

# SOLAR KIT MODEL: SISMA-500



**500 Solar PV Kit**

**72 kWh per month**

**2,4 kWh per DAY**

**Quantity Description**

**2 Solar panels 250W Polycrystalline**

**2 Micro Inverter SMA**

**1 Multigrad Communication unit**

**2 2M, AC cables for Multigrad Coomunication,**

**1 Support structure for solar panels**

**1 20 m AC cables 1x 4mm R1000 3core Inverter to Multigrade with connectors at end**

**1 5m AC cables 1x 4mm R1000 3 core Multigrad to Main Breaker with thimble at ends**

**1 1 installation tool kit**

## **SYSTEM WARRANTY\*:**

Solar modules production: 25 years

Module support structure: 25 years

Inverters: 5 years standard, (extendable to 25 years)

## **Quality of Components:**

Manufactured in EU.

All components in the kit are high quality with CE standard

## **Description**

SITECNO solar kits for hybrid system with diesel generator, batteries and grid are complete solutions which also provide energy in all unforeseen situations that may lead either by time, by circumstances of outage and any situation. It is a complete solution for saving your energy costs and fuel.

## **Kits advantages**

- Easy to organize the order through a unique code and provider
- Compatibility between all components secured
- Measurement of energy flows installation
- CE Highest quality components
- Support pre (Combiner Box) enclosures configured to facilitate mounting installation.
- Possibility of dimensioning variants references listed kits for other power settings (on request)

### ***Function of the system***

1. The place uses the solar energy produced by photovoltaic modules during the hours of sun, plus the excess energy store in the batteries.
2. The diesel generator is the last option when the load does not get solar energy, and there is load shedding in the grid. In these situations the location consumes energy from diesel generator.

### ***Modular system***

These systems are module type and can be installed as per your space and requirement. You can ask for additional services as state-of-the-art designing, drawings, engineering and installation of your projects.

Solar kits with modular system can be extended to MW projects

### ***Solar Kit Applications:***

- Schools
- Restaurants
- Gymnasium
- Electric vehicle charging stations
- Gardens
- Markets
- Administration buildings
- Hospitals
- Resorts
- Service centres
- Multi story buildings
- Shopping malls
- Hotels
- Scout camps
- Petrol Stations
- Parking Areas
- Old houses
- Public service offices

### ***Additional Accessories***

You can ask for additional accessories for extension at your installation or shifting of your system to another place.

### ***Installation Training Services***

Training of installation is offered for technical persons on time to time basis. Schedule of the training session announce on web site.

### ***Operation and maintenance services***

Operation and maintenance services offered for the valued customers for efficient operation of the system. Customers may ask for the O&M service contract with the company.

### ***Monitoring services***

In order to monitor solar power systems, data can be transmitted to remote locations. For communication between the solar inverter and monitoring devices, SITECNO provides two basic choices: Wireless or Blue-tooth and wired variants.



# Polycrystalline SolarModule 250W

SITECNO Solar Photovoltaic Panels stand for quality, durability and most importantly, high performance. Our experience, capacity of research, continuing development and improvement have turned us into a company recognized in the sector by the high value offered to our clients.

Due to their engineered hollow section frame and its 4mm special textured glass with AR coating, SITECNO modules meet the maximum demands with regard to stability and corrosion resistance.

Thanks to their high performance SITECNO modules are prepared for changes in legislation. These panels will produce 5% more than any other of the same features.

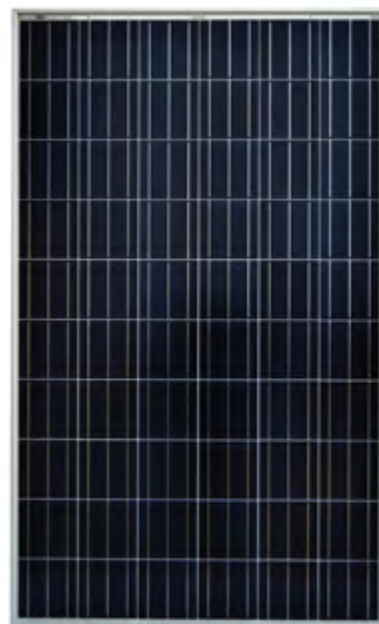
The performance warranty is for 25 years, after 12 years, modules still produce a minimum 90% of their nominal performance. After 25 years module still produce a minimum 80% of their nominal performance.

