



reddot award 2016
winner

Higher Revenue

- High efficiency inverter topology, Max. Efficiency 98.6%, European Efficiency 98.0%

Simple & Easy

- 10.4kg, allows one person simple installation
- Optimized AC connector for quick wiring
- Supports one-click inverter configuration
- Supports one-click remote I-V curve diagnosis

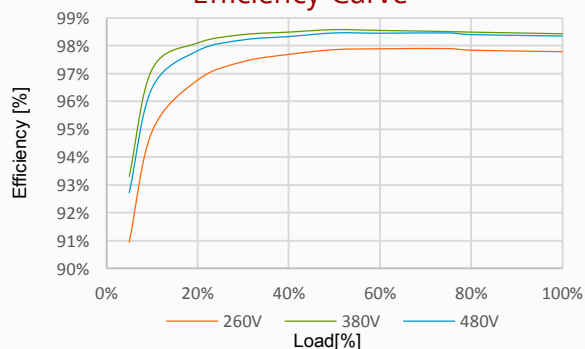
Battery Ready

- Integrated energy storage interface

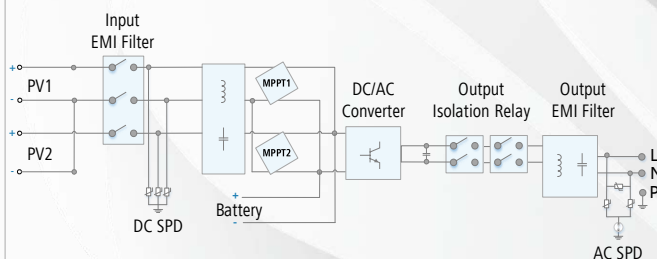
Safe & Reliable

- IP65, Natural cooling
- Build-in DC and AC surge arresters

Efficiency Curve



Circuit Diagram



SUN2000L-2/3/4/4.6/5/KTL

SUN2000L-2/3/4/4.6/5KTL

Technical Specification	SUN2000L-2KTL	SUN2000L-3KTL	SUN2000L-4KTL	SUN2000L-4.6KTL	SUN2000L-5KTL
Efficiency					
Max. efficiency	98.4%	98.5 %	98.6 %	98.6 %	98.6 %
European weighted efficiency	97.0 %	97.6 %	97.9 %	98 %	98 %
Input					
Recommended max. PV power	2660 Wp	3990 Wp	5400 Wp	6210 Wp	6750 Wp
Max. input voltage	600 V				
Operating voltage range ¹	90 V~ 600 V				
Start-up voltage	120 V				
Full power MPPT voltage range	120V~480 V	160 V~480 V	210 V~480 V	260 V~480 V	260 V~480 V
Rated input voltage	380 V				
Max. input current per MPPT	11 A				
Number of MPP trackers	2				
Max. number of inputs per MPPT	1				
Output (Single Phase)					
Rated output power	2000 W	3000 W	4000 W	4600 W	5000 W
Maximum apparent power	2200 VA	3300 VA	4400 VA	4600 VA	5500 VA
Rated output voltage	220 V / 230 V / 240 V				
Rated AC grid frequency	50 Hz / 60 Hz				
Maximum output current	10 A	15 A	20 A	23 A	25 A
Adjustable power factor	0.8 leading ... 0.8 lagging				
Max. total harmonic distortion	≤ 3 %				
Protection					
Anti-Islanding protection	Yes				
DC reverse polarity protection	Yes				
Insulation monitoring	Yes				
DC surge arrester	Yes				
AC surge arrester	Yes				
Residual current monitoring	Yes				
AC overcurrent protection	Yes				
AC short-circuit protection	Yes				
AC over-voltage protection	Yes				
Over-heat protection	Yes				
General Data					
Operating temperature range	-30 ~ +60 °C (Derating above 45°C @ Rated output power)				
Relative operating humidity	0 %RH~100 %RH				
Operating altitude	0-4000 m (Derating above 2000m)				
Cooling	Natural Convection				
Display	LED Indicators				
Communication	RS485, WLAN				
Weight (incl. mounting bracket)	10.4 kg				
Dimension (incl. mounting bracket)	375X375X161.5 mm				
Degree of protection	IP65				
Battery Compatibility					
Battery	LG Chem RESU 7H / 10H				
Voltage range	350~450 Vdc				
Max. current	10 A				
Communication	RS485				
Standards Compliance					
Safety	EN/IEC 62109-1, EN/IEC 62109-2				
Grid connection standards	G83/2,G59/3, EN 50438, CEI 0-21, VDE-AR-N-4105, UTE C 15-712-1, AS 4777				

*1.The maximum input voltage and operating voltage upper limit will be reduced to 500 V when inverter connects and works with battery.

*2.Only applicable for PV string.

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Higher Revenue

- Max. efficiency 99.6%, weighted efficiency 99.0%
- Module-level MPP tracking, increase power yield by 5%-30%
- Allows more panels on each roof to achieve higher system yields

Simple & Easy

- Supports installation in shade prone areas and in different directions
- Quick frame mount at warehouse, less rooftop installation time
- Supports remote module-level monitoring & I-V curve diagnosis

Safe & Reliable

- IP68, support outdoor application
- Communication through DC Power Line Communication
- Single module shutdown capability to secure people and assets safety



