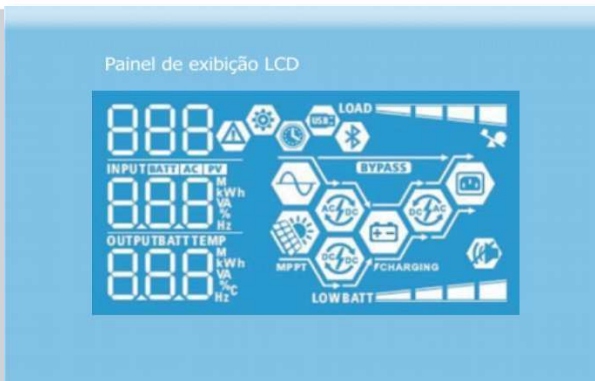


HÍBRIDO FOTOVOLTAICO-BATERIA-REDE



Módulo de controle com várias comunicações

Este módulo de controle LCD destacável pode ser girado para o painel remoto.

Os usuários podem instalar o painel LCD em área acessível longe do inversor até 20 metros.



Porta de comunicação reservada (RS-485, CAN-BUS ou RS-232) para BMS

Este inversor de terceira geração é uma porta de comunicação reservada para BMS. Para obter informações detalhadas, entre em contato diretamente com as vendas .



A equalização da bateria estende o ciclo de vida

Este carregador inversor é construído na função de equalização da bateria. Esta função ajudará a remover a sulfatação para otimizar o desempenho da bateria e até mesmo prolongar o ciclo de vida.

Interface Bluetooth integrada com aplicativo Android

Série com interface Bluetooth integrada pronta para monitoramento móvel. Esta tecnologia permite a comunicação sem fio de até 6-7m em um espaço aberto. Agora, o WatchPower App está disponível na google store.



Independência de bateria

O inversor pode continuar fornecendo energia às cargas a partir de energia fotovoltaica ou da rede sem bateria conectada.



Operação de LCD amigável

Os usuários podem configurar ou alterar facilmente a corrente de carregamento, a fonte de saída e a priorização da fonte do carregador através do painel de controle LCD para otimizar o desempenho do inversor.



Suporta a função USB On-the-Go

Série suporta a função USB On-the-Go para facilitar o upload/ download de dados.



Design de ventilador substituível

Série projetada com ventilador substituível. Isso simplificará a manutenção e reduzirá o custo de manutenção.



MODELO DE INVERSOR	1,5 kW	3KW	5KW
Forma de onda da tensão de entrada	Seno (utilitário ou gerador)		
Tensão de entrada nominal	230 Vac		
baixa tensão de perda	170Vac ± 7V (UPS); 90Vac ± 7V (eletrodomésticos)		
Baixa Tensão de Retorno de Perda	180Vac ± 7V (UPS); 100Vac ± 7V (eletrodomésticos)		
alta perda de tensão	280Vac ± 7V		
Alta Perda de Voltagem de Retorno	270Vac ± 7V		
Tensão máxima de entrada CA	300 Vac		
Frequência de entrada nominal	50Hz / 60Hz (detecção automática)		
Baixa frequência de perda	40 ± 1Hz		
Frequência de Retorno de Perda Baixa	42 ± 1Hz		
alta frequência de perda	65 ± 1Hz		
Alta Frequência de Retorno de Perdas	63 ± 1Hz		
Proteção contra curto-circuito de saída	Disjuntor		
Eficiência (modo de linha)	> 95% (carga nominal R, bateria totalmente carregada)		
tempo de transferência	10ms típico (UPS); 20 ms típico (aparelhos)		
<p>Redução de potência de saída: Quando a tensão de entrada CA cai para 170V, a potência de saída será reduzida.</p>	<p>Gráfico de Potência de saída vs Tensão de entrada. O eixo vertical representa a Potência de saída, com pontos para 50% de potência e Potência nominal. O eixo horizontal representa a Tensão de entrada, com pontos para 90V, 170V e 280V. A curva mostra que a potência de saída é zero até 90V, salta para 50% da potência nominal entre 90V e 170V, atinge a potência nominal entre 170V e 280V, e cai para zero após 280V.</p>		