## Electrical Characteristics:

|                               |            |
|-------------------------------|------------|
| MODEL                         | SI-P60-250 |
| Nominal Power (Pmax)          | 250W       |
| Open Circuit Voltage (VOC)    | 37,5V      |
| Short Circuit Current (ISC)   | 8,76A      |
| Voltageat Nominal Power (Vmp) | 30,3V      |
| Currentat Nominal Power (Imp) | 8,24A      |
| Module Efficiency (%)         | 15,20      |

## Mechanical Characteristics:

|                  |                             |
|------------------|-----------------------------|
| Cell type        | Polycrystalline156x156mm    |
| Number of cells  | 60 (6x10)                   |
| Module dimension | 1660 x 990 x 50mm           |
| Weight           | 20kg                        |
| Front cover      | TSG low-iron tempered glass |
| Frame            | Aluminium alloy             |
| Junction box     | IP65, 3diodes               |
| Cable length     | 1200mm (+) , 800mm(-)       |
| Connector        | PV-JM601                    |



## Temperature Coefficients:

|                                           |                  |
|-------------------------------------------|------------------|
| Nominal Operating Cell Temperature (NOCT) | 25°C ±2°C        |
| Temperature Coefficients of Pmax          | -0.43% / °K      |
| Temperature Coefficients of Voc           | -0.31% / °K      |
| Temperature Coefficients of Isc           | 0.04% / °K       |
| Operating Temperature                     | -40 °C to +85 °C |
| Maximum System Voltage                    | 1000V DC         |
| Reverse current load                      | 15A              |

# MICRO INVERTER SB 240

## OVERVIEW

PV system operators can make a smart investment today, toward the future of the energy transition. The Sunny Boy 240 and its modular system make this possible. Thanks to its simple design, ease of planning and installation and overall flexibility when it comes to energy demand, it provides nothing but benefits.

## PRINCIPLE:

### MODULAR DESIGN MEANS EASY EXPANSION

When it comes to generating electricity with the micro inverter system, you can decide how small (or how large) your PV system will be (or become). Depending on the energy demand and your financial resources, the system can be expanded or varied step by step.

System size ranging from a single module (e.g., on a balcony) to a system offering several kilowatt-peak output

Any number of additional micro inverters can be connected thanks to the flexible design of the Sunny Multigate\*

\*Depending on local regulations



## TECHNICAL DESCRIPTION

### Input (DC)

|                                            |                        |
|--------------------------------------------|------------------------|
| Max. DC power (@ $\cos \varphi = 1$ )      | 230 W                  |
| Max. input voltage                         | 45 V                   |
| MPP voltage range / rated input voltage    | 23 V ... 39 V / 29.5 V |
| Min. input voltage / initial input voltage | 23 V / 40 V            |
| Max. input current input A / input B       | 8.6 A                  |

### Output (AC)

|                                            |                                      |
|--------------------------------------------|--------------------------------------|
| Rated power (@ 230 V, 50 Hz)               | 230 W                                |
| Max. apparent AC power                     | 230 VA                               |
| Nominal AC voltage / range                 | 230 / 184-270 V                      |
| AC power frequency / range                 | 50 Hz, 60 Hz / -5 Hz ... +5 Hz       |
| Rated power frequency / rated grid voltage | 50 Hz / 230 V                        |
| Max. output current                        | 1 A                                  |
| Power factor at rated power                | 1                                    |
| Displacement power factor, adjustable      | 0.8 overexcited ... 0.8 underexcited |

### Efficiency

|                                                |                 |
|------------------------------------------------|-----------------|
| Max. efficiency / European weighted efficiency | 95.8 % / 95.3 % |
|------------------------------------------------|-----------------|

### General data

|                             |                                            |
|-----------------------------|--------------------------------------------|
| Dimensions (W / H / D)      | 188 / 218 / 44 mm (7.4 / 8.6 / 1.7 inches) |
| Weight                      | 1.3 kg (2.9 lb)                            |
| Operating temperature range | -40°C ... +65°C (-40°F ... +140°F)         |
| Noise emission (typical)    | 38 dB(A)                                   |
| Self-consumption (night)    | 0.03 W                                     |

## TECHNICAL DESCRIPTION SUNNY MULTIGATE

|                                            |                                      |
|--------------------------------------------|--------------------------------------|
| Max. number of micro inverters             | 12 x SB 240-10                       |
| Output (AC)                                |                                      |
| Rated power (@ 230 V, 50 Hz)               | 2760 W                               |
| Max. apparent AC power                     | 2760 VA                              |
| Nominal AC voltage / range                 | 230 / 184-270 V                      |
| AC power frequency / range                 | 50 Hz, 45.5 Hz to 63 Hz              |
| Rated power frequency / rated grid voltage | 50 Hz / 230 V                        |
| Max. output current                        | 12 A                                 |
| Power factor at rated power                | 1                                    |
| Displacement power factor, adjustable      | 0.8 overexcited ... 0.8 underexcited |