Technical Specification	SUN2000P-375W
Input	
Rated input power	375 W
Absolute maximum input voltage	80 V
MPPT operating voltage range	10-80 V
Max. input current	12 A
Max. efficiency	99.6 %
Weighted efficiency	99 %
Overvoltage category	II
Output	
Max. output voltage	80 V
Max. output current	15 A
Output bypass	Yes
Standard Compliance	
Safety	IEC62109-1 (class II safety)
RoHS	Yes
General Specification	
Maximum allowed system voltage	1000 V
Communication	PLC
Dimensions (W x L x H)	125*85*25.5 mm
Weight (including cables)	0.7 kg
Input connector	MC4
Output connector	MC4
Output wire length	47 in / 1.2 m
Operating temperature/humidity range	-40 to 85 °C / 0-100 %
Protection rating	IP68
PV System Design Using A SUN2000L Inverter	
Minimum String Length	According to inverter design rules & PV module datasheet
Maximum String Length	
Maximum Power per String	

Smart PV Safety Box



Simple & Easy

- Communicate with optimizers through Power Line communication
- Support module-level real time monitoring & management

Safe & Reliable

- Single module shutdown capability to secure people and assets safety
- IP65, support outdoor application

Technical Specification	SmartPSB2000L
DC Input	
Maximum input voltage	1100 V
Number of inputs	2
Maximum input current per input	15 A
DC Output	
Maximum output voltage	1100 V
Number of outputs	2
Maximum output current per output	15 A
Features	
Module-level remote management	Yes
Onsite master module shutdown	Yes
Remote auto module shutdown	Yes
General Specification	
Dimensions (H x W x D)	148 x 148 x 38 mm
Weight	3 kg
Display	LED
Communication	PLC, RS485
Input type	HH4
Operating temperature range	-30 to 60 °C
Protection rating	IP65



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Huawei SUN2000 Series Products Warranty and Service Condition

(Network Energy Inverter Products)

Huawei Brand Service



Huawei Solar Inverter Series

Warranty and Service Conditions

These warranty and service conditions apply to the following products:

- SUN2000L-2/3/4/4.6/5KTL
- SUN2000P-375W
- SmartPSB2000L



SUN2000L



SUN2000P



SmartPSB2000L

Warranty period:

Warranty Period			
Product	Warranty Commencement	Warranty Period	
SUN2000L Series Products	Warranty commences from the 90th day after the date of the product shipment from Huawei, or the date on which Huawei receives a service request for this product, whichever is earlier	60 months Spare part, Logistic, Replacement fare	60 months Spare part only
SUN2000P-375W Smart PV Optimizer		25 years	-
SmartPSB2000L Smart PV Safety Box		60 months	-



Warranty services:

Huawei provides remote support and hardware support for solar inverter maintenance.

Warranty Services			
Warranty Service	Service Classification	Service Content	Availability
	Remote Support	Help Desk	Tel: 1800046639 E-mail: au_inverter_support@huawei.com 09:00 to 18:00 Monday to Friday (Business Days only)
		Remote Technical Support	5*8h (response within 30Min)
		Online Technical Support	http://e.huawei.com/en/service-hotline
	Hardware Support	Hardware support	2 Business Days-Shipment*
		Replacement Fare	165AUD/incident of Replacement, 25AUD per additional unit from same project

*Excludes travelling time if required

➤ Remote Support

Remote Support means Huawei provides solutions for technical enquiries or problems relating to the solar inverter products under warranty by telephone or e-mail. It includes Help Desk, Remote Technical support and Online Technical Support (<http://e.huawei.com/en/service-hotline>).

- **Help Desk** provides technical support to Huawei's customers for solar inverter products.

Tel: 1800046639; **Email:** au_inverter_support@huawei.com

- **Remote Technical Support** includes technical enquiry and problem handling. The technical enquiry service provides consultation services in respect of Huawei inverter products. The problem handling service is to provide solutions to customers for inverter-related problems.

➤ Hardware Support

During the Warranty Period, Huawei guarantees that all solar inverter hardware purchased shall be free from defects in material, fabrication and workmanship.



- Solar inverter products that are defective in material, fabrication or workmanship or do not meet the published specifications shall be replaced free of charge.
- Huawei will send the replacement device to the customer site within 2 Business Days after device fault being confirmed. After receiving the replacement device, customer should return the defective device (packed in the packaging from the replacement device) within 15 Business Days of receipt of the replacement device. Defective devices not returned in time for any reason may be charged for.
- The replacement device provided by Huawei will be functionally equivalent to the customer's defective device (in features, functions, compatibility, provided with default software version).
- The replacement device provided by Huawei will have a Warranty Period of twelve (12) months from the date of receipt by the customer, or the remainder of the original device warranty period, whichever is longer.
- Huawei will bear the costs of on-site attendances, if applicable.

Disclaimer:

- All above mentioned warranty and support services apply only to SUN2000 Series Products.
- Accessories and consumable parts, including but not limited to cables and connectors, are not covered by the warranties and services set out above.
- If Huawei cannot fulfill its service commitments within the committed time period due to non-Huawei causes, Huawei should be exempted from responsibilities and related compensations on the fulfillment of the SLA commitments. If on-site service is required, traveling time should be excluded from the SLA time.
- Warranties and services shall not apply in the following circumstances:
 - Damage as a result of force majeure (natural disasters, fires and wars).
 - Damage as a result of natural wear and tear.
 - Direct damage caused by failure to meet system requirements provided in writing including site running environment or external electricity parameters.

- Damage from lightning due to unsuitable system design.
- Large scale damage to hardware or data due to customer's negligence, inappropriate operation or intentional damage.
- Damage caused by non-compliance with the operation manual of the equipment.
- System damage caused by the customer or third parties, including relocation and installation of the system not in compliance with Huawei's requirements or instructions.
- Damage caused by adjustment, change or removal of identification marks not in compliance with Huawei requirements or instructions.
- System damage directly caused by problems in customer's infrastructure.

Huawei Service Organization

Huawei has built up an extensive service organization world-wide. We are serving our customers with warranty services and spare parts for a wide range of technologies.

For support of the warranty services for SUN2000 products, Huawei has defined a support organization to support the process as depicted below:

