www.solaxpower.com info@solaxpower.com

Single phase
Dual MPPT inverters

# X1-Boost


***Simple.***
***Reliable.***
***Efficient***

- High Efficiency
- Wide Voltage Range
- 'Smart Plug' Load Control
- Remote Monitoring

3kW 3.3kW 3.6kW 4.2kW 5kW

## X1-3.0-T / X1-3.3-T / X1-3.6-T/X1-4.2-T / X1-5.0-T

SolaX have developed a range of single phase inverters unrivalled in the industry for their quality, reliability and efficiency. The SolaX single phase inverters boast a wide MPPT voltage range to allow for more energy harvesting and have a maximum input voltage of 600V, with a maximum efficiency of 97.8%. In addition, SolaX single phase inverters are IP65 rated, have no internal fan and come with optional 'plug & play' WIFI. The dual MPPT 'Boost' range is also compatible with the new SolaX 'Smart Plug' which allows for device remote control.


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# X1-BOOST (SINGLE PHASE)

| | X1-3.0T | X1-3.3T | X1-3.6T | X1-4.2T | X1-4.6T | X1-5.0T |
|---|---|---|---|---|---|---|
| **INPUT (DC)** | | | | | | |
| Max.PV array power [Wp] | 4500 | 4950 | 5400 | 6300 | 6900 | 7500 |
| Max.DC voltage [V] | 600 | 600 | 600 | 600 | 600 | 600 |
| Nominal DC operating voltage [V] | 360 | 360 | 360 | 360 | 360 | 360 |
| Max. input current [A] | 12/12 | 12/12 | 12/12 | 12/12 | 12/12 | 12/12 |
| Max. short circuit current [A] | 14/14 | 14/14 | 14/14 | 14/14 | 14/14 | 14/14 |
| MPPT voltage range[V] | 70-580 | 70-580 | 70-580 | 70-580 | 70-580 | 70-580 |
| Start operating voltage[V] | 100 | 100 | 100 | 100 | 100 | 100 |
| No. of MPP trackers | 2 | 2 | 2 | 2 | 2 | 2 |
| Strings per MPP tracker | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |
| **OUTPUT AC** | | | | | | |
| Nominal AC power [VA] | 3000 | 3300 | 3680 | 4200 | 4600 | 5000 (4600 for VDE4105) |
| Max. AC power [VA] | 3300 | 3630 | 4048(3680 for G98) | 4620 | 5060 | 5500 (4600 for VDE4105) |
| Nominal grid voltage(AC voltage range) [V] | 220/230/240; 180~280 | | | | | |
| Nominal grid frequency/range [Hz] | 50/60; ±5 | | | | | |
| Nominal AC current [A] | 13 | 14.3 | 16 | 18.3 | 20 | 21.7 (20 for VDE4105) |
| Max. AC current [A] | 14.3 | 15.8 | 17.6(16 for G98) | 20.1 | 22 | 23.9 (20 for VDE4105) (21.7 for AS4777) |
| Displacement power factor | 0.8 leading ~ 0.8 lagging | | | | | |
| THDi, rated power [%] | <2 | | | | | |
| **EFFICIENCY** | | | | | | |
| MPPT efficiency [%] | 99.9 | | | | | |
| Euro efficiency [%] | 97.0 | | | | | |
| Max. efficiency [%] | 97.8 | | | | | |
| **POWER CONSUMPTION** | | | | | | |
| Standby consumption (Night) [W] | <0.5 | | | | | |
| **STANDARD** | | | | | | |
| Over voltage protection | YES | | | | | |
| Over current protection | YES | | | | | |
| DC isolation impedance monitoring | YES | | | | | |
| Ground fault current monitoring | YES | | | | | |
| DC injection monitoring | YES | | | | | |
| RCD protection | YES | | | | | |
| Safety | IEC62109-1/-2 | | | | | |
| EMC | EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3 | | | | | |
| Certification | VDE4105 /G98 / G99/ AS4777 / EN50549 / CEI0-21 | | | | | |
| **ENVIRONMENT LIMIT** | | | | | | |
| Degree of protection(according to IEC60529) | IP65 | | | | | |
| Operating temperature range [°C] | -25~+60(derating at 45) | | | | | |
| Max. operation altitude [m] | <2000 | | | | | |
| Humidity [%] | 0~100 (condensation) | | | | | |
| Storage temperature [°C] | -25~+60 | | | | | |
| Typical noise emission [dB] | <25 | | | | | |
| **DIMENSION AND WEIGHT** | | | | | | |
| Dimensions(WxHxD) [mm] | 341.5*430*143 | | | | | |
| Weight[kg] | 13.5 | 13.5 | 13.5 | 14.5 | 14.5 | 14.5 |
| Cooling concept | Natural | | | | | |
| Topology | Non-isolated | | | | | |
| Communication interfaces | Pocket WiFi(optional)/Pocket LAN(optional)/Pocket GPRS(optional)/Meter(optional)/RS485/DRM/USB-Upgrade | | | | | |
| LCD display | Yes | | | | | |
| Standard warranty [years] | 5-10 | | | | | |

SUNTECH

# HIPower Series

144-CELL HALF CUT MONOCRYSTALLINE SOLAR MODULE

# 450 Watt

**STP*XXX*S - 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) *

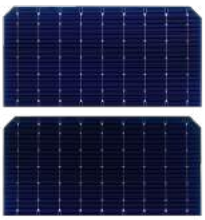
**Withstanding harsh environment**
Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline

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

## Trust Suntech to Deliver Reliable Performance Over Time

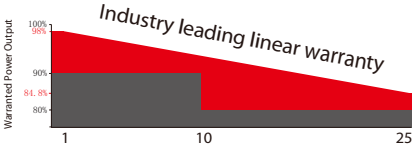
- World-class manufacturer of crystalline silicon photovoltaic modules
- Unrivaled manufacturing capacity and world-class technology
- Rigorous quality control meeting the highest international standards: ISO 9001, ISO 14001 and ISO17025
- Regular independently checked production process from international 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

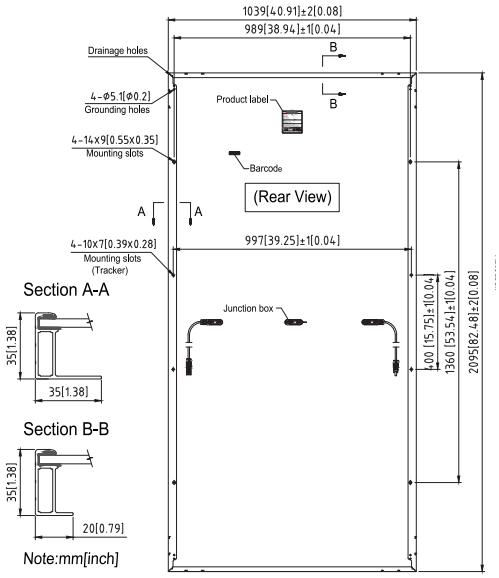
## Electrical Characteristics

| STC | STPXXXS-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 | STPXXXS-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 |

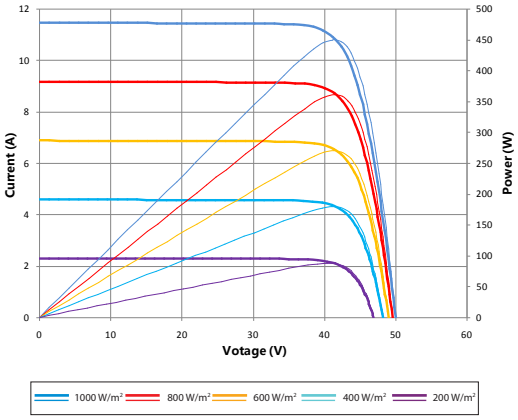
NMOT: Irradiance 800 W/m², ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.




## 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 |

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




## 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 mm², 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 | |

## Dealer information




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.