### Protective Devices

|                                                                                              |           |
|----------------------------------------------------------------------------------------------|-----------|
| Ground fault monitoring / grid monitoring                                                    | — / ●     |
| DC reverse polarity protection / AC short-circuit current capability / galvanically isolated | — / ● / — |

### General data

|                             |                                           |
|-----------------------------|-------------------------------------------|
| Dimensions (W / H / D)      | 162 / 90 / 68 mm (6.4 / 3.5 / 2.5 inches) |
| Weight                      | 0.75 kg (1.5 lb)                          |
| Operating temperature range | -40°C ... +45°C (-40°F ... +113°F)        |

|                                               |            |
|-----------------------------------------------|------------|
| Cooling method                                | Convection |
| Degree of protection (according to IEC 60529) | IP20       |

|               |                             |
|---------------|-----------------------------|
| Communication |                             |
| Sunny portal  | SMA Webconnect via Ethernet |

|                                 |                |
|---------------------------------|----------------|
| Features                        |                |
| AC terminal                     | Screw terminal |
| Interface: Speedwire/Webconnect |                |

|                                     |                                                                                                                                                       |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certification and approvals 01/2014 | VFR2014, PPC, EN 50438:2007(EU, CZ, NEN), C10/11:2012, VDE0126-1-1, VDE-AR-N 4105, TR-3.2.1, R.D.1699/ R.D.413, CEI0-21, AS4777, TOR D4, G83/2, G59/3 |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

|                  |             |
|------------------|-------------|
| Type designation | MULTIGATE-1 |
|------------------|-------------|

**Design**

Technical feature

Weight

Loads

Test certificate

**Cable:**

- Model:
- Rated Voltage:
- Rating Current:
- Cable Size:
- Proof Voltage:
- Protection Class:
- Temperature Range:
- Flame class:

**Modular type**

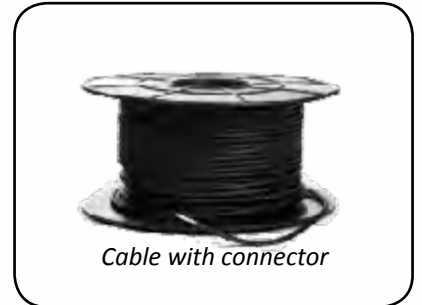
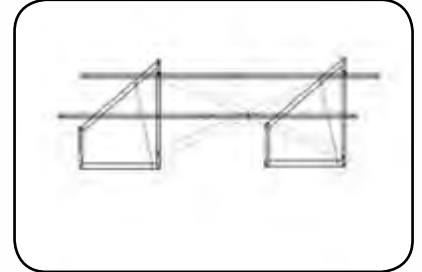
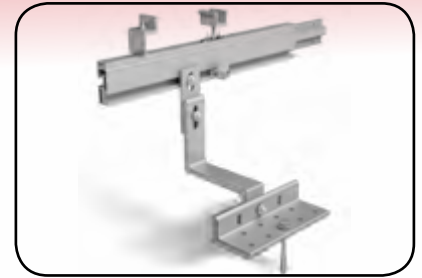
Aluminium  
25 years warranty  
Tamper proof nut bolt  
100% recycleable material  
A2 Stainless steel bolts  
2,49kg/m  
wind, snow  
CE Certifies

SI-MC4-F  
TUV 1500V DC / UL 600V DC  
20-30A  
2.5-4.0-6.0, 10-12-14AWG  
TUV 1500V AC, 1 min  
Class II  
-40 to 85°C  
UL94-V0

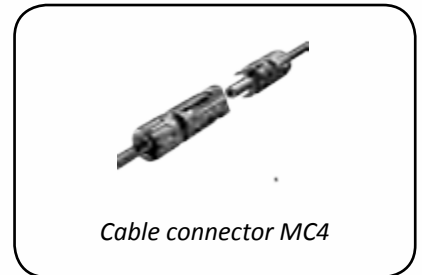
**Connector:**

Flexible conductor,  
Maximum service temperature:  
Estimated lifetime  
UV Resistant UV Resistant  
Grease & mineral oils resistance:  
Grease & mineral oils resistance:

class 5  
120°C  
30 years.  
excellent  
excellent



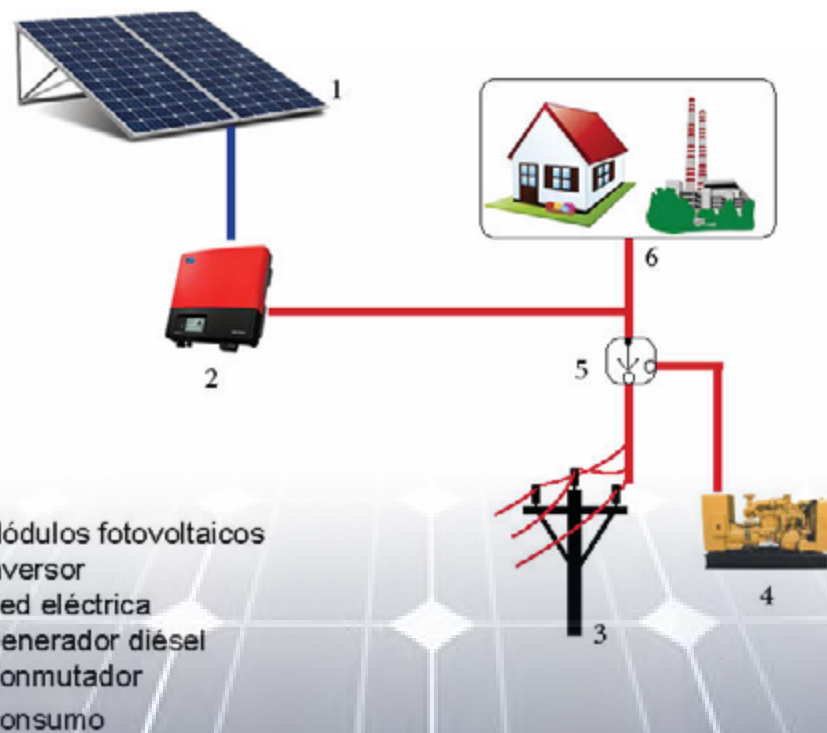
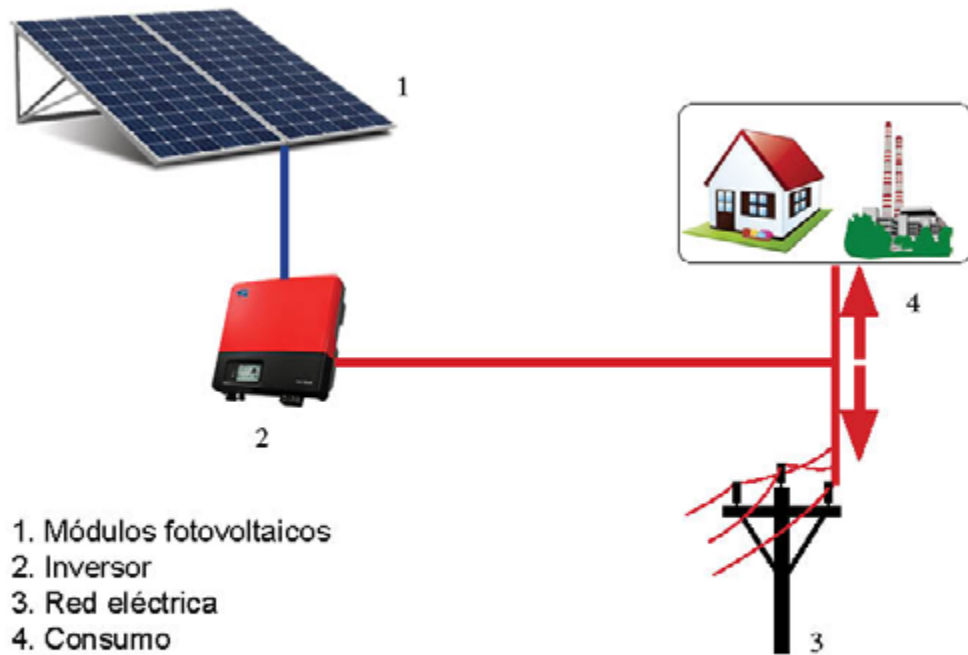
Cable with connector



Cable connector MC4

## INSTALLATION APPLICATION

- Instant self-consumption system with feed in grid (on grid)
- Instant self-consumption system without feed in to the grid (on grid)
- Solar system hybrid with diesel generator (on grid)



# Produce your own FREE energy

Your contribution for a sustainable earth and reduce CO2



**SiTecno**  
ENERGY - EFFICIENCY - INNOVATION



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