MODELO DE INVERSOR	1,5 kW	3KW	5KW
Potência de saída nominal	1,5 KVA / 1,5 KW	3KVA / 3KW	5KVA / 5KW
Forma de onda da tensão de saída	Onda senoidal pura		
Regulagem de tensão de saída	230 Vac \pm 5%		
frequência de saída	50Hz		
máxima eficiência	93%		
proteção de sobrecarga	5s @ \dot{y} 130% de carga; 10 s @ 105% ~ 130% de carga		
Capacidade de reação	2 * potência nominal por 5 segundos		
Tensão nominal de entrada CC	24Vdc	48Vdc	
tensão de partida a frio	23,0 VCC	46,0 VCC	
Baixa tensão de aviso DC			
@ carga <50%	23,0 VCC	46,0 VCC	
@ carga \dot{y} 50%	22,0 VCC	44,0 VCC	
Tensão de retorno de aviso de baixa CC			
@ carga <50%	23,5 VCC	47,0 VCC	
@ carga \dot{y} 50%	23,0 VCC	46,0 VCC	
Tensão de corte baixa CC			
@ carga <50%	21,5 VCC	43,0 VCC	
@ carga \dot{y} 50%	21,0 VCC	42,0 VCC	
Alta tensão de recuperação DC	32Vdc	62Vdc	
Alta tensão de corte CC	33Vdc	63Vdc	
Consumo de energia sem carga	<35W	<50W	

Modo de carregamento utilitário			
MODELO DE INVERSOR	1,5 kW	3KW	5KW
Carregar algoritmo	3 passos		
Corrente de carga CA (máx.)	40 amperes (@VI / P = 230Vac)	60 amperes (@VI / P = 230Vac)	
Carga em massa Tensão da bateria	29,2		58,4
Gel / bateria AGM	28,2		56,4
Tensão de carga flutuante	27Vdc		54Vdc
curva de carga			

Modo de carregamento solar MPPT			
MODELO DE INVERSOR	1,5 kW	3KW	5KW
Máx. Potência do painel fotovoltaico		2000W	4000 W
Tensão fotovoltaica nominal	240Vdc		320Vdc
Tensão inicial	150Vdc +/- 10Vdc		
MPPT Faixa de tensão máx. Voltagem	120 ~ 380 Vcc	120 ~ 450Vdc	
Matriz fotovoltaica de circuito aberto	400Vdc	500Vdc	
Corrente máxima de carregamento (carregador AC mais carregador solar)	60A	80 Amperes	

5000 W

MODELO DE INVERSOR	1,5 kW	3KW	5KW
Faixa de temperatura operacional	- 10 ° C doente 50 ° C		
Temperatura de armazenamento	- 15°C ~ 60°C		
Umidade	5% a 95% de umidade relativa (sem condensação)		
Dimensão (D * DENTRO * Hmm)	100 x 280 x 390	115 x 300 x 400	
Peso neto / kg	8,5	9	1

MKBL121000 12V 100Ah



The KAISE LONG LIFE Series 10 years has been designed for different applications, such as UPS, electric and telecommunications applications that require a long useful life.



