Green Energy
Smart Inverter Expert

WIFI物联网智能并网逆变器

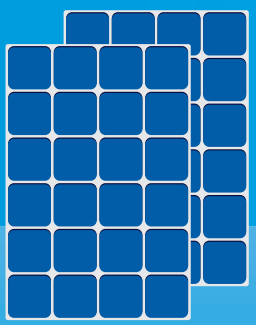
WVC-700
Description
说明书

2019年全新R3版智能型逆变器，集监控（Monitor）计量（Metering）、通讯（Communication）于一体，设有专用客户端APP。

In 2019, the new R3 version of the intelligent inverter integrates monitoring, metering and communication, and has a dedicated client APP.

IoT grid-connected inverter
自动识别全球电压,WiFi物联网监控模式
Automatic global voltage identification, WiFi IoT monitoring mode

- 随时随地，随心操控我的“智能电站“
  Control my "smart power station" anytime, anywhere
- 一键操作，电量、功率、效率、收益全知道
  One-button operation, electric quantity, power, efficiency, and revenue are all known
- 批量电站、电箱、逆变器轻松管理
  Easy management of batch power stations, electrical boxes, and inverters



适用平台

Android Apple Windows

Disclaimer

Exemption regulations stipulated by law

1.Force majeure: article 117th of the contract law stipulates that if force majeure fails to perform the contract, part or all of the liability shall be exempted according to the influence of force majeure, except as otherwise stipulated by law. If the party fails to perform force majeure after the delay, it cannot be exempted from responsibility. Force Majeure as mentioned in this Law refers to an objective situation that cannot be foreseen, unavoidable and insurmountable.

2. Natural nature of the goods themselves and reasonable loss of the goods: article 311st of the contract law stipulates that the carrier shall be liable for damages to damage or loss of the goods during transportation, however, the carrier proves that the damage or loss of the goods is caused by force majeure, the natural nature or reasonable loss of the goods themselves, and the fault of the shipper and consignee.

3. Creditor's fault: article 311st of the Contract Law and Article 370th of the Contract Law stipulate that the custody delivered by the depositor is defective or special custody measures are required according to the nature of the custody, the depositor shall inform the custodian of the relevant information.If the depositor fails to inform and causes the storage to be lost, the custodian shall not bear the liability for damages; if the custodian is therefore lost, except if the custodian knows or should know and fails to take remedial measures, the depositor shall bear the liability for damages.

Exemption clause:

1. Concept of exemption clause
The exemption clause is the contract clause in which the parties exclude or restrict their future responsibilities by agreement. First, the exemption clause is
The part of the contract is a kind of contract clause; second, the proposal of the exemption clause must be Express and not allowed to be silent.
The method is made and the judge is not allowed to assume the existence of the exemption clause.

2. The validity and invalidity of the exemption clause
(1) determine the validity or invalidity of the exemption clause based on the provisions of the current law. The disclaimer clause is expressed as an element by meaning.
The purpose of excluding or restricting the future liability of the parties is to belong to a civil act and should be subject to the contract law.
The provisions of Article 52nd, article 53rd, article 54th, article 47th, article 48th, article 51st and article 40th shall be adjusted.
(2) determining the validity or invalidity of the exemption clause based on the risk allocation theory
(3) to determine the validity or invalidity of the exemption clause according to the degree of fault, Article 40th and article 53rd of the contract law.
(4) determine the validity or invalidity of the exemption clause according to the severity of the breach of contract.

Disclaimer content:

1. The appearance of the whole machine is discolored, the parts are damaged, peeling, etc;
2. The appearance deformation caused by natural disasters or human impact and fall of the product cannot be used;
3. Unauthorized private disassembly and replacement, welding, cracking and commissioning caused damage;
4. Non-professional personnel carry out maintenance;
5, due to the user's use of related plug sockets, connecting heads or adapter and other poor contact caused by damage;
6. The number of hand-in-hand connection of each group exceeds the specified number in the manual;
7. If the cable diameter not guided by professional electricians does not meet the current standard during installation;
8, can not show the warranty card or provide purchase vouchers;
9. The installed position causes the inverter water to burn out on the border of the solar energy;
10. If the power grid is not disconnected for live operation during installation or maintenance, it will cause damage;

The above terms do not belong to the free warranty range of the product. Please be sure to clearly indicate the terms. Once the warranty is exceeded, the warranty will not be guaranteed. Be sure to refer to the product manual for installation.

WVC700-WiFi 产品简介

WVC700-WiFi智能并网逆变器采用IP65防水型流线外观设计，内置高性能最大功率点追踪（MPPT）功能、WIFI物联网/433MHz智能手机APP监控系统、全世界交流电压自动适应、高频并网模式等功能于一身的新一代智能并网逆变器，具备高性价比，智能并网发电的逆变器产品之一。

iWVC700-WiFi intelligent grid-connected inverter adopts IP65 waterproof streamline design, built-in high performance maximum power point tracking (MPPT) function, WIFI IoT/433MHz smart phone APP monitoring system, worldwide AC voltage automatic adaptation, high frequency the grid-connected mode is a smart grid-connected inverter with one of the intelligent inverters with high cost performance and intelligent grid-connected power generation.

