



Samil Power
Expert for PV Grid-tied InvertersTM

Samil Power Co., Ltd.

Expert for PV Grid-tied InvertersTM

1. History

History of Samil Power

Samil Power is a spring-off company from the Samil Group.

Samil Group was founded in Korea in 1992 and focuses on research & design, manufacture and sales of variable speed drives and lift controllers.

Samil Power started in 2008 as Solar inverter OEM manufacturer.



1. History



Samil Group

Founded in Korea in 1992, **focuses on research & design, manufacture and sales of variable speed drives and lift controllers.**

Samil Power Wuxi

Founded in 2008 as Solar inverter OEM manufacturer, and focuses on **string/three phase inverter R&D, global sales**

Samil Power Shenzhen

Founded in 2009 focuses on research and design of **central solar inverters**, China sales

Samil Power Suqian

Founded in 2009 focuses on **manufacture** of solar inverters

Samil Power GmbH

Founded in 2010 focuses on European **after-sales service**, sales and marketing

Samil Power AU

Founded in 2010 focuses on Australian **after-sales service**, sales and marketing

Samil Power Beijing

Founded in 2011 focuses on **Chinese after-sales service**, sales and marketing

Samil Power Shanghai

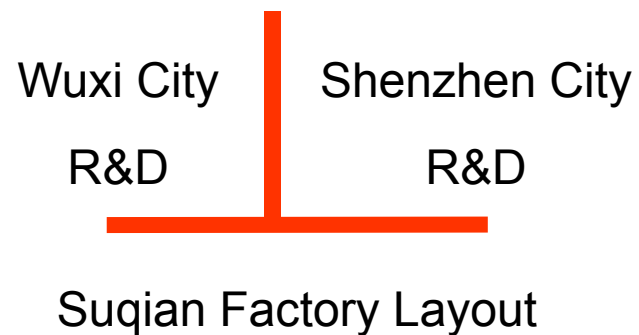
Founded in 2011 focuses on **Chinese after-sales service**, sales and marketing

1.Location



- **One Factory** (34,000 M²) and one factory (200,000 M²) is building
- ▲ **Two R&D Centers** (5 storeys building in Wuxi and one in Shenzhen)
- **More than six Sales and Service subsidiaries** (Germany, Sydney, Beijing, Wuxi, Shenzhen, Shanghai, etc)

1.Location



1.Culture

- **People:** both R&D centers are leaded by professionals with Master and Doctor Degrees. More than six sales, marketing, and after-sales service subsidiaries are cross the globe. The workforce comprising more than 500 professionals, **30% of which are dedicated to R&D**, is a key asset to Samil Power.

- **Our promise:**
“To deliver high-efficiency, high-quality and high-reliability Solar inverters”
- **Our slogan:**
“Better Service Better Samil Power.”



2. Certification



ISO, CE, TUV, VDE, DK, RD, G83



Italy



Germany



France



Spain



Czech
Republic



Bulgaria



Belgium



Netherlands



Greece



Australia



UK

Certification List of Samil Power Products														
Model	CE	TUV	China	Australia	Belgium	Bulgaria	Czech	France	Germany	Greece	Italy	Netherlands	Spain	UK
			Golden Sun	AS4777:2(3) AS/NZS 3100	VDE	VDE	VDE	VDE UTE C15-712-1	VDE	VDE	VDE ENEL 2010	VDE	VDE RD1663	G83/1 or G59/2
SolarRiver Series														
SolarRiver 1700TL	√			√	√	√	√	√	√	√	√	√	√	√
SolarRiver 2300TL	√			√	√	√	√	√	√	√	√	√	√	√
SolarRiver 3000TL	√			√	√	√	√	√	√	√	√	√	√	√
SolarRiver 3300TL	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SolarRiver 4400TL	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SolarRiver 5200TL	√	√	√	√	√	√	√	√	√	√	√	√	√	T6
SolarLake Series														
SolarLake 10000TL	√			√	√	√	√	√	√	√	√	√	√	T6
SolarLake 12000TL	√			√	√	√	√	√	√	√	√	√	√	T6
SolarLake 15000TL	√			√	√	√	√	√	√	√	√	√	√	T6
SolarLake 17000TL	√			√	√	√	√	√	√	√	√	√	√	T6
SolarOcean Series														
SolarOcean 100TL	√	T7	√								√		√	
SolarOcean 100	√	T7									√		√	
SolarOcean 250TL	√	T7	√								√		√	
SolarOcean 250	√	T7	√								√		√	
SolarOcean 500TL	√	T7	√								√		√	
Accessories														
SolarArray Combiner	√													
SolarEnvi Monitor	√													
SolarPower Manager	√													
Model	CE	TUV	China	Australia	Belgium	Bulgaria	Czech	France	Germany	Greece	Italy	Netherlands	Spain	UK
			Golden Sun	AS4777:2(3) AS/NZS 3100	VDE	VDE	VDE	VDE UTE C15-712-1	VDE	VDE	VDE ENEL 2010	VDE	VDE RD1663	G83/1 or G59/2

2.Products

Single Phase PV Grid-tied Inverters (**SolarRiver** series)



Three Phase PV inverters (**SolarLake** series)



Central PV Inverters with/without transformers (**SolarOcean** Series)



2.Products

Single Phase PV Grid-tied Inverters (SolarRiver series)

- ▶ With impressive efficiency up to 97.6%, They are specially designed for small and mid-range systems. They combine an excellent cost/performance ratio with a modern design.

SR1K5TLA1(1500W)
SR2K2TLA1(2000W)
SR2K8TLA1(2600W)
SR3K3TLA1(3000W)
SR4K4TLA1 (4000W)
SR5KTLA1(4600W)



2.Products

Features of SR series 1.5-5.0KW inverters

▶ Efficient

- Maximum efficiency of 97.6 %
- Wide range MPP voltage

▶ Convenient

- Suitable for indoor and outdoor applications (IP65)
- Easy module configuration

▶ Reliable

- Modern design with high-quality stainless steel housing.
- Reliable operation with multifunction protection



2.Products

Three Phase PV inverters (SolarLake series)

- ▶ Thanks to the new technology, SL series three-phase inverter meets all the requirements for grid support, thus it can be suited to almost any module configuration, and can be up to the megawatt range

SL10KLVA1(10,000W)
SL12KLVA1(12,000W)
SL15KLVA1(15,000W)
SL17KTLA1(17,000W)



2.Products

Features of SL series 10-17KW inverters

Efficient

1. Maximum efficiency of 98.2 %
Adopt the technology of three-level invert to obtain higher efficiency up to max efficiency of 98.2% and European efficiency of 97.6%.
2. Wide range MPP voltage
Separated MPPT with double channels; each MPPT has two input strings and flexible configuration and installation

Convenient

1. DC input voltage up to 1,000 V
2. Integrated grid management functions
3. Two MPP inputs

Reliable

1. Modern appearance with high-quality stainless steel housing
2. Reliable operation with multifunction protection
3. Use plastic film capacitors to greatly extend the life time of inverters
4. Integrated DC switch
5. Able to ride through the fault grid



2.Products

Central PV Inverters with/without transformers (SolarOcean Series)

With a power range from 100kW to 500kW they offer more flexible choices for PV power plants. Even working under non-full load conditions they offer leading edge efficiency, and a cost-effective performance for the PV power plant system.

SO100KTL(100,000W)

SO100K(100,000W)

SO250KTL(250,000W)

SO250K (250,000W)

SO500KTL(500,000W)



2.Products

Features of SolarOcean series 100~500KW inverters

- ▶ Leading edge efficiency
- ▶ DC input voltage up to 880 V/1000V
- ▶ Advanced DSP digital control techniques
- ▶ High-degree protection making the power station operate more reliable
- ▶ Multiple communication via RS232, RS485, Can Bus
- ▶ Easy to install, operate and maintain



2.Products

Grid-tied System Accessories



SolarArray Combiner

It connects a number of PV strings to inverters, can greatly simplify the wiring and protect inverters



SolarPower Manager

It can monitor the system's operation, remote diagnostics and data acquisition conveniently. Customers can get real-time running status of the PV power system at any time.



SolarEnvi Monitor

It can measure the sunlight level. You can build your weather station for your solar power system

Product Advantages:

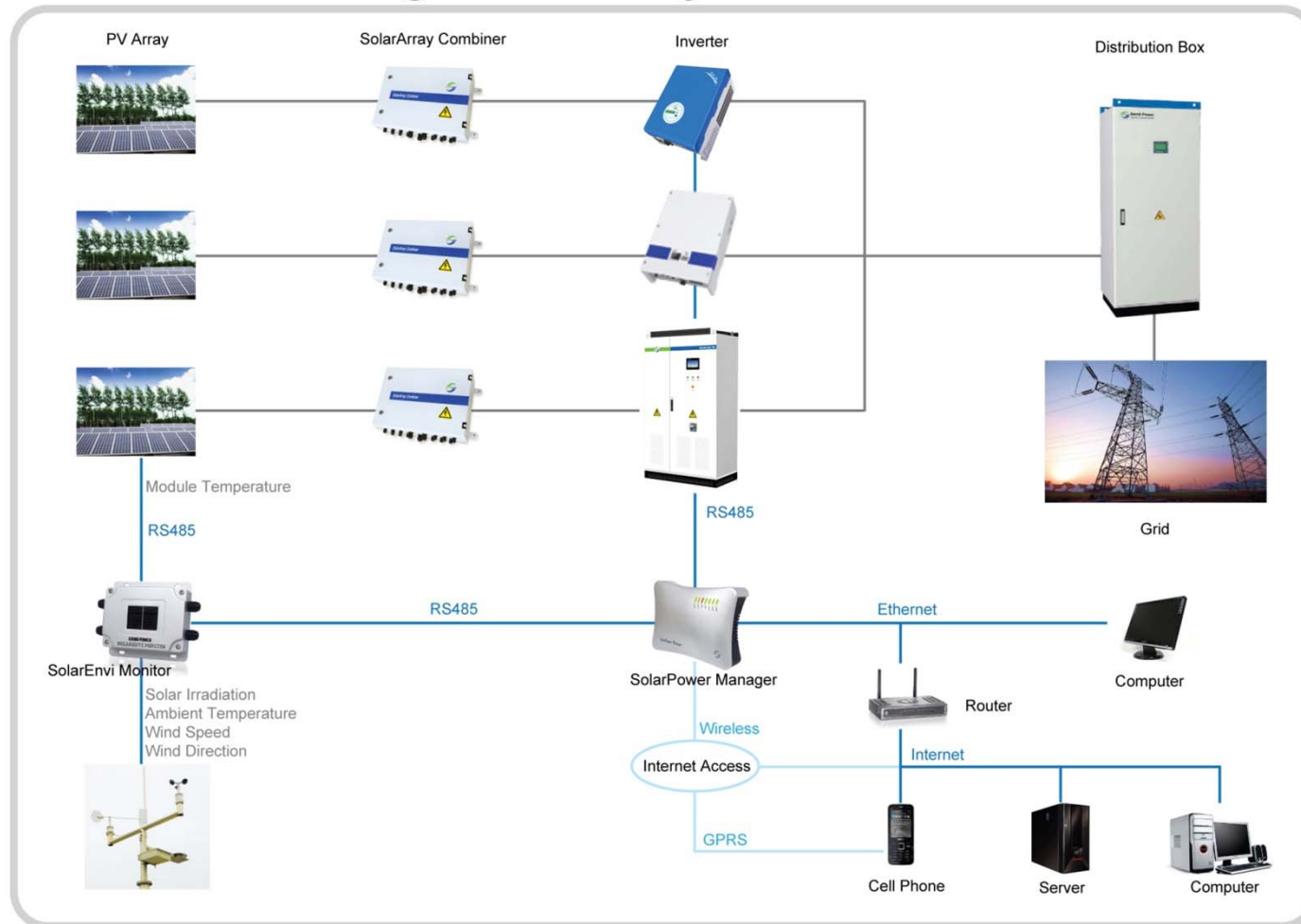


- ▶ 1. Strict Internal **Total Quality Control**.
- ▶ 2. Complete Product Series varies from **1.5kw~500kw**
- ▶ 3. High efficiency and stability
- ▶ 4. **Components and devices** are sourced from world leading suppliers
- ▶ 5. Competitive price
- ▶ 6. **IP65** water and dust protection.
- ▶ 7. Wide MPPT Range/Multi MPPTs for three phases
- ▶ 8. **Multi-national certificates** (already passed 12 countries testing).
- ▶ 9. Five years warranty and **extended warranty up to 20 years**

2. System Solutions

Grid-connected PV system

Structure of String Grid-tied System



2. Mounting System

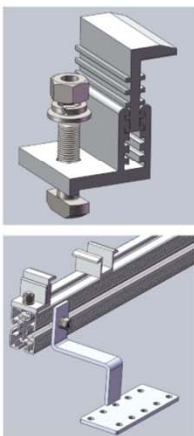
Samil Power Mounting System



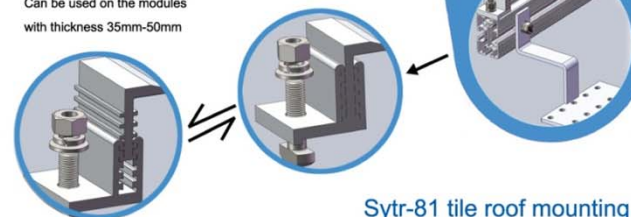
Samil Power dedicated to develop and produce panel mounting systems suitable for a wide variety of building types and climate zones. After years of efforts and accumulation of actual project experience. Samil power formed a system of professional solutions for multifarious power plants include flat roof mounting system, pitched roof mounting system, open ground mounting system etc. From design, testing, to manufacturing, installation. We try best to make sure the mounting system safety, credibility.

All samil power mounting system need to pass the computer simulation tests and actual mechanical properties tests. Following all kinds of tough climatic challenges. tensile test, yield test, elongation test etc.

We pass various quality tests and are certified by well-know global certification bodies.



Can be used on the modules with thickness 35mm-50mm



Sytr-81 tile roof mounting system

Sytr-81 tile roof solution is suitable for pitched roof. The Hooks are fastened onto the substructure by means of screw bolt. And another end are connected with the mounting system.

Advantage:

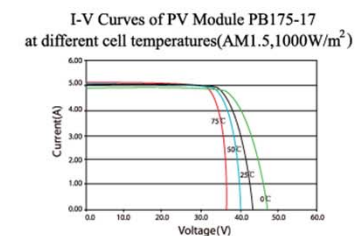
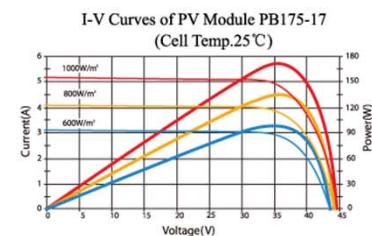
- **Adjustable clamp suitable for a vast array of solar panel thickness.**
- **100% waterproof without penetration to the roof.**
- **The hooks can be adjustable to cater to tiles with different thickness.**
- **Light weight**

Technical Data	
Installation site	Tile roof
Rack Material	AL 6063-T6
Tile & bolt Material	SUS 304
Surface treatment	Anodizing AA15
Wind load	40m/s
Snow load	1000N/m²
Warranty	25 years

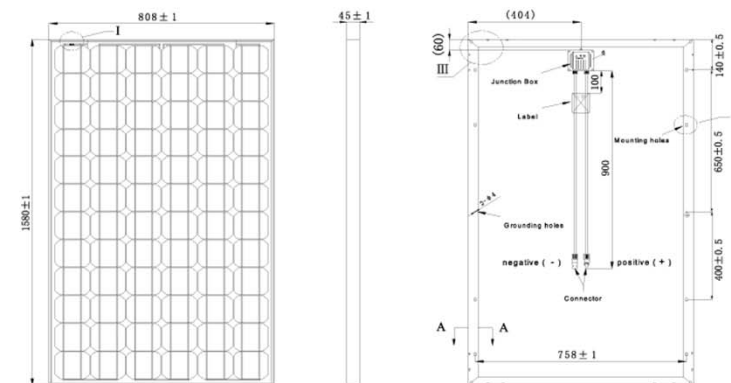
2. PV Module

Type	SP235-60P	SP230-60P	SP225-60P	SP220-60P	SP215-60P	SP210-60P	SP205-60P
Pmax[Wp]	235	230	225	220	215	210	205
Vmp[V]	30.2	30.0	29.5	29.7	29.4	29.00	28.5
Imp[A]	7.78	7.67	7.63	7.41	7.31	7.24	7.19
Isc[A]	8.56	8.45	8.24	8.15	8.05	7.94	7.91
Voc[V]	37.05	36.9	36.60	35.65	35.30	34.8	34.2
Module Efficiency	14.47%	14.16%	13.85%	13.55%	13.24%	12.93%	12.63%
Cell Technology	60 polycrystalline solar cells (156mm×156mm) in a 6×10 matrix connected in series						
Maximum System Voltage[V]	1000						
Voltage temperature coefficients	-0.38%/K						
Current temperature coefficients	+0.04%/K						
Power temperature coefficients	-0.54%/K						
Maximum Series Fuse Rating	15A						
Junction box	IP65 rated						
Dimensions	1650×992×50mm (L×W×H)						
Weight	19.5kg						
Operating Temperature	-40℃ ~ +85℃						
NOCT	47℃±2℃						

- The electrical data relates to standard test conditions[STC]:1000W/m²,AM 1.5,25℃;NOCT: Nominal Operating Cell Temperature.
- Power tolerance:0~+3%.



Unit:mm



2. *Manufacture*

Quality Control on Production Lines

- | | |
|---------------------------------------|-------------------------------------|
| 1、IQC | 2、PCBA ICT test |
| 3、PCBA FUT test | 4、T1 Automatic Products FUT test |
| 5、IP65 testing during assembling | 6、Aging test (60°CX4hr + 45°CX20hr) |
| 7、T2 Automatic Products Function test | 8、IP65 testing before packaging |



2.Service

- Free pre-sales technical support;
- Regular product training;
- Free software and upgrade services.
- Technical Support Service
- Replacement Service
- On-site Service
- Warranty Extension Service



2. Warranty

1. Warranty Policy: replace single phase solar river series and three phase solar lake series if found faulty and provide on-site service for solar ocean series
2. Tens of certified service partners across the globe – independent service providers, qualified distributors, and certified installers
3. Samil Power service hotlines
4. Samil Power pays service partners for customers services

Service Advantages



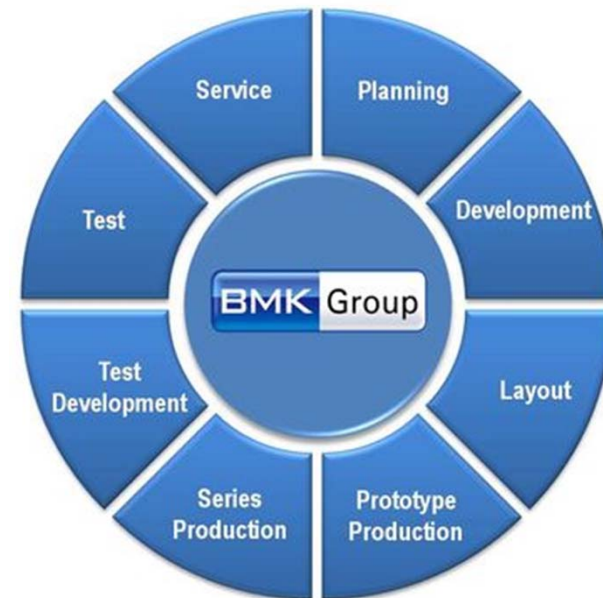
1. Inverter Replacement

Service Partner– Installer, Distributor

For a justified warranty claim for an inverter with AC rated power of up to 17kw within the applicable manufacturer's warranty period, Samil Power will pay the installer/distributor a fixed-rate replacement fee for each additional unit that is replaced in the same system, plus half the amount. If a warranty extension was agreed, Samil Power continues to cover the fixed-rate replacement fee.

