protected environment, shielded from dust, humidity, and physical harm when not in use.

Adhering to these refined maintenance procedures ensures the safe and effective functionality of ATS.

接线说明 Wiring instructions



注意 NOTE:
输入电源必须按照正确相序接入
The input power supply must be connected in the correct phase sequence

电源指示灯状态 Power indicator light status

当电源处于欠压状态时，指示灯闪烁（每两秒闪一次）；
当电源处于过压状态时，指示灯闪烁（每两秒闪两次）；
当电源切断时，指示灯熄灭。

When the power supply is under voltage, the indicator light flashes (Flashes every two seconds);
When the power supply is in an overvoltage state, the indicator light flashes(Flash twice every two seconds);
When the power is cut off, the indicator light goes out.

① 备用电源零线 Backup power neutral wire
② 常用电源零线 Common power neutral wire
③ 常用电源指示灯 Common power supply
④ 备用电源指示灯 Backup power supply
⑤ 负载电源 Load power
⑥ 负载输出零线 load output neutral wire
⑦ 导轨卡扣 Din-Rail bu ckle
⑧ 备用电源火线 Backup power live wirelive wire
⑨ 常用电源火线 Common power live wire
⑩ 合闸指示(绿色:工作ON红色:断开OFF) Closing indication (Green:ON, Red:OFF)
⑪ 手动操作手柄 Manual operation handle
⑫ 负载输出火线 load outputlive wire

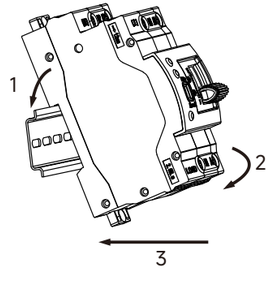
安装说明 Installation Instructions

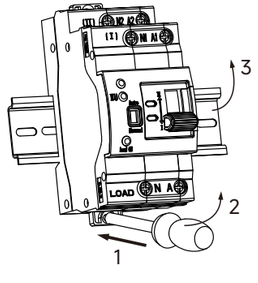
⚠ 重要提示： Important Notice:

在安装或操作本产品前，请务必仔细阅读本手册。如有任何疑问，请联系我公司。
严禁未经授权拆卸产品，以免造成设备故障或失效。

Please read this manual carefully before installing or operating the product. If you have any questions, Please contact our company.
Unauthorized disassembly of the product is strictly prohibited to prevent instrument failure or malfuntions.

DIN导轨安装 DIN Rail Installation





1.将ATS基座的上端插入DIN导轨。
2. 将ATS基座的下端推入DIN导轨，直至卡扣牢固锁定。

1. Insert the upper end of the ATS base into the DIN rail.
2. Push the lower end of the ATS base into the DIN rail until the snap fastener locks securely.

DIN导轨拆卸 DIN Rail Disassembly

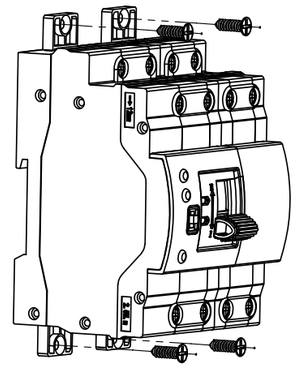
1.将螺丝刀插入ATS底部DIN导轨卡扣的圆孔中。
2.用螺丝刀向下撬动DIN导轨卡扣。
3.将ATS倾斜抬起，从DIN导轨上取下

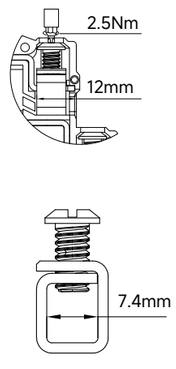
1. Insert a screwdriver into the round hole of the DIN rail snap fastener at the bottom of the ATS.
2.Use a screwdriver to pry the DIN rail snap fastener downward.
3. Tilt the ATS upwards and remove it from the DIN rail.