端口图解
Port diagram

①太阳能板输入
Solar PV Input

②太阳能板输入
Solar PV Input

③AC输出/输入
AC Output/Input

④WiFi 2.4G天线
WiFi/433 Antenna

⑤LED指示灯
LED Display

光伏智能逆变器的功能特点

FEATURES :

高性能自动功率点追踪（MPPT）
Maximum power point tracking (MPPT)
逆向电力传输
Reverse power transmission
智能化监控管理
Intelligent monitoring and management
输入输出完全隔离，保障用电安全
Safety isolation
高可靠性多台并联堆叠
Multiple stacking
全数字化控制
Full digital control
安装灵活
Flexible installation
运行维护成本低
Low cost of the operation and maintenance
使用WiFi 2.4G/433MHz通讯模式
WiFi 2.4G/433MHz communication mode

注：当你购买433MHz版本逆变器时，你需要另外购买WIFI数据采集器。
Note: When you purchase a 433MHz version inverter, you need to purchase another WIFI data collector.

系统功能
System Function

物联网手机APP接入平台
IoT mobile APP access platform

1、WiFi 2.4G物联网通讯模式
WiFi 2.4G IoT communication mode

2、多个电站管理模式
Multi-station management mode

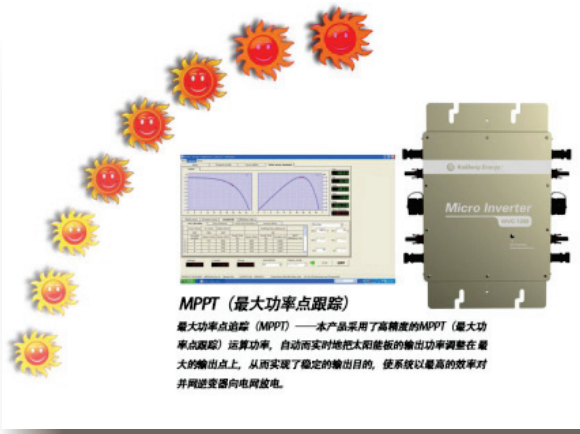
3、大屏幕电站数据显示
Large screen power station data display

4、逆变器故障自动报警功能
Inverter fault automatic alarm function

高精度MPPT功能
High precision MPPT function

内置MPPT追踪功能精度高达99.9%以上，能更好的跟踪太阳光度的变化而控制不同的输出功率，有效地捕捉与收集阳光。

The built-in MPPT tracking function has an accuracy of over 99.9%.Can better track changes in solar luminosity and control different output power,captured and collected sunlight effectively.



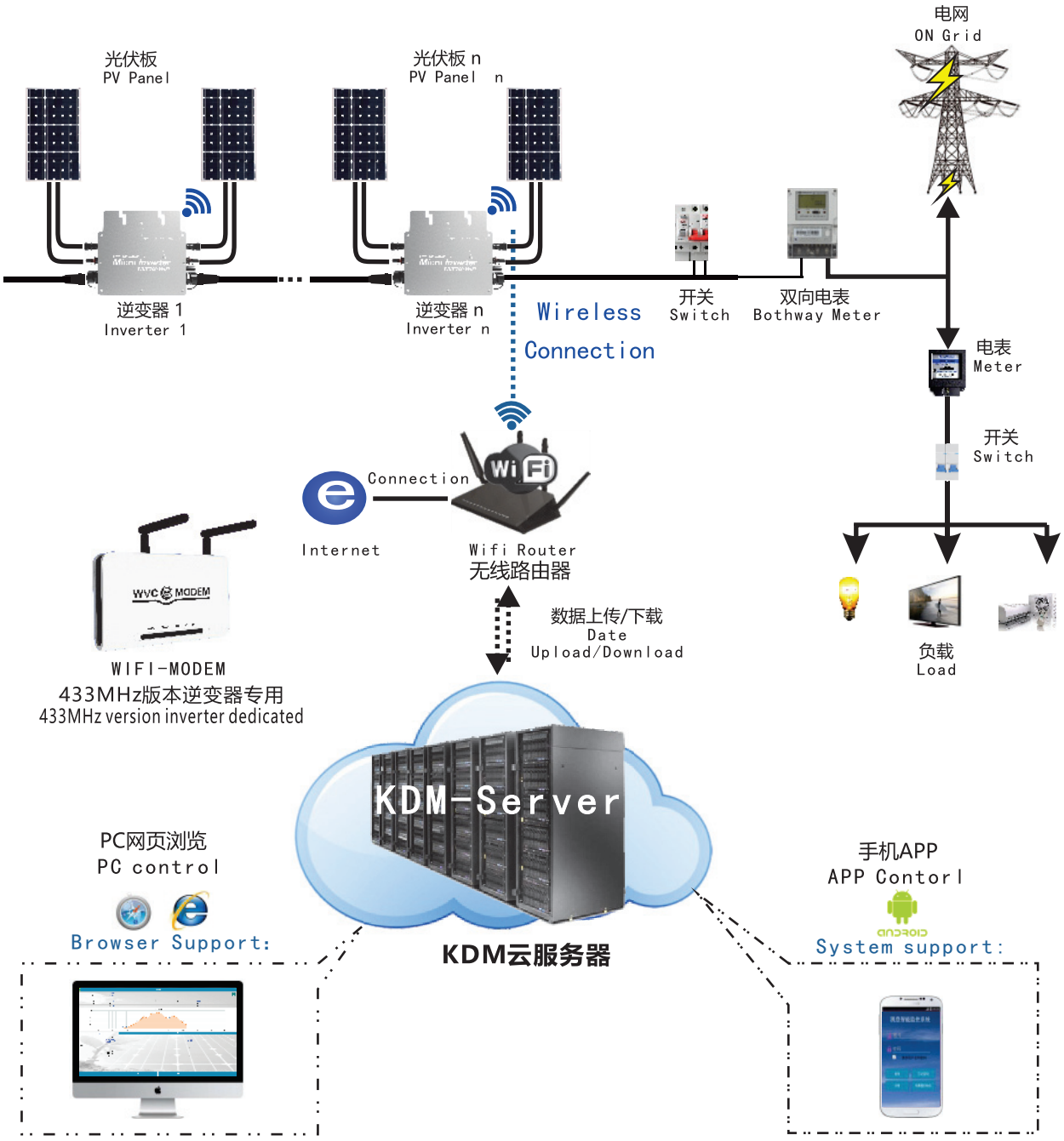
自主研发的微逆系统平台
Self-developed micro-reverse system

