

20%-25% more energy harvesting power than traditional solar panels

SMS Smart Solar Panels



**Proprietary
Cell-level MPPT
optimizes cell
performance at a
granular level.**

> SMS Advantage: Smart Solar Panels maximize the power generated by photovoltaic panels independent of temperature and the amount of solar radiation. The performance of conventional solar panels is directly proportional to the operating temperature of the cells. The outcome: variation in climate can negatively affect cell performance.

> SMS Advantage: SMS panels include embedded Smart Controllers enabling serial or parallel connections of to produce 108v or 36v respectively.

Example: a single SMS Smart Solar Panel can produce the 96v required for high-voltage applications (like 3-phase motors) which can only be achieved by 3 conventional panels.

Conventional solar panels use bypass (dump) diodes to protect and isolate underperforming or weak cells (which occurs during panel shadowing). When panel cells do not produce identical output, their output is diminished, producing less power.

More Power From Fewer Panels.

Conventional solar panels, even the latest generation, aren't very efficient because they can't accommodate changing levels of light. When only some of the cells fall into shadow, the entire panel stops producing. SMS Smart Solar Panels with Smart Solar Controller technology resolves that problem and produces...

Gain 20%-25% more energy harvesting –
*More power than traditional solar panels without
 the expense of a separate micro-inverter.*

Better Technology. Better Performance.

- > Cell-level MPPT producing higher voltage throughput.
- > DC voltage boost to create consistent voltage.
- > 72 high-quality cells (mono or polycrystalline) produce optimal light absorption.

High Reliability and Limited Maintenance.

- > Cells are sealed into high-transmission tempered glass to protect modules from harsh weather environments.
- > A tough all-weather corrosion-resistant case houses the SSC (Smart Solar Controller) circuitry.
- > A tough powder coated anodized aluminum alloy frame is made for years of outdoor use.

> SMS Advantage: Smart Solar Panels compute MPPT locally, optimizing cell performance at a granular level. This increases throughput (energy harvesting) 20% to 25% more than conventional panels. In conventional solar panels, MPPT algorithms perform only a generalized optimization.

SMS panels optimize the power conversion using embedded logic (MPPT algorithm) on the PV cells connected to the converter. Capacitors are eliminated by integrating 4-phase interleaved topology of the DC-DC converter – increasing system integrity.

SSP305w – Smart Solar Panels

High efficiency 305watt • Built-in MPPT technology

SMS Smart Solar Panel – Specifications

Dimensions (L x W x D): 76.93 x 38.7 x 1.57 inches
1930 x 990 x 51mm

Weight: 25kg / 55lbs.

Glass: 3.2mm tempered

Frame Material: Anodized Aluminium Alloy

Cells Type: Mono/Poly Crystalline Cell
High-transmission glass

Maximum Power (Pmax): 305 watt

Power Tolerance: +3%

Tolerance: 5W (2%+)

Operating Temperature: -40°F (-40°C) 185°F (85°C)

Number of Cells: 72

Max System/Power Voltage: 96V / 96V

Maximum Power Current: 7.78 Amps

Series Fuse Rating: 15

Termination Method: none required

Solar Cell Efficiency: 19%

Harvesting Efficiency: 20-25% more than
conventional panels

Partial Shading Technology: MPPT embedded

Nominal Operating Temperature: 45°C/113°F

Open Circuit Voltage: 36V @ 36V setting

36V Short Circuit Current: 8.47 Amps @ 36V

Open Circuit Voltage: 108V @ 96V setting

96V Short Circuit Current: 3.18 Amps @ 96V

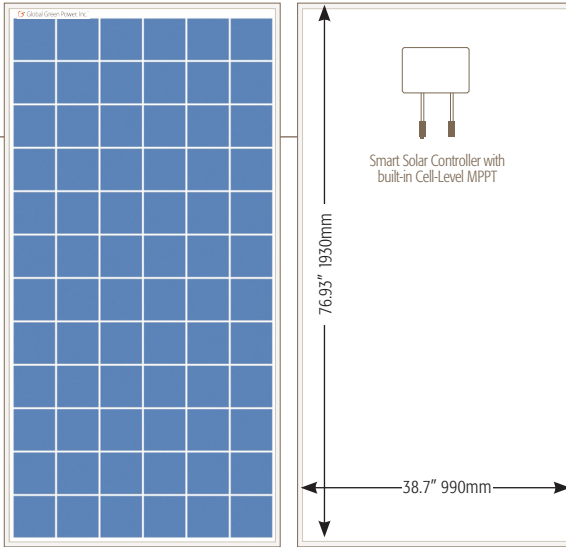
Every SMS Smart Solar Panel is flash tested to ensure it meets our high performance specifications. The tracking of manufacturing and performance data is made easy with a Radio-Frequency Identification (RFID) that is included on every panel.



SMS (USA)

Find a Distributor:

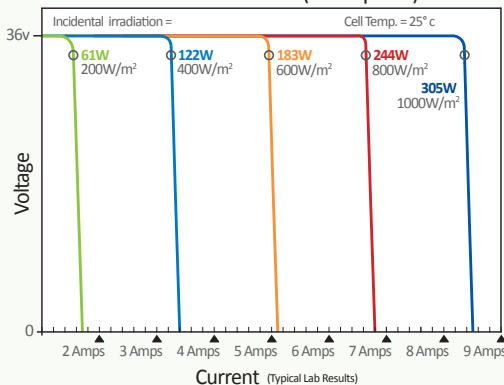
www.SolarMotorSystems.com



Built-in MPPT technology produces optimal power performance even during partial shadowing.



Electrical Curves (36V option)



Electrical Curves (96V option)