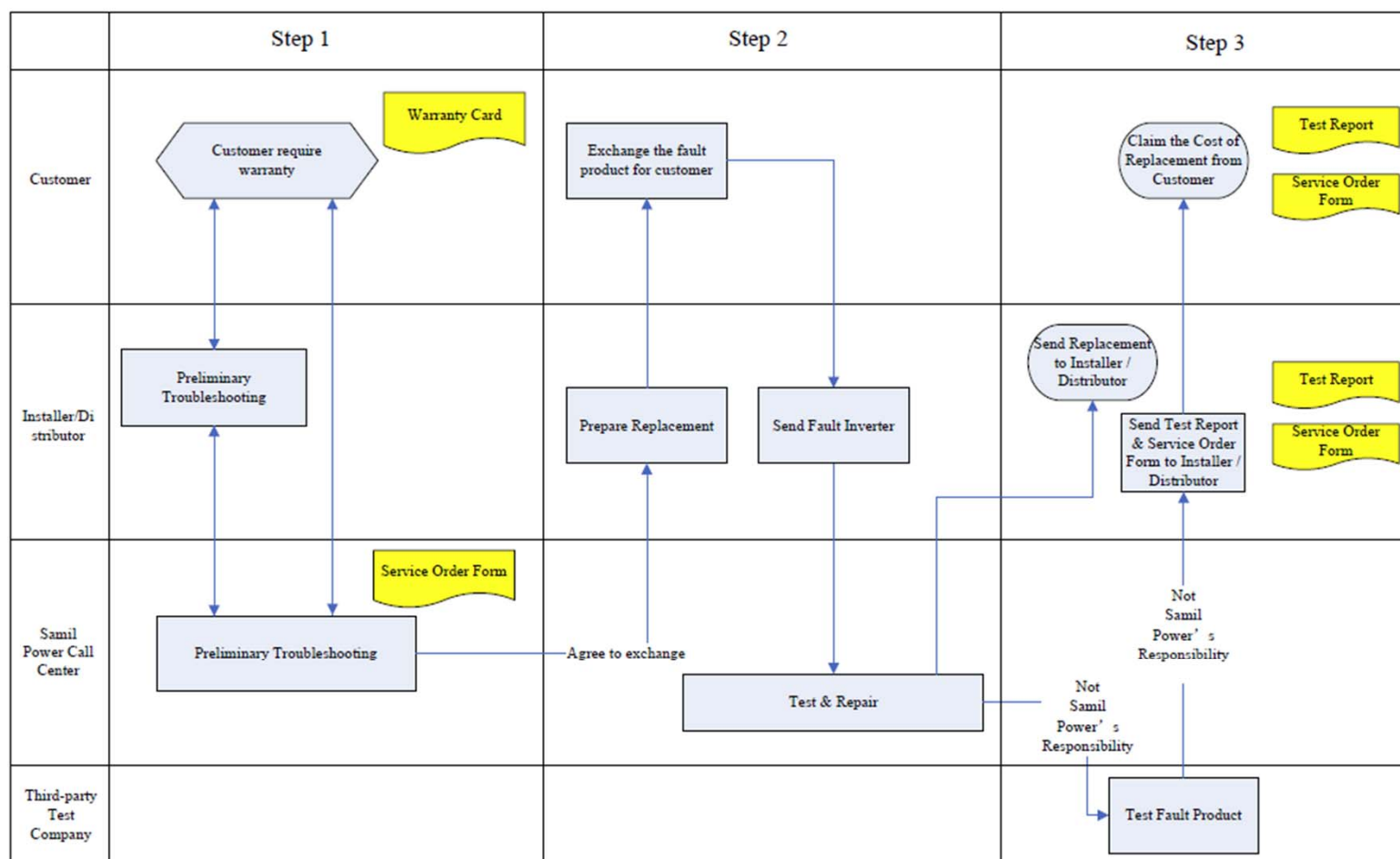
2. Inverter Maintenance

Service Partner – BMK Group



2. Warranty

Samil Power After-sales Service Procedure



Remarks:

1. Samil Power Installer have to respond customer request with 48 hours;
2. Replacements should come from installer/distributor directly;
3. The first replacement maybe new, the later inverter should be equivalent device and its warranty period continuing from the fault device;
4. Installer/distributor replace inverter for one time, Samil Power pay USD120 service charge, add extra USD25 if for same place;
5. If not quality problem after being tested, installer/distributor could claim the service fee from customer.

3. Marketing

Exhibitions 2010-2011

05-07 May 2010	SNEC2010 Shanghai
09-11 June 2010	InterSolar 2010 Germany
06-09 Sept 2010	25th PVSEC 2010 (EU) Valencia (Spain)
17-19 Nov 2010	The PV TECH 2010 (Italy Milan)
09~11 Dec 2010	ENERGAIA 2010 (France Montpellier)
22~24 Feb 2011	SNEC2011 Shanghai
06~08 May 2011	SOLAR EXPO 2011
08~10 June 2011	Intersolar 2011 Germany
12~14 July 2011	Intersolar North America 2011
17~20 October 2011	SolarPower international 2011



4. Our strengths

- Capital: 12million Euros
- Production Capacity: 4GW
- Product Range: 1.5KW - 500KW inverters
- R &D Capacity: More than 150 R&D experts.
- Innovations & Patents: more than 20 patents
- Factory: State-of-the-art production facilities, comply with ISO-9001 & ISO-14000 certifications
- International Sales & service network: Germany, Australia, Italy, Spain, France, China, UK, etc.

High Efficiency Radiator

高效交叉网格式功率半导体散热器



5. What We Offer

We are here to provide

✓ **Top Products**



✓ **Excellent Service**



✓ **Best Quality/Price Relation**



6. Overseas Projects

Overseas Installation Cases



- 100KW Torino, Italy
- 5KW inverters installed on indoor wall



- 90KW Piemonte, Italy
- 5KW inverters installed on outdoor wall

Overseas Projects

Oversea Installation Cases



- 1200KW, Pizza factory, Venice, Italy
- 3KW inverters installed

Overseas Projects

Overseas Installation Cases



- 12.7KW Rooftop Project in Daufenbach, German
- 5KW inverters installed

Overseas Projects

Oversea Installation Cases



- New South Wales, Australia
- 3-5KW inverters installed
- Outdoor roof system



- Aignan, France
- 3.3KW inverters installed
- Outdoor roof system

Overseas Projects

Overseas Installation Cases



- 125 KW Surabaya Military School, Indonesia
- 5KW and 100KW inverters installed
- Outdoor roof system

Overseas Projects

Overseas Installation Cases



- 1MW Project in Macedonia
- 100KW inverters installed
- Outdoor Power Plant



Overseas Projects

China Installation Case



- 10 KW Suqian factory, Jiangsu Province, China
- Outdoor ground system
- Monitoring System: Sunny Manager
- Installation time: October, 2009
- Product Model: SR4K4TLA1

Overseas Projects

China Installation Case



- Shanfu 1MW PV Grid-tied Plant (Shanghai Solaryouth)
- Installation time: November, 2009
- Product Model: SR5KTLA1

Overseas Projects

China Installation Case



- 60kW PV Grid-tied Plant (Jiangsu Yueyang)
- Installation time: September, 2009
- Product Model: SR5KTLA1



SAMIL POWER GmbH

Address: Landsberger Str. 302, 4th Floor
D-80687 Munich
Germany

Tel: +49 (0) 89 9040 5182

Fax: +49 (0) 89 9040 5066

E-mail: germany@samilpower.com

Wuxi Marketing & Sales Office

Add: No.1608, Huishan Ave. Huishan District,
Wuxi City, Jiangsu Province, P.R.China 214174

Tel.: +86 510 8359 3131

Fax: +86 510 8181 9678

Email: info@samilpwoer.com

www.samilpower.com