- 高性能数字处理 High-performance digital chip
- MPPT功能 Maximum power point tracking
- 同步并网 Synchronous grid connection
- 并网数据感测技术Grid-connected data sensing technology
- 自动控制软开关技术 Soft switch technology
- 无功功率控制 Reactive power control
- 电网并入管理 Power grid management
- 433MHz/WIFI无线通讯 433 MHz/WIFI
- 人机互动远端无线数据采集管理平台 Data collection
- 具有孤岛保护，过压欠压，过频欠频，超温保护功能 Island, over-voltage, under-voltage, over-frequency under-frequency, over-temperature, protection
- 电网故障检测及保护功能 Power grid fault detection

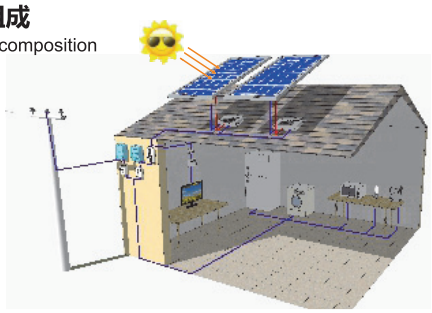
Parameter

Model	WVC-700	
Maximum input power	2*350Watt	
Output voltage mode	Automatically switch 120/230V according to local grid	
Solar panel open circuit voltage range	36-50VOC	
Peak power tracking voltage	22-50V	
Min/Max starting voltage	22-50V	
Maximum DC short-circuit	53A	
Maximum input operating current	36A	
Output Data	@120V	@230V
Peak power output	700Watt	700Watt
Rated output power	700Watt	700Watt
Rated output current	6.7A	3.5A
Rated voltage range	80-160VAC	180-280VAC
Rated frequency range	48-51Hz/58-61Hz	48-51Hz/58-61Hz
Power Factor	>99%	>99%
Max unit per branch circuit	5pcs（Single-phase）	10pcs（Single-phase）
Output Efficiency	@120V	@230V
Static MPPT efficiency	99. 5%	99. 5%
Maximum output efficiency	97%	97%
Night loss consumpition	<1W	<1W
THD	<5%	<5%
Exterior & Feature		
Operating temperature range	-40° C to +65° C	
Dimensions (L× W × H）	283mm×200mm×41.6mm	
N.W.	1.56kg	
Waterproof level	IP65	
Cooling	Self-cooling	
Communication mode	WiFi 2.4G mode	
Power transmission mode	Reverse transfer,load priority	
Monitoring system	APP、PC Browser	
Electromagnetic Compatibility	EN50081. part1 EN50082. Party1	
Grid disturbance	EN61000-3-2 Safety EN62109	
Grid detection	DIN VDE 0126	
Certificate	CEC, CE National patent technology	
Package weight		
Specification	Single (packing)	Whole(5PCS)
G.W.	2. 8KG	14KG
Dimensions	342×240×115mm	440×380×260mm

系统结构流程图
Case Diagram



系统组成
System composition



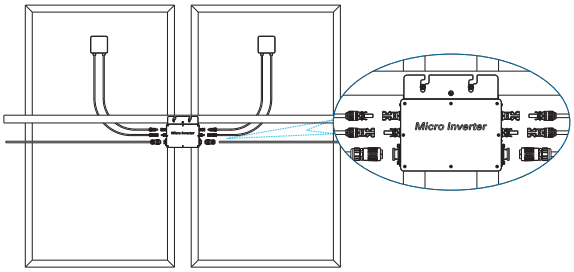
智能光伏发电系统
Solar Power System

- 光伏组件 PV Panels
- 逆变器 Inverter
- 云服务器 KDM System

逆变器安装指南
Installation Of Micro Inverter

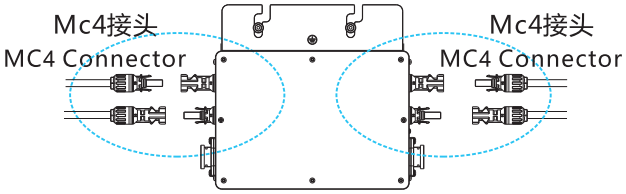
第一步 用本机附带的螺丝将逆变器安装固定在光伏板的支架上，如下图所示：

Step1 Installation for fixed the inverter on the PV holder with the screws attached is as following:



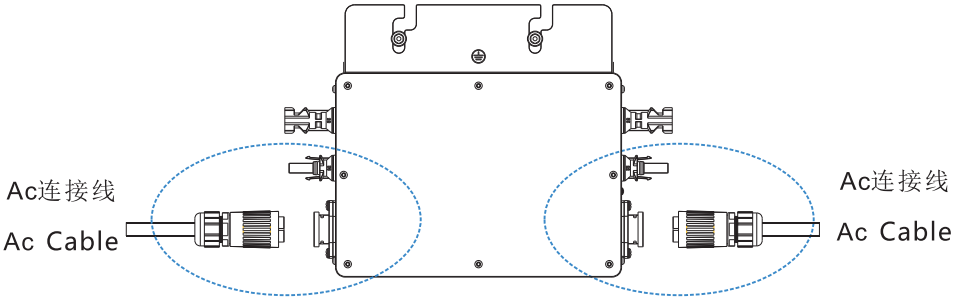
第二步 将光伏板上的**DC**连接**MC4**插头分正负极连接到逆变器的**DC**输入端，如下图：