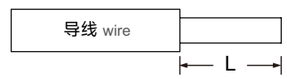
螺丝固定安装 Screw Mounting

1.拔出位于ATS底部的上下卡扣。
2.用螺丝将ATS固定在安装面板上。

1. Pull out the upper and lower snap fasteners located at the bottom of the ATS.
2. Secure the ATS to the panel with screws.







推入式接线脱扣长度
Push-in wiring Btripping length
12 mm ≤L≤ 13 mm

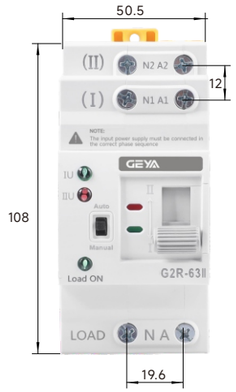
接线 Wiring

1. ATS 配备螺丝式接线端子，每个端子宽度为 7.4 毫米，适用于截面积为 1 至 16 平方毫米的铜导线。
2. 接线时，将导线剥去12 至 13 毫米的绝缘层；建议使用鸭嘴形端子头以确保连接牢固。
3. 拧紧螺丝，推荐扭矩为 2.5 Nm ，以确保紧固到位，同时避免损坏端子。

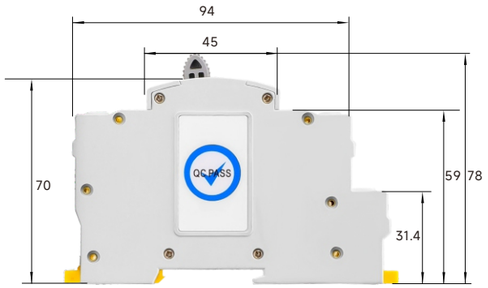
1. The ATS is equipped with screw-type terminals, each with a width of 7.4 mm, suitable for copper wires with a cross-sectional area of 1 to 16 mm^2
2. When wiring, strip the wire to a length of 12 to 13 mm; it is recomm ended to use a duckbill-shaped terminal for secure connection.
3. Tighten the screws with a recommended torque of 2.5 Nm to ensure proper tightening without damaging the terminals.