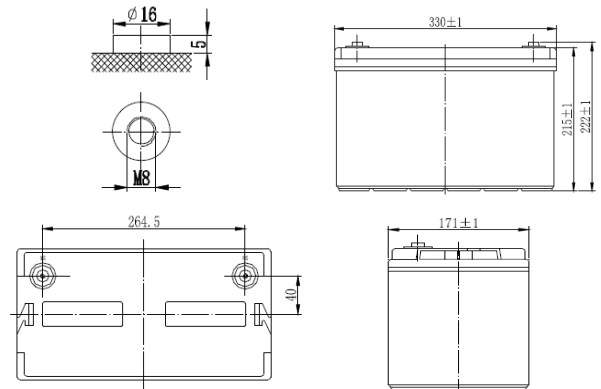
Performance Characteristics

Nominal Voltage	12V	
Dimensions	Length (mm / inch)	330 / 12.99
	Width (mm / inch)	171 / 6.73
	Height (mm / inch)	215 / 8.46
	Total Height (mm / inch)	222 / 8.74
Approx. Weight	(Kg / lbs) 29 / 63.9	
Design Life	10 years	
Terminal	M8	
Container Material	ABS	
Rated Capacity	104 Ah / 10.4A	(10hr, 1.70V / cell, 25°C / 77°F)
	85 Ah / 17.0A	(5hr, 1.70V / cell, 25°C / 77°F)
	59.7 Ah / 59.7A	(1hr, 1.70V / cell, 25°C / 77°F)
Max. Discharge Current	900A (5s)	
Internal Resistance	Approx 5.2 mΩ	
Operating Temp. Range	Discharge : -20 ~ 60°C (-4 ~ 140°F)	
	Charge : -10 ~ 60°C (14 ~ 140°F)	
	Storage : -20 ~ 60°C (-4 ~ 140°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 20A.	
	Voltage: 2.30VPC ~ 2.35VPC at 25°C (77°F)	
	Temp. Coefficient: -30mV/°C	
Standby Use	Initial Charging Current less than 20A.	
	2.25VPC~2.30VPC at 25° C (77°F)	
	Temp. Coefficient: -20mV/°C	
Capacity affected by	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Fully charged Kaise Long Life Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Constant Current Discharge (Amperes) at 77°F (25°C)

Volts/cell	15min	30min	1h	3h	5h	10h	20h
1.80V	136	87.4	57.1	22.8	16.3	10.0	5.30
1.75V	145	89.3	58.9	23.5	16.6	10.2	5.35
1.70V	156	92.2	59.7	24.1	17.0	10.4	5.40
1.65V	164	95.0	60.6	24.6	17.3	10.6	5.45
1.60V	173	98.9	61.0	25.1	17.6	10.8	5.50

Dimensions and Terminal (Unit: mm (inches))



Applications

UPS
Telecommunications equipment
Solar energy systems
Cable TV
Power station
Marine equipment
Military equipment
Emergency power systems
Railway systems

Certifications

ISO 9001:2008 ISO 14001:2008



Discharge Current vs. Discharge Voltage

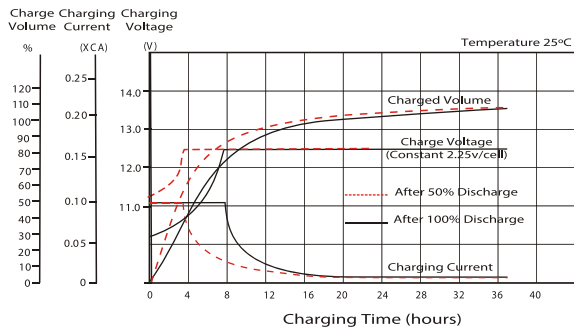
Final discharge voltage V/CELL	1.8	1.75	1.7	1.6
Discharge current (A)	$I \leq 0.1CA$	$0.25CA \geq I > 0.1CA$	$0.55CA \geq I > 0.25CA$	$I > 0.55CA$

Constant Power Discharge (Watts per cell) at 77°F (25°C)

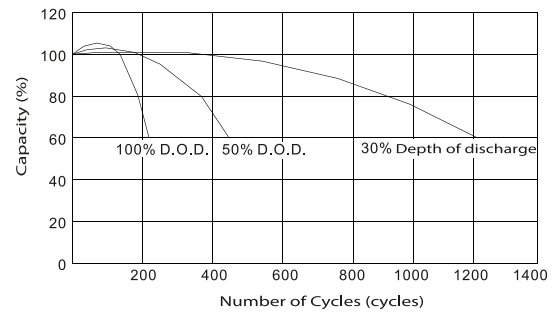
Volts/cell	15min	30min	1h	3h	5h
1.80V	270	164	109	45.9	32.9
1.75V	279	170	112	46.7	33.2
1.70V	290	176	116	47.3	33.3
1.65V	299	180	117	47.8	33.6
1.60V	304	186	119	48.4	33.8

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

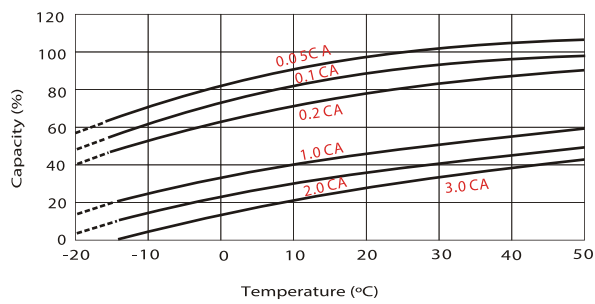
Charging Characteristics (float use)



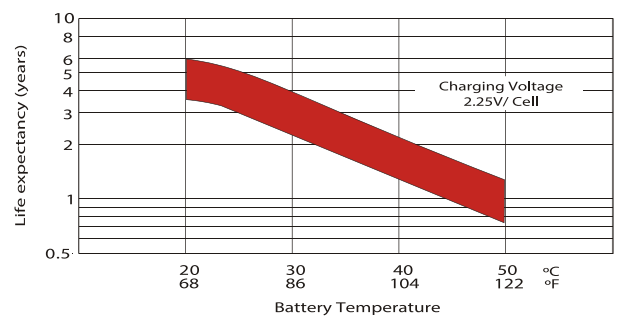
Cycle Life in Relation to Depth of Discharge



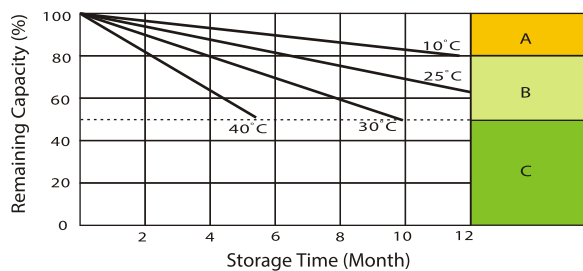
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics



- A** No supplementary charge required (carry out supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use. Optional charging way a below:
 1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
 2. Charged for above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.
 3. Charged for 8-10 hours at limited current 0.05 CA.
- C** Supplementary charge often fail to recover the capacity. The battery should never be left standing till this is reached.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.

HiPower Series

144-CELL HALF CUT MONOCRYSTALLINE
SOLAR MODULE

450 Watt

STPXXXS - B72H/Vnh



Features



High power output

Compared to 158.75mm module, the power output can increase 25W-30W



Suntech current sorting process

System output maximized by reducing mismatch losses up to 2% with modules sorted & packaged by amperage



Excellent weak light performance

More power output in weak light condition, such as haze, cloudy, and morning



Lower operating temperature

Lower operating temperature and temperature coefficient increases the power output



Extended load tests

Module certified to withstand front side maximum static test load (5400 Pascal) and rear side maximum static test loads (3800 Pascal) *



Withstanding harsh environment

Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline

Certifications and standards:
IEC 61215, IEC 61730, conformity to CE



Trust Suntech to Deliver Reliable Performance Over Time

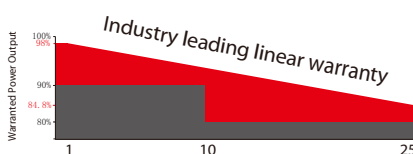
- World-class manufacturer of crystalline silicon photovoltaic modules
- Unrivaled manufacturing capacity and world-class technology
- Rigorous quality control meeting the highest international standards: ISO 9001, ISO 14001 and ISO17025
- Regular independently checked production process from international accredited institute/company
- Long-term reliability tests
- 2 × 100% EL inspection ensuring defect-free modules

Special Cell Design



The unique cell design leads to reduced electrodes resistance and smaller current, thus enables higher fill factor. Meanwhile, it can reduce losses of mismatch and cell wear, and increase total reflection.

Industry-leading Warranty based on nominal power



- 98% in the first year, thereafter, for years two (2) through twenty-five (25), 0.55% maximum decrease from MODULE's nominal power output per year, ending with the 84.8% in the 25th year after the defined WARRANTY STARTING DATE.****
- 15-year product warranty
- 25-year linear performance warranty

IP68 Rated Junction Box



The Suntech IP68 rated junction box ensures an outstanding waterproof level, supports installations in all orientations and reduces stress on the cables. High reliable performance, low resistance connectors ensure maximum output for the highest energy production.

* Please refer to Suntech Standard Module Installation Manual for details. **WEEE only for EU market.

*** Please refer to Suntech Product Warranty for details.
made in China & Vietnam

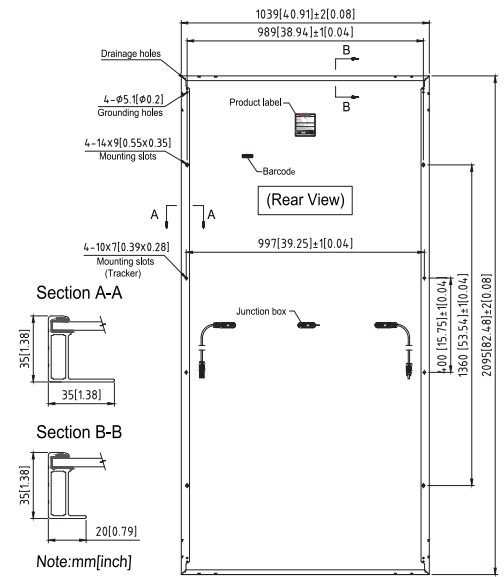
Electrical Characteristics

STC	STPXXS-B72H/Vnh				
Maximum Power at STC (Pmax)	450 W	445 W	440 W	435 W	430 W
Optimum Operating Voltage (Vmp)	41.4 V	41.2 V	41.0 V	40.8 V	40.6 V
Optimum Operating Current (Imp)	10.87 A	10.81 A	10.74 A	10.67 A	10.60 A
Open Circuit Voltage (Voc)	49.2 V	49.0 V	48.8 V	48.6 V	48.4 V
Short Circuit Current (Isc)	11.61 A	11.54 A	11.47 A	11.40 A	11.32 A
Module Efficiency	20.7%	20.4%	20.2%	20.0%	19.8%
Operating Module Temperature	-40 °C to +85 °C				
Maximum System Voltage	1500 V DC (IEC)				
Maximum Series Fuse Rating	20 A				
Power Tolerance	0/+5 W				

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5;
Tolerance of Pmax is within +/- 5% and tolerances of Voc and Isc are within +/- 5%.

NMOT	STPXXS-B72H/Vnh				
Maximum Power at NMOT (Pmax)	339.4 W	335.8 W	332.7 W	327.7 W	324.6 W
Optimum Operating Voltage (Vmp)	38.2 V	38.0 V	37.8 V	37.6 V	37.5 V
Optimum Operating Current (Imp)	8.89 A	8.84 A	8.78 A	8.73 A	8.67 A
Open Circuit Voltage (Voc)	46.2 V	46.0 V	45.8 V	45.5 V	45.4 V
Short Circuit Current (Isc)	9.37 A	9.31 A	9.25 A	9.20 A	9.13 A

NMOT: Irradiance 800 W/m², ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.



Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	42 ± 2 °C
Temperature Coefficient of Pmax	-0.36%/°C
Temperature Coefficient of Voc	-0.304%/°C
Temperature Coefficient of Isc	0.050%/°C

Mechanical Characteristics

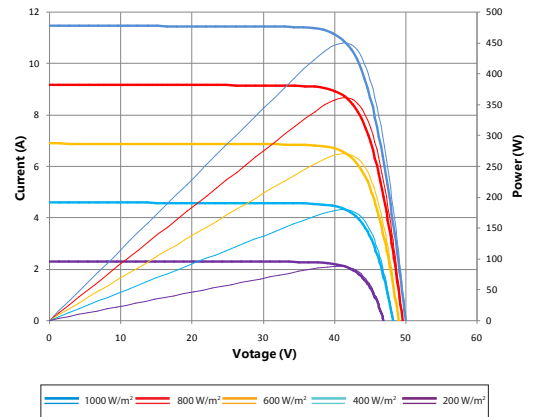
Solar Cell	Monocrystalline silicon 166 mm
No. of Cells	144 (6 × 24)
Dimensions	2095 × 1039 × 35 mm (82.5 × 40.9 × 1.4 inches)
Weight	24.5 kgs (54.0 lbs.)
Front Glass	3.2 mm (0.13 inches) tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm ² , Portrait: (-)350 mm and (+)160 mm in length Landscape: (-)1400 mm and (+)1400 mm in length or customized length
Connectors	Genuine MC4 EVO2, TL-Cable01S
Fire Class Rating	C in accordance with UL 790

Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	31	31
Pallets per container	5	22
Pieces per container	155	682
Packaging box dimensions	2125×1130×1205 mm	
Packaging box weight	812 kg	

Information on how to install and operate this product is available in the installation instruction. All values indicated in this data sheet are subject to change without prior announcement. The specifications may vary slightly. All specifications are in accordance with standard EN 50380. Color differences of the modules relative to the figures as well as discolorations of/in the modules which do not impair their proper functioning are possible and do not constitute a deviation from the specification.

Current-Voltage & Power-Voltage Curve (450S)



Dealer information