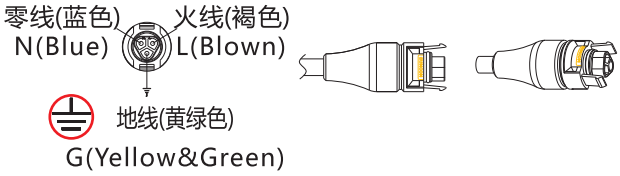
Step2 Connect the two DC terminal of the PV to the inverter, positive to positive, negative to negative. Show below:



第三步 打开逆变器AC输出接头的防水盖并将AC连接线连接到AC防水插头上，连接方法如插头连接图：

Step3 Open the waterproof cap on AC output side of the micro inverter, then plug to AC power line. Show below:





第四步 将AC输出线连接到AC主电缆上;

Step4 Plug the AC output line to main AC cable;

第五步 重复第一至第三步骤,安装并连接好所有的逆变器;

Step5 Repeat the first step to the third step to complete the installation of micro inverters;

第六步 将AC主电缆连接到市电电网开启您的绿色能源之旅。

Step6 Finally, please connect the AC main cable to the utility grid to run renewable energy and saving $$$!

系统组成
System composition

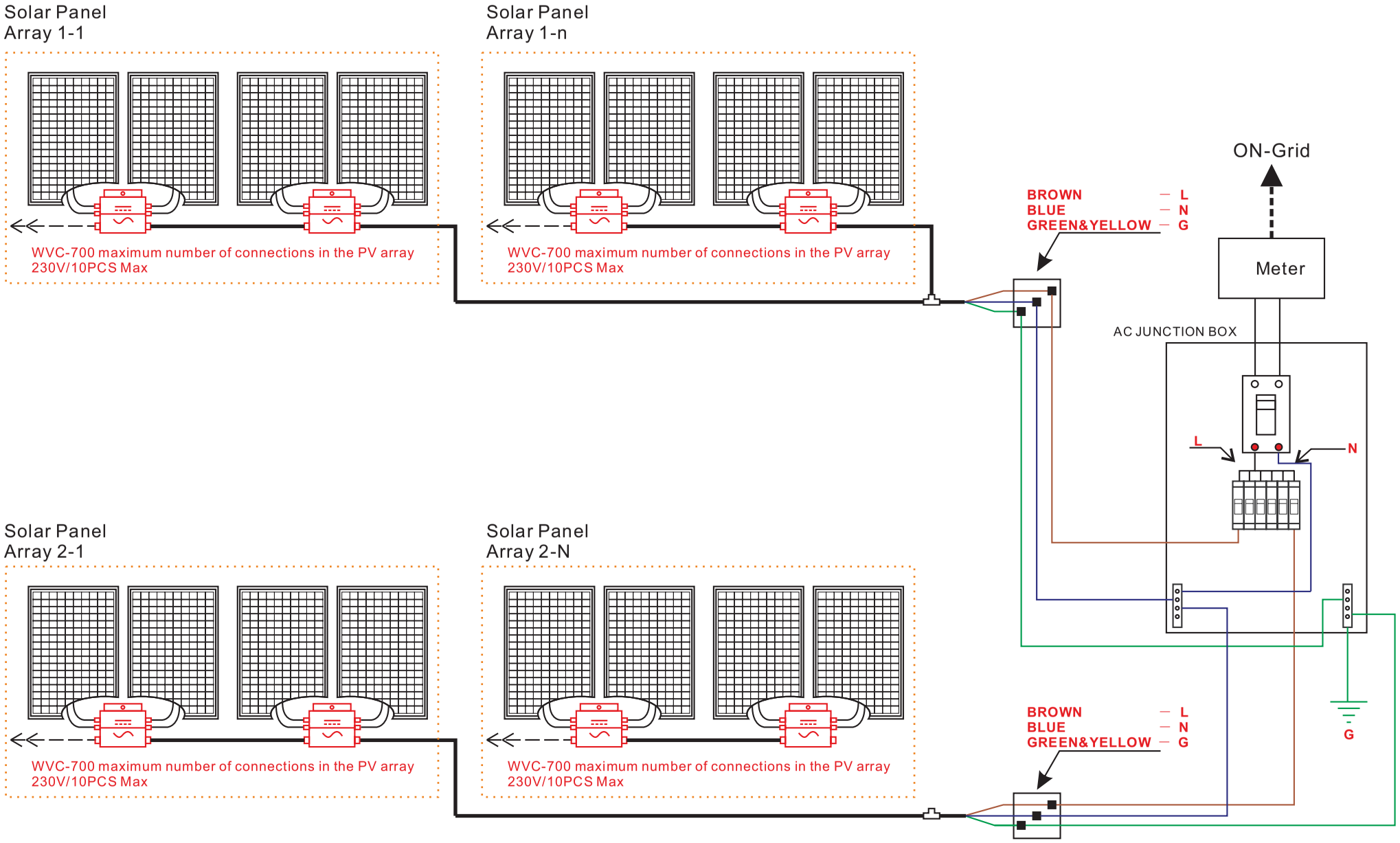
光伏组件
PV Panel

逆变器
Inverter

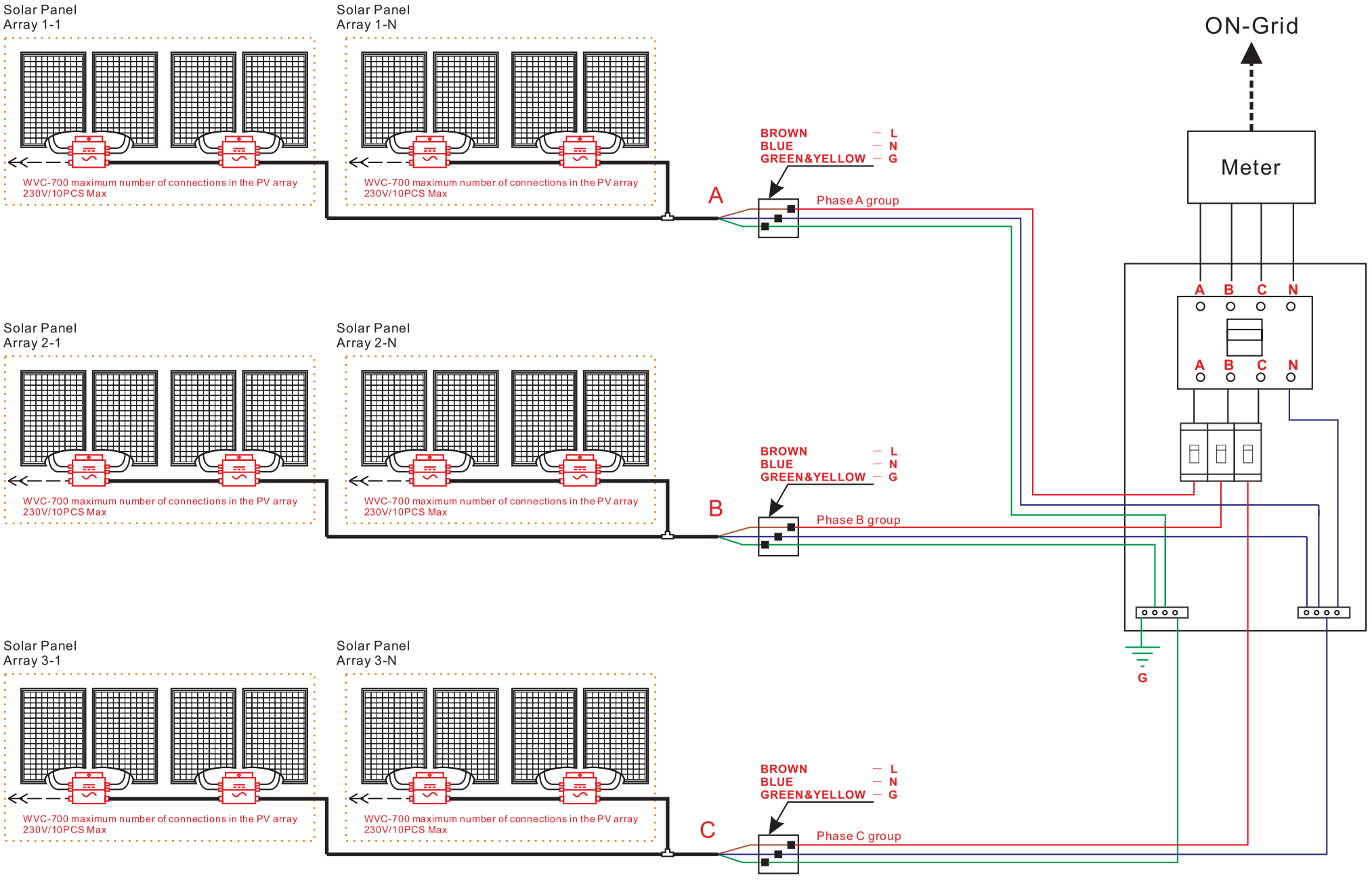
KDM云服务器
KDM-System

PC浏览器&App
PC Browser & App

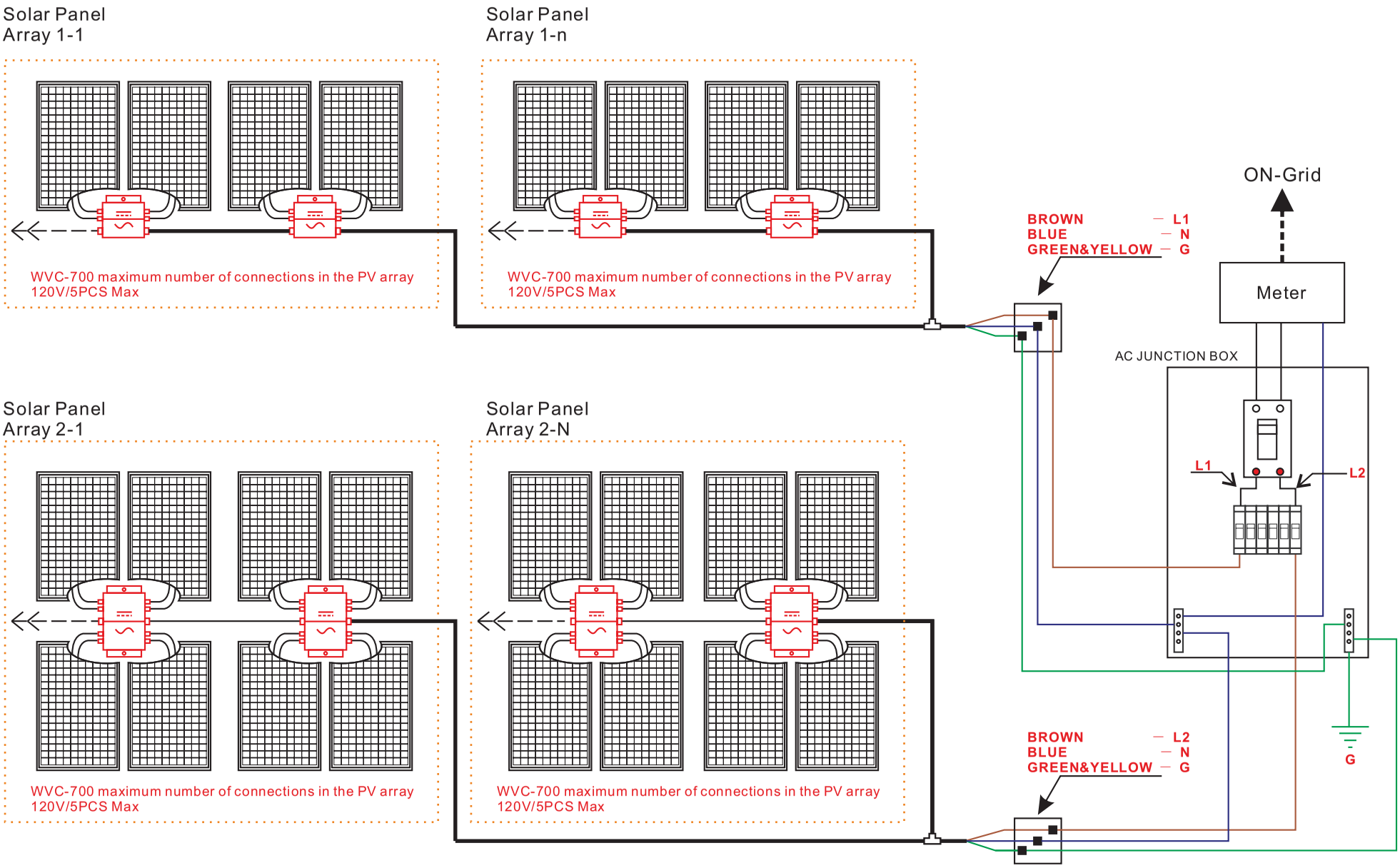
China 230V Single-phase connection



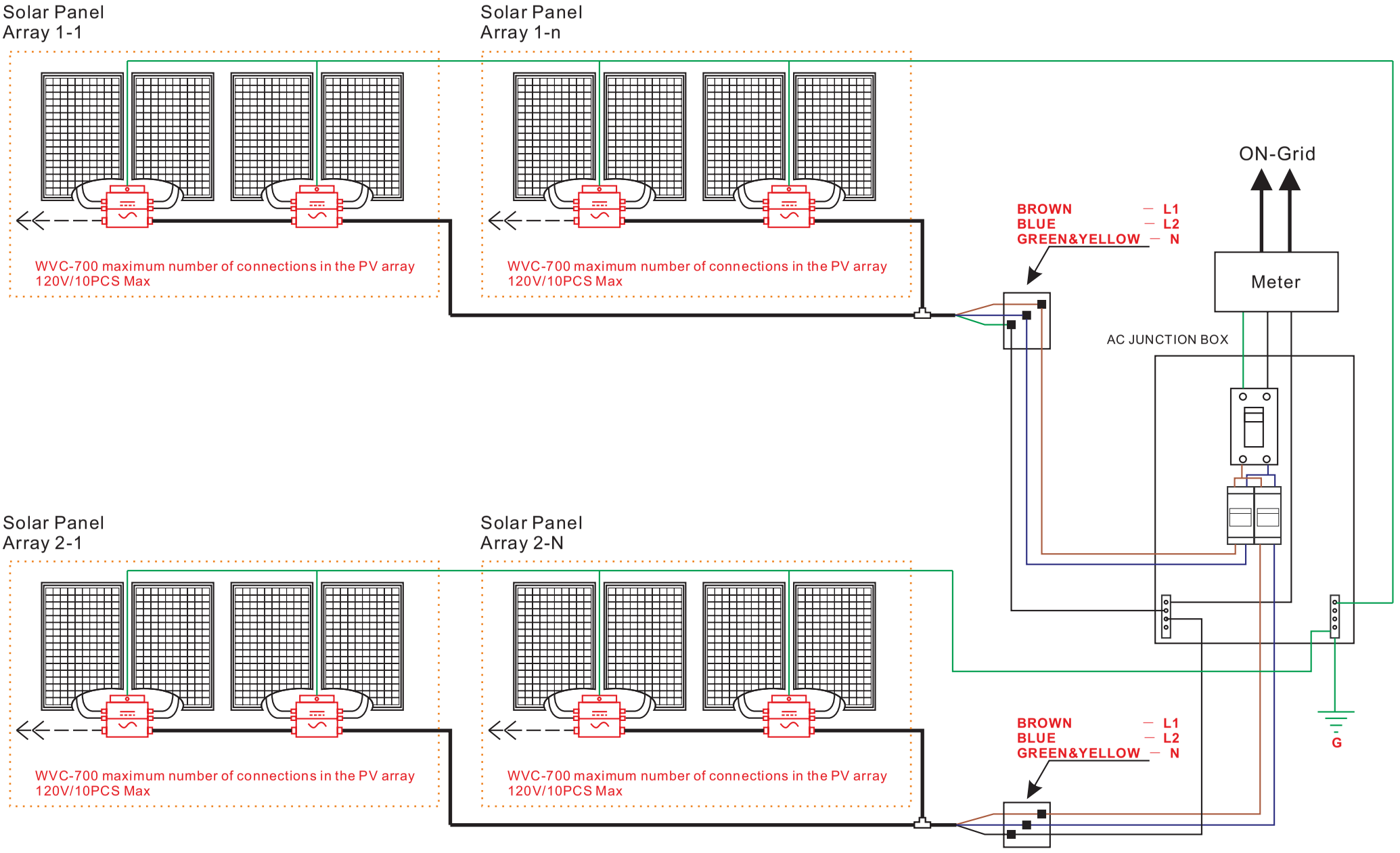
China 380V Three-phase connection



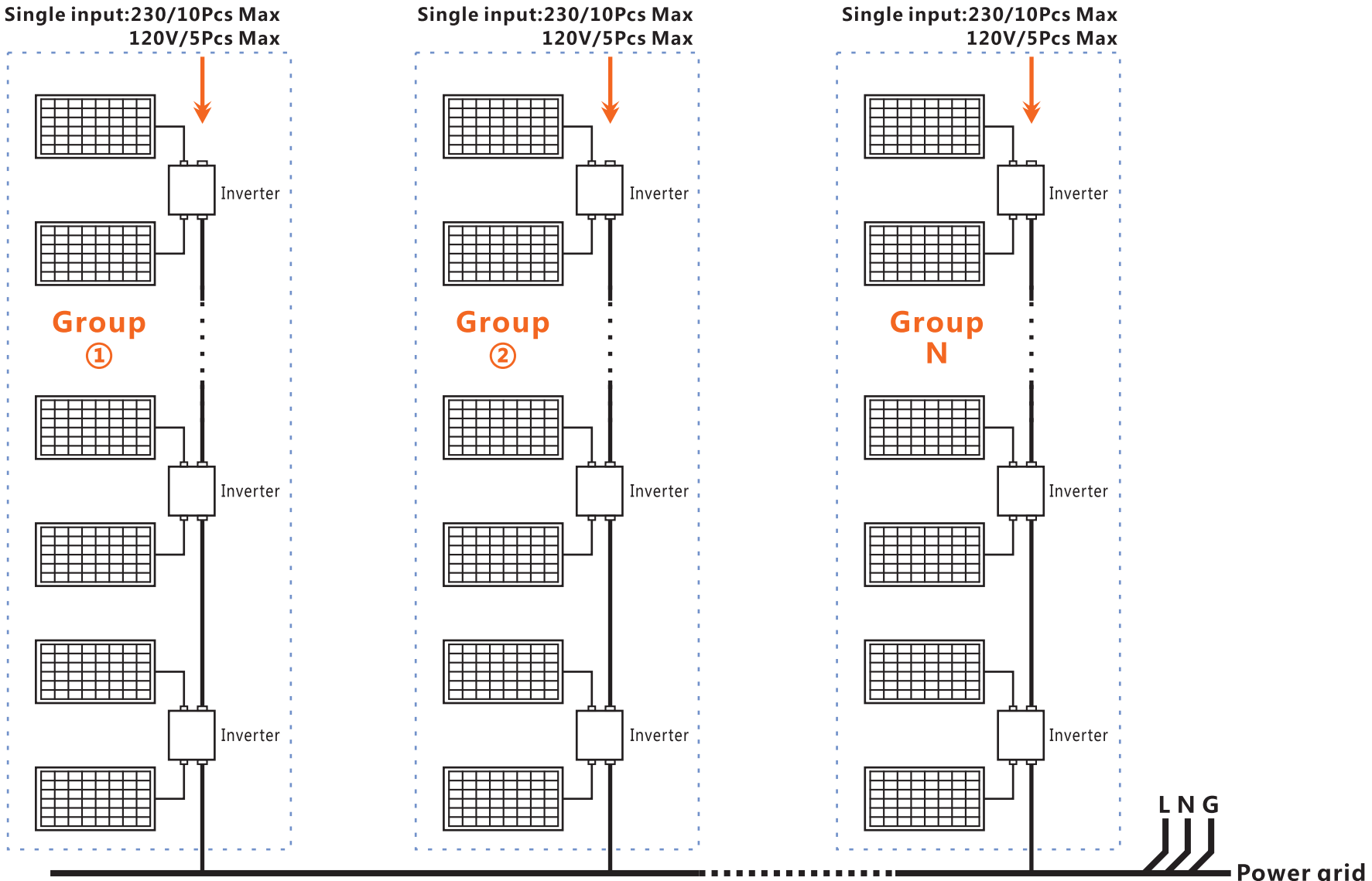
American 120V connection



American 240V connection



System installation wiring diagram



Remarks: Main line wire metering method = single group standard 4 squares * into group number (multiple strands of copper wire for cable)
For example: 3 groups of incorporation, ie 4 square * 3 = 12 square cable
The maximum length from the end line to the grid should not exceed 30 meters.

注意事项
Notes:

★请按说明正确安装逆变器，如有疑问请与相关人员 联系。
Please connect the inverter by the instruation manual. If have any question please contact with relative persons.

★非专业人员请勿拆机，只有合格的维修人员才可以修理本产品。
Non-professionals do not disassemble.Only qualified person can repair the product.

★请将逆变器安装在低湿度和通风良好的地方，以避免逆变器过 热，并清除周围易燃易爆物品。
Please install inverter in the low humidity and well ventilated place to avoid the inverter over-heating,and clear around the inflammable and explosive materials.

★使用本产品时，避免小孩子触摸、玩耍，以免触电。
When using the product, avoid children touching,playing,to avoid electric shock.

★只连接太阳能电池板。
Only Connected solar panels.

