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Samil Power



Samil Power

Expert for PV Grid-tied Inverters™



Better Energy Better Life

- PV Grid-tied Inverters
- System Monitor
- Ambient Monitor
- SolarArray Combiner



Company Profile



Samil Power Co., Ltd.

Expert for PV Grid-tied Inverters

About us

Samil Power Co., Ltd is a high-tech international corporation equipped with leading technology of grid-tied Inverters. Samil Power has the first-class production equipment and international R&D team. Its core business is to provide various high-quality and reliable grid-tied solar Inverters and energy system solutions to meet the consistently increasing needs of global energy.

Samil Power has 5 main branches worldwide, namely: Munich, Beijing, Shenzhen, Wuxi, Suqian. It has one factory occupying 33,000m² (approximately 8.23 acres) of land with a workshop and test centre of 11,000m², and two R&D centres about 1,000m² each.

What we do

Samil Power is specialized in solar photovoltaic grid-tied inverters' innovation, manufacture, sales and service.

What we offer

We offer high-efficiency and low-cost PV grid-tied inverters to home owners, solar system integrators and solar plants investors with good after-sales service worldwide. Leading technology, high quality, wide application and stability are the main features of its products.

Our staff

The workforce comprising more than 600 professionals, 30% of which are dedicated to R&D, is a key asset to Samil Power.

Product Range



PV Grid-tied Inverters

SolarRiver String Inverters 1.5~5KW

SolarLake Central Inverters 100~500KW



Accessories for PV System

System Monitor SolarPower Manager

Ambient Monitor SolarEnvi Monitor

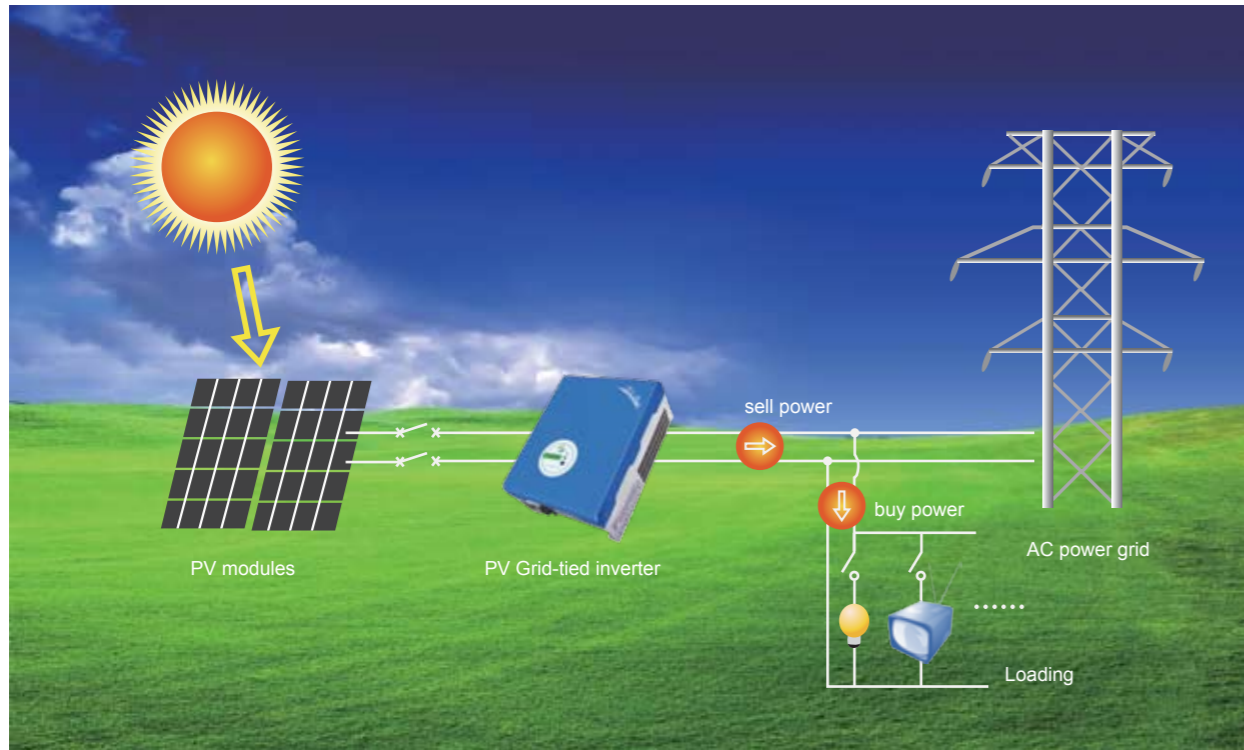
SolarArray Combiner



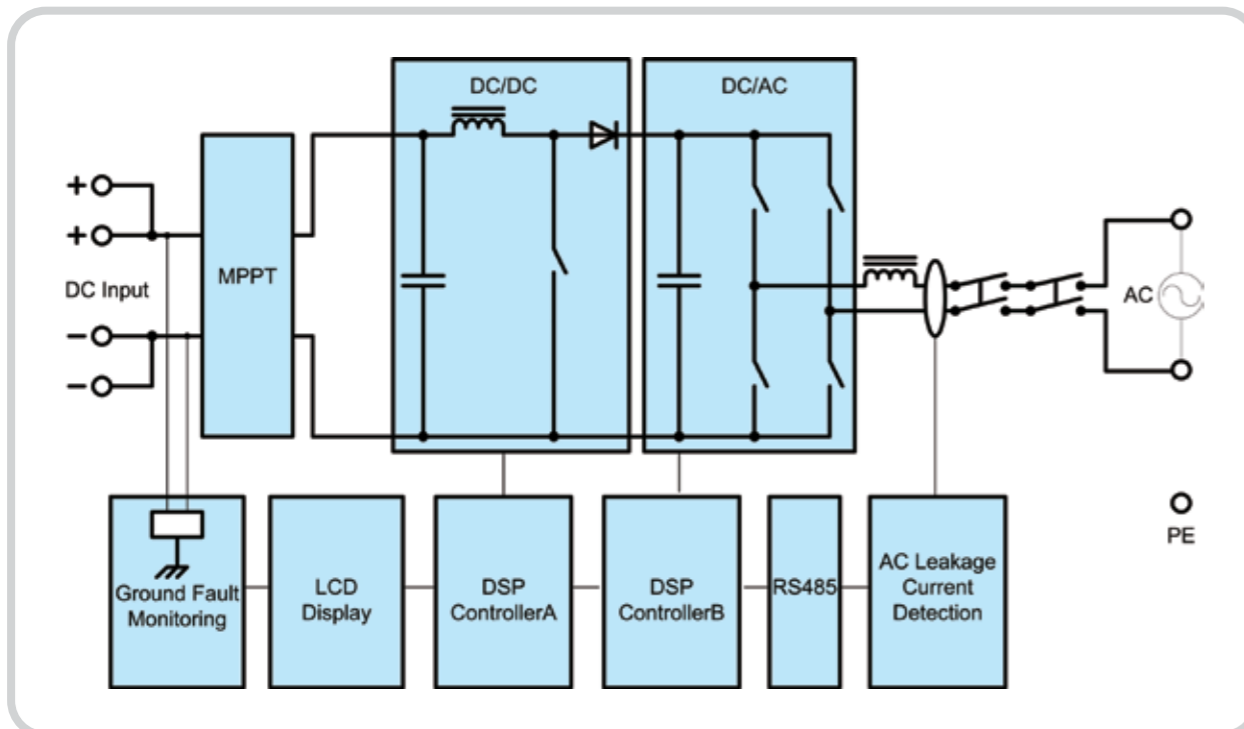
One Earth Only

String Grid-tied Inverter

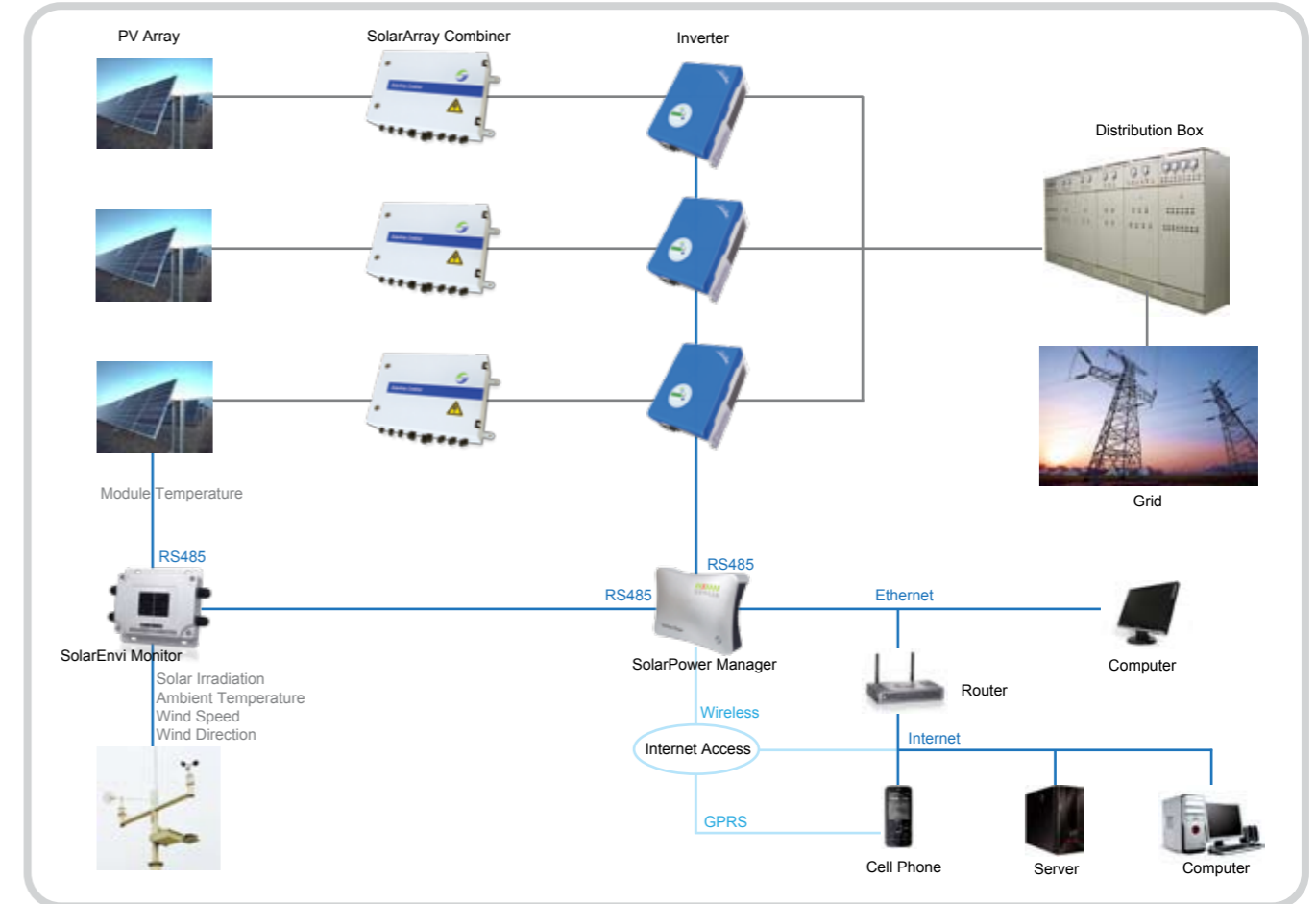
Home PV Grid-tied Power System



SolarRiver String Inverter Topology



Structure of String Grid-tied System



What are the advantages of SolarRiver Series inverters?

String inverters are small scale(1-5 kW inverters). Researched and analyzed by technologists, string inverters have the following advantages:

High Efficiency

- 1 Transformerless design, with higher operation efficiency.
- 2 Wide MPPT range, making system efficiency higher.
- 3 No need of remote DC power transmission, and low DC loss.
- 4 No need of large-capacity on-grid AC power distribution, lowering AC loss to get more electricity power.
- 5 Utilizing small-inverter generation, convenient to increase capacity.

High Reliability

- 1 Little influence to AC power grid when breakdown.
- 2 Little generation loss when single inverter breaks down.
- 3 DCs increasing reliability of configuration and operation.

Cost Advantages

- 1 Transformerless design cutting down the cost.
- 2 Light weight and small dimension, reducing shipping cost.
- 3 Integrated procurement and assembly line of operation, reducing production cost.
- 4 IP65 protection degree, suitable for outdoor installation, reducing construction cost.
- 5 Low maintenance expense and low power loss when breakdown.

SolarRiver Series



SolarRiver (Brief in SR) series PV grid-tied inverters are string inverters specially designed for PV power station by Samil Power. It consists of 7 power levels, which provide more flexible choices for PV power plants. SR series string inverters are not only with high cost-effective, but also has modern appearance.

Moreover, it strictly complies with the international certification or standards, i.e.: ISO, CE, RD1663, DK5940, VDE0126-1-1 and AS4777, etc.

- MODEL SR1K5TLA1
- MODEL SR2K2TLA1
- MODEL SR2K8TLA1

■ Features

- Utilizing the latest high-efficiency power device for PV inverters and improving the inverter efficiency significantly
- Optimal MPPT technology, maximizing the system output power
- Multiple communication via RS232,RS485 (optional)
- Multilingual LCD monitoring, convenient for setting
- Multi-inverter parallel running mode, simplifying the power plant design
- Protection for overvoltage, islanding, overload, overheating, etc.
- Modern appearance design, compact profile and light weight
- Plug in connectors for input and output, easy to install and maintain



Adapt To Any Weather



Technical Data

SolarRiver Series 1.5-2.8KW

Inverter Model	SR1K5TLA1	SR2K2TLA1	SR2K8TLA1
Input Data			
Max.DC power[Wp]	1700	2300	3000
Max. DC voltage[V]	550	550	550
Max.input current[A]	9	11	13.5
Number of MPP trackers	1	1	1
MPPT voltage range[V]	150~500	150~500	150~500
Number of DC connection	1	1	1
Output Data			
Rated AC power[W]	1500	2000	2600
Max. output power[W]	1650	2200	2800
Max. output current[A]	8.6	11	13.8
AC connection	Single phase	Single phase	Single phase
Grid voltage range[V]	180~260	180~260	180~260
Grid frequency[Hz]	50/60	50/60	50/60
Power factor	1	1	1
Total Harmonic distortion(THD)	<3% (rated power)	<3% (rated power)	<3% (rated power)
Efficiency			
Max. efficiency	95.5%	96%	96.5%
Euro efficiency	94.3%	94.9%	95.5%
General data			
Dimensions(W*H*D)[mm]	332*440*150	332*440*150	332*440*150
Weight[kg]	13.5	14	14
Operating temperature range[°C]	-20~+60	-20~+60	-20~+60
Ambient humidity	0~95%	0~95%	0~95%
Altitude[m]	≤2000	≤2000	≤2000
Electronics protection rating	IP65	IP65	IP65
Topology	transformerless	transformerless	transformerless
Power Consumption (Night-time) [W]	0	0	0
Cooling concept	Convection	Convection	Convection
Noise mission (typical) [dB]	<28	<28	<28
Display	LCD	LCD	LCD
Communication interface	RS485/RS232	RS485/RS232	RS485/RS232
Standard warranty[year]	5	5	5
Inverter Model	SR1K5TLA1	SR2K2TLA1	SR2K8TLA1

SolarRiver Series



SolarRiver (Brief in SR) series PV grid-tied inverters are string inverters specially designed for PV power station by Samil Power. It consists of 7 power levels, which provide more flexible choices for PV power plants. SR series string inverters are not only with high cost-effective, but also has modern appearance.

Moreover, it strictly complies with the international certification or standards, i.e.: ISO, CE, RD1663, DK5940, VDE0126-1-1 and AS4777, etc.

- MODEL SR3K3TLA1
- MODEL SR4K4TLA1
- MODEL SR4K4TLA1/PT
- MODEL SR5KTLA1

■ Features

- Utilizing the latest high-efficiency power device for PV inverters and improving the inverter efficiency significantly
- Optimal MPPT technology, maximizing the system output power
- Multiple communication via RS232,RS485 (optional)
- Multilingual LCD monitoring, easy to use
- Multi-inverter parallel running mode, simplifying the plant design
- Protection for overvoltage, islanding, overload, overheating,etc.
- Modern appearance design, compact profile and light weight
- Plug connectors for input and output, easy to install and maintain



Adapt To Any Weather



Technical Data

SolarRiver Series 3.3-5KW

Inverter Model	SR3K3TLA1	SR4K4TLA1	SR4K4TLA1/PT	SR5KTLA1
Input Data				
Max.DC power[Wp]	3480	4580	4000	5200
Max. DC voltage[V]	550	550	550	550
Max.input current[A]	17.5	22	22	26
Number of MPP trackers	1	1	1	1
MPPT voltage range[V]	200~500	200~500	200~500	200~500
Number of DC connection	2	2	2	2
Output Data				
Rated AC power[W]	3000	4000	3680	4600
Max. output power[W]	3300	4400	3680	5000
Max. output current[A]	16	22	16	24
AC connection	Single phase	Single phase	Single phase	Single phase
Grid voltage range[V]	180~260	180~260	180~260	180~260
Grid frequency[Hz]	50/60	50/60	50/60	50/60
Power factor	>0.99	>0.99	>0.99	>0.99
Total Harmonic distortion(THD)	<3% (rated power)	<3% (rated power)	<3% (rated power)	<3% (rated power)
Efficiency				
Max. efficiency	97.4%	97.6%	97.6%	97.6%
Euro efficiency	96.5%	97.1%	97.1%	96.8%
General data				
Dimensions(W*H*D)[mm]	329*433*180	329*433*180	329*433*180	329*433*180
Weight[kg]	17.8	18.6	18.6	18.7
Operating temperature range[°C]	-20~+60	-20~+60	-20~+60	-20~+60
Ambient humidity	0~95%	0~95%	0~95%	0~95%
Altitude[m]	≤2000	≤2000	≤2000	≤2000
Electronics protection rating	IP65	IP65	IP65	IP65
Topology	transformerless	transformerless	transformerless	transformerless
Night-time consumption[W]	0	0	0	0
Cooling concept	Convection	Fan cooling	Fan cooling	Fan cooling
Noise mission (typical) [dB]	<28	<40	<40	<40
Display	LCD	LCD	LCD	LCD
Communication interface	RS485/RS232	RS485/RS232	RS485/RS232	RS485/RS232
Standard warranty[year]	5	5	5	5
Inverter Model	SR3K3TLA1	SR4K4TLA1	SR4K4TLA1/PT	SR5KTLA1

SolarLake Series



SolarLake (Brief in SL) series offers central PV grid-tied inverters with power range from 10KW to 500KW, and offers more flexible choices for PV power plants.

SolarLake series central inverters have the “state-of-the-art”, efficiency up to 98%, even working under non-full load conditions, and offer a cost-effective guarantee for the PV power plants. It has friendly interface, easy to use, modern appearance, and wide DC voltage features.

- MODEL SL17KTLA1
- MODEL SL100KLVA1
- MODEL SL250KHEA1
- MODEL SL500KHEA1

■ Features

- Using effective IGBT power module
- Optimal MPPT technology
- Suitable for applications under harsh power grid conditions
- Multilingual LCD monitoring, convenient for local setting
- Using high frequency transformer for isolation
- Wide MPPT range, making module configuration more flexible
- Integrated multi communication interfaces
- Accurate calculation of output power
- Protection for overvoltage, islanding, overload, overheating, etc.
- Friendly interface, easy to install and maintain