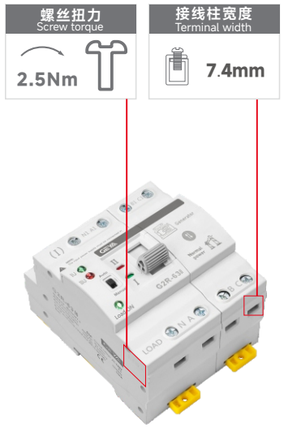
产品尺寸 Size

2P

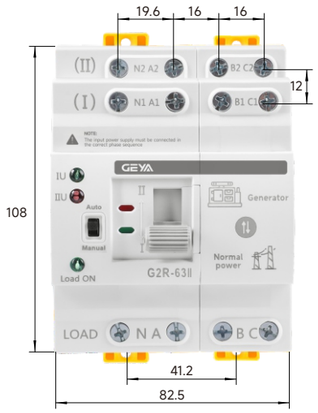


产品尺寸：108X50.5X78
Product size：108X50.5X78





4P



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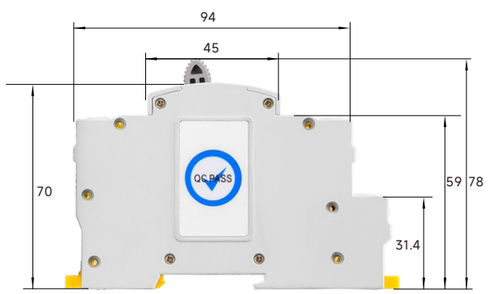
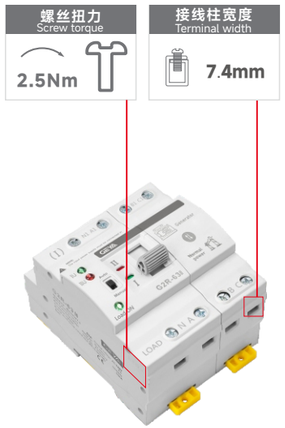
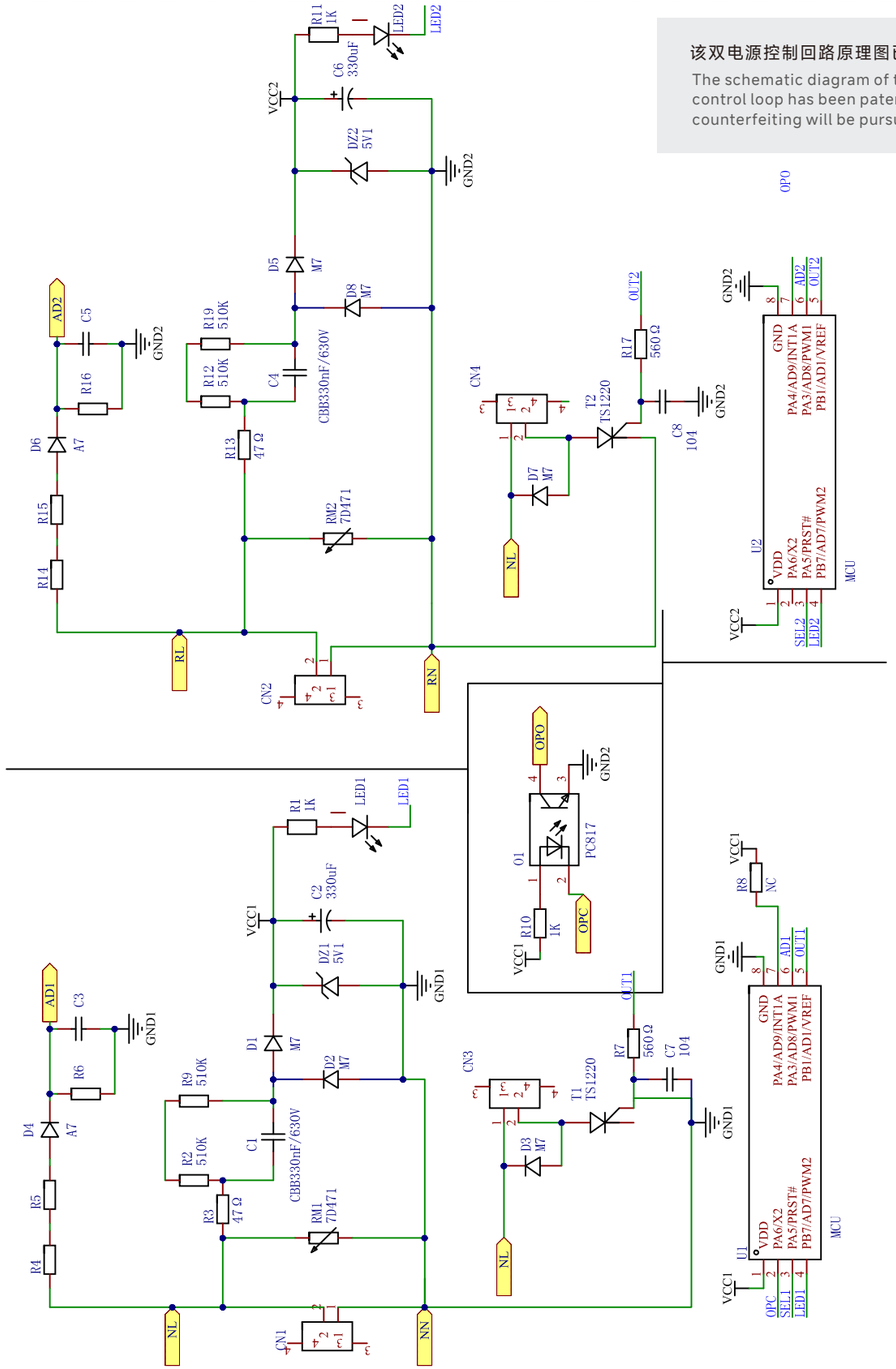
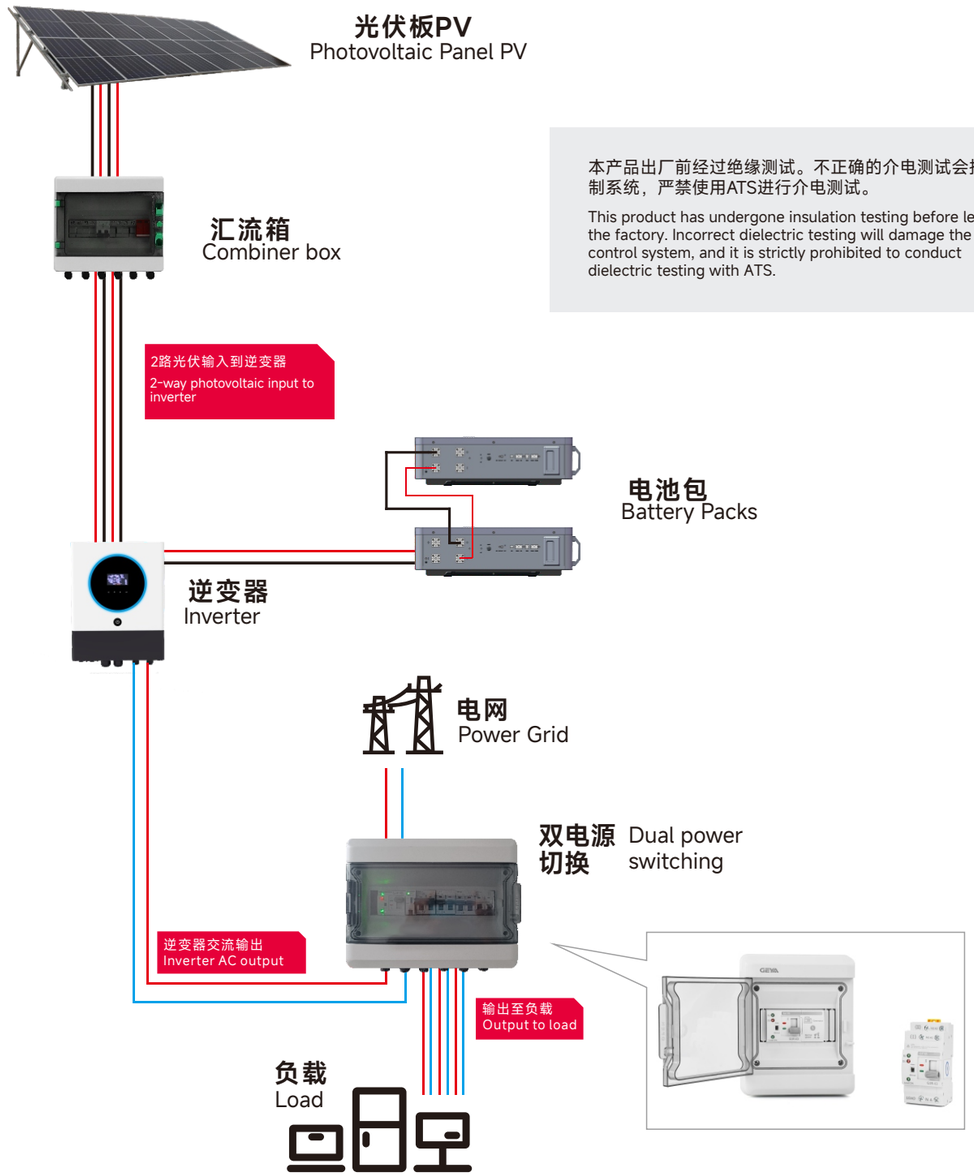




原理图 schematic diagram



应用场景 Application scenarios



本产品出厂前经过绝缘测试。不正确的介电测试会损坏控制系统，严禁使用ATS进行介电测试。

This product has undergone insulation testing before leaving the factory. Incorrect dielectric testing will damage the control system, and it is strictly prohibited to conduct dielectric testing with ATS.

可安装配电箱内

Can be installed inside the distribution box