产品配件
Accessories for product:

1、保修卡1份（One warranty card）
2、用户手册1份（One user manual）
3、品质证明书1份（One certificate of quality）
4、逆变器固定螺丝1包（1 pouch of screw for micro inverter installation）
5、AC连接线1根（One AC Cable）

LED显示说明
LED Display

1、红灯长亮3秒----------开机红灯长亮3秒,设备进入正常工作状态;
Red light 3 second---when the red light is on for 3 seconds, the equipment enters the normal working state.
2、绿灯快闪----------MPPT搜索;
Green flash fast---MPPT searching;
3、绿灯慢闪----------MPPT+功率微调;
Green flash slow---MPPT + power fine-tuning;
4、红灯慢闪----------MPPT- 功率微调;
Red flash slow---MPPT - power fine-tuning;
5、绿灯亮3秒,灭0.5秒----MPPT锁定;
Green lights on 3s and off 0.5s---MPPT locked;
6、红灯长亮----------a.孤岛保护; b.温度保护;c.AC电压过、欠压保护;d.DC电压过、欠压保护;e.故障;
Red light steady---a. Islanding protection;b.Over-temperature protection;c.Over / low AC voltage protection;d. Over / low DC voltage protection; e.Fault

注
Remarks:

正常工作指示灯闪烁过程:逆变器连接上AC、DC端→红灯长亮3秒→绿灯快闪(MPPT搜索)→绿灯慢闪(MPPT+功率微调)/红灯慢闪(MPPT-功率微调)/绿灯亮3秒,灭0.5秒(MPPT锁定)。

LED flashing in the process of being working condition:inverters connected to AC & DC sides→Red light 3 second→Green light flash fast(MPPT searching)→Green light flash slow(MPPT + power fine-tuning) / Red light flash slow MPPT - power fine-tuning) / green lights on 3s and off 0.5s (MPPT locked) .

产品保修卡
Product Warranty Card

非常感谢您使用我们的产品和服务

Thank you very much for using our products and services

机器型号
Model

序列号
Serial No.

出厂日期
Date of manufacture

客户姓名
Customer Name

联系电话
Tel.

联系地址
Address

电子邮箱
E-Mail

备　　注
Remarks

1、本保修卡只适用于上述所列型号和编号的设备保修服务;
It is only applicable to all the model and Numbers equipment listed above for after services;

2、本保修卡为最终用户享受保修服务的重要凭证,请妥善保管;
It is an important document for final customers to enjoy the after service, please safekeeping;

3、本保修卡须由销售商填写并加盖销售印章后才能生效;
It should be effective with filling in and sales seal by the vendors or distributor;

4、我公司拥有保修卡及保修条款的最终解释权;
Our company has the final interpretation right of the warranty card and warranty terms;

Purchase Date
购买日期

Invoice No.
发票号码

产品保修条款
Products Guarantee Clauses

感谢您惠我公司的产品，始终为用户提供更好的产品和服务是我们的一贯宗旨，为了让您更好的享受我们为您提供的优质售后服务，请仔细阅读本保修条款及填写您的个人信息，需要维修时您需要将设备和本保修卡一起邮寄或送往指定的授权维修点，运输费用由用户承担，谢谢！

Thank you for purchasing our products, always provide better products and services for our customers is our consistent aim, in order to let you better enjoy the quality after-sales service we provide for you, please read this warranty and fill in your Personal information, when you need to repair, pls mail or send the equipment together with this warranty card

1.本产品自购买之日开始计算保修期;

2.在保修期范围内正常状态下使用本产品而产生的故障,可根据本保修条款的内容获得相应的保修服务;

3.本产品基于25年使用寿命而设计,整机提供5年有限保修服务,正常使用情况下的主机板提供1年免费保修服务,附件（接头或线缆等）提供3个月免费保修服务,免费保修期后且不足5年收取维修零件费用;

4.在保修期内发生以下情况将实施有偿维修服务：

(1)不能出示保修卡或原始购买凭证;

(2)保修卡或原始购买凭证与产品不符;

(3)由于错误使用、疏忽或其它人为原因造成的缺陷或损坏;

(4)因未经授权的维修、拆卸等造成的缺陷或损坏;

(5)因不可抗拒因素造成的缺陷或损坏;

(6)正常使用情况下的磨损或损耗;

(7)在非正常或非常规情况下使用本产品造成的缺陷或损坏;（如多张太阳能板串联高电压，无防雷措施）

(8)因不正确的测试、操作、维修、安装、改装或调整等造成的缺陷或损坏;

1. Warranty period starts from the date that you purchase;
2. In the warranty period, within the range of normal condition on the use of this product and produce fault occurs, corresponding guarantee service can be offered according to the contents of the after service'terms;
3. It designed for 25 years service life, 5-year limited warranty service for the complete inverter, one year free warranty service for the main board under normal use, 3 months free warranty services accessories (connectors or cable, etc.), users should pay for the spare parts cost after free guarantee period and between 5 years;
4. During the free guarantee period, users should pay for the maintenance service on the following situations:
   (1) No warranty card or primitive proof of purchase;
   (2) The warranty card or primitive proof of purchase is not agree with the product;
   (3) Due to the incorrect use, negligence or other man-made defects or damage;
   (4) Unauthorized maintenance, disassembly leads to the defect or damage;
   (5) Force majeure factors lead to the defects or damage;
   (6) Under normal use of wear and tear,
   (7) In the abnormal or abnormal conditions of use this product leads to defects or damage;
   (8) Incorrect testing, operation, maintenance, installation, modification or adjustment lead to the defect or damage;

Green Energy
Smart Inverter Expert

专业智能逆变器光伏发电系统厂家

solar power system product manufacturer