Technical Data

SolarLake Series 17-500KW

Inverter Model	SL17KTLA1	SL100KLVA1	SL250KHEA1	SL500KHEA1
Input Data				
Max.DC power[KWp]	19	115	280	560
Max. DC voltage[V]	1000	850	850	850
Max.input current[A]	2x18	250	600	1200
MPPT voltage range[V]	430~850	450~820	450~820	450~820
Number of MPP trackers	2	1	1	1
Number of DC connection	2x2	4	8	16
Output Data				
Rated AC power[kW]	17	100	250	500
Rated output current[A]	25	145	550	1100
AC connection	3/N/PE, 380V	3/PE,380V	3/PE,270V	3/PE,270V
Grid frequency[Hz]	50	50	50/60	50/60
Power factor	0.9lagging ... 0.9leading	>0.99 (rated power)	0.95 lagging...0.95leading	0.95 lagging...0.95leading
Total Harmonic distortion(THD)	<3% (rated power)	<3% (rated power)	<3% (rated power)	<3% (rated power)
Efficiency				
Max. efficiency	98%	97.1%	98.2%	98.6%
Euro efficiency	97.6%	96.7%	97.7%	98.3%
General data				
Dimensions(W*H*D)[mm]	480*700*230	1200*2060*700	2400*2060*800	2800*2100*850
Weight[kg]	40	800	1200	2000
Operating temperature range[°C]	-25~+55	-20~+50	-20~+50	-25~+50
Ambient humidity	0~95%	0~95%	15%~95%	15%~95%
Altitude[m]	Up to 1.5km without derating	Up to 2km without derating	Up to 1km without derating	Up to 1km without derating
Electronics protection rating	IP65	IP21	IP20	IP20
Topology	transformerless	Low frequency transformer	transformerless	transformerless
Power Consumption (Night-time) [W]	<0.5	<10	<100	<100
Cooling concept	Fan cooling	Fan cooling	Fan cooling	Fan cooling
Noise mission (typical) [dB]	<56	<65	<70	<70
Display	LCD	touch screen LCD	touch screen LCD	touch screen LCD
Communication interface	RS485/RS232	RS485/RS232	RS485/RS232	RS485/RS232
Standard warranty[year]	5	5	5	5
Inverter Model	SL17KTLA1	SL100KLVA1	SL250KHEA1	SL500KHEA1

PV System Accessories



System Monitor

SolarPower Manager

SolarPower Manager is the communication centre of PV power system, which can monitor the system's operation, remote diagnostics and data acquisition conveniently. All data of the inverters connected with SolarPower Manager can be obtained continuously, and customers can get real-time running status of the PV power system at any time

■ Features

- Monitoring the PV power system constantly
- Detecting and recording system faults automatically
- Recording and storing PV power system data at presetting time
- Analysing and storing PV operation data by Microsoft Excel
- Data diagnostics and system configuration by PC



Ambient Monitor

SolarEnvi Monitor

The weather station for your solar power system

■ Features

- Comprehensive performance analysis of the PV power system
- Precise acquisition of solar irradiation, module temperature, ambient temperature, wind speed and wind direction values
- Communication with the SolarPower Manager via RS-485
- Easy to install on the PV power system



SolarArray Combiner

SolarArray Combiner developed by Samil Power, which is suitable for collecting the DC current delivered by PV arrays. It connects a number of PV arrays to inverters (i.e.: SolarLake series inverters from Samil Power). SolarArray Combiner can greatly simplify the wiring and protect inverters.

■ Features

- Wide DC input voltage range
- IP65 protection degree, for outdoor using
- Reliable lightning proof protection
- Possible to connect 6 PV strings at one time



Technical Data

PV System Accessories

■ SolarPower Manager

■ Interfaces

Inverter communication	RS485 (up to 32 inverters, max. 1200m cable)
Ethernet	10/100M LAN
SD memory	Max. 2GB

■ Mechanical Data

Width/height/depth (mm)	222 /153/45
Weight	720g

■ Power Supply

Plug-in power supply	115-230V 50/60Hz
Power consumption	Typical 3W (Max. 10W)

■ Operation Conditions

Ambient temperature	-20°C~+55°C
Relative air humidity	5%~95%

■ Other Data

Status display	Built-in LED
Installation	Wall-mounted

■ SolarEnvi Monitor

■ Interfaces

To SolarPower Manager	RS-485 to SolarPower Manager
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■ Sensors

Solar irradiation	Precision: ±8%	Range: 0~1500W/m²
Module temperature	Precision: ±0.1°C	Range: -40~+150°C
Ambient temperature	Precision: ±0.1°C	Range: -40~+150°C
Wind speed	Precision: ±(0.3+0.03V)m/s	Range: 0~75m/s

Wind direction	Precision: ±3°	Range: 0~360°
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■ Power Supply

External power adaptor	5±0.3V/3W
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Protection degree	IP65
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■ Mechanical Data

Width/height/depth (mm)	120/90/50
Weight	500g

■ SolarArray Combiner

Input voltage range	0~900 Vdc
number of inputs	6 (Can Be Tailored)
Max. input current	10A (Can Be Tailored)
Ambient temperature	-25 ~ +60°C

Protection degree	IP65
Type of installation	Wall-mounted
Dimension	510 X 355 X 180mm
Weight	12kg