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PV Inverter
SUNNY BOY 3000TL / 4000TL / 5000TL
User Manual



SB30TL_40TL_50TL-BEN084420 | IME-TB-SBXTL-20 | Version 2.0

EN

Installer contact

SMA Solar Technology AG
Tel.: +49 (561) 95 22 - 499
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- Type of the Sunny Boy
- Serial number of the Sunny Boy (see name plate)
- Type and number of modules connected
- Event number or display of the Sunny Boy

If you have technical problems concerning our products, contact your installer or the SMA Technical Service line. We require the following information in order to provide you with the necessary assistance:

Contact

Explanation of the LEDs

- Green LED blinking: Waiting for sufficient insolation
- Green LED on: Operation
- Red LED on: Disturbance: contact the installer and specify the event and the serial number.
- Blue LED on: Sunny Boy is connected to a Bluetooth network and can communicate with other devices that have the same network ID.

Power	2250	kW
Day	24.06	kWh
Total	1178.2	kWh

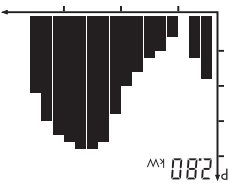
Power
The power that the Sunny Boy is feeding into the grid is displayed here.

Day
The energy generated on this day is displayed here. This equals the energy generated between the Sunny Boy's start up in the morning to the current time.

Total
The total energy that the Sunny Boy has generated throughout its service life is displayed here.

The power and energy of the Sunny Boy are displayed in the following three fields: Power, Day and Total. The display is updated every 5 seconds.

Power Display



The output of the Sunny Boy is shown as a diagram in the display. The daily graph is displayed by default. The right bar of the diagram represents the current hour. In case the Sunny Boy does not feed any power to the grid (e.g. at night or in case the modules are covered with snow) a gap is inserted into the chart.

The column for the current hour is adjusted every five seconds. After four seconds, it goes out for one second and then displays the current value.

Diagram

Tap once:
The background illumination switches on for one minute. The diagram displays the course of the last 16 feeding hours.

Tap again:
The diagram displays the course of the last 16 days. Tapping again switches the display to the next message.

The display shows the current values of your PV system. The values are updated every five seconds. You can operate the display by tapping on the Sunny Boy's lower cover.

Display Operation

Measurement Accuracy

The Sunny Boy is not equipped with a calibrated meter. The display values may deviate from the actual values and must not be used as a basis for invoicing. The Sunny Boy's measured values are required for the system management and to control the current to be fed to the grid.

Glossary

Bluetooth
Bluetooth is a radio technology that allows Sunny Boy devices and communication devices to communicate with each other. Bluetooth communication does not require visual contact between the devices.

Electronic Solar Switch

The Electronic Solar Switch is part of the Sunny Boy's DC isolator. The Electronic Solar Switch must be securely inserted into the bottom of the Sunny Boy and may only be removed by a qualified electrician.

Energy

Energy is measured in Wh (watt hours), kWh (kilowatt hours) or MWh (megawatt hours). The energy is the power calculated over time. If, for example, your Sunny Boy operates at a constant output of 3000 W for half an hour and then at a constant output of 2000 W for another half hour, it has fed 2500 Wh of energy into the grid within that hour.

Power

Power is measured in W (watts), kW (kilowatts) or MW (megawatts). Power is a momentary value. It displays the power your Sunny Boy is currently feeding into the grid.

Serial Number

DANGER!
Lethal voltages inside the Sunny Boy!

- Do not open the Sunny Boy.
- Do not remove the cable from the Sunny Boy.
- Work on the Sunny Boy must only be carried out by a qualified electrician.

CAUTION!
Danger of burn injuries due to hot housing parts!

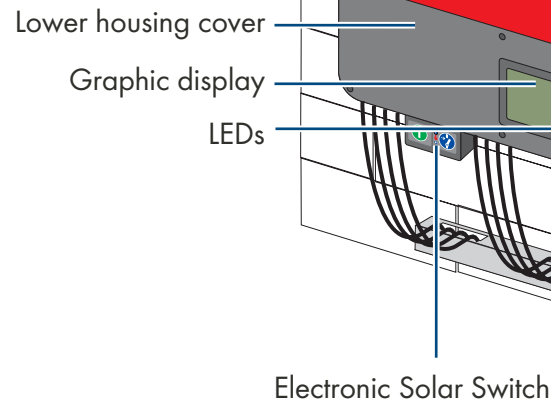
Some parts of the Sunny Boy housing can become hot during operation. However, this does not apply to the lower housing cover.

- Only touch the lower housing cover during operation.

i Yield loss due to poor heat dissipation!

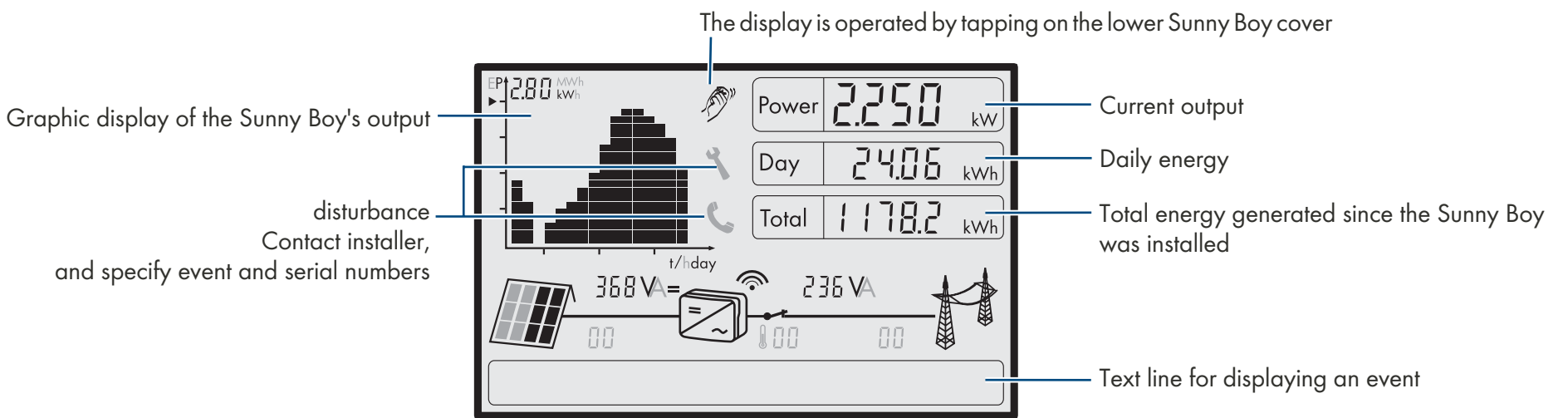
- Do not place objects on the housing.

Identification of the Sunny Boy by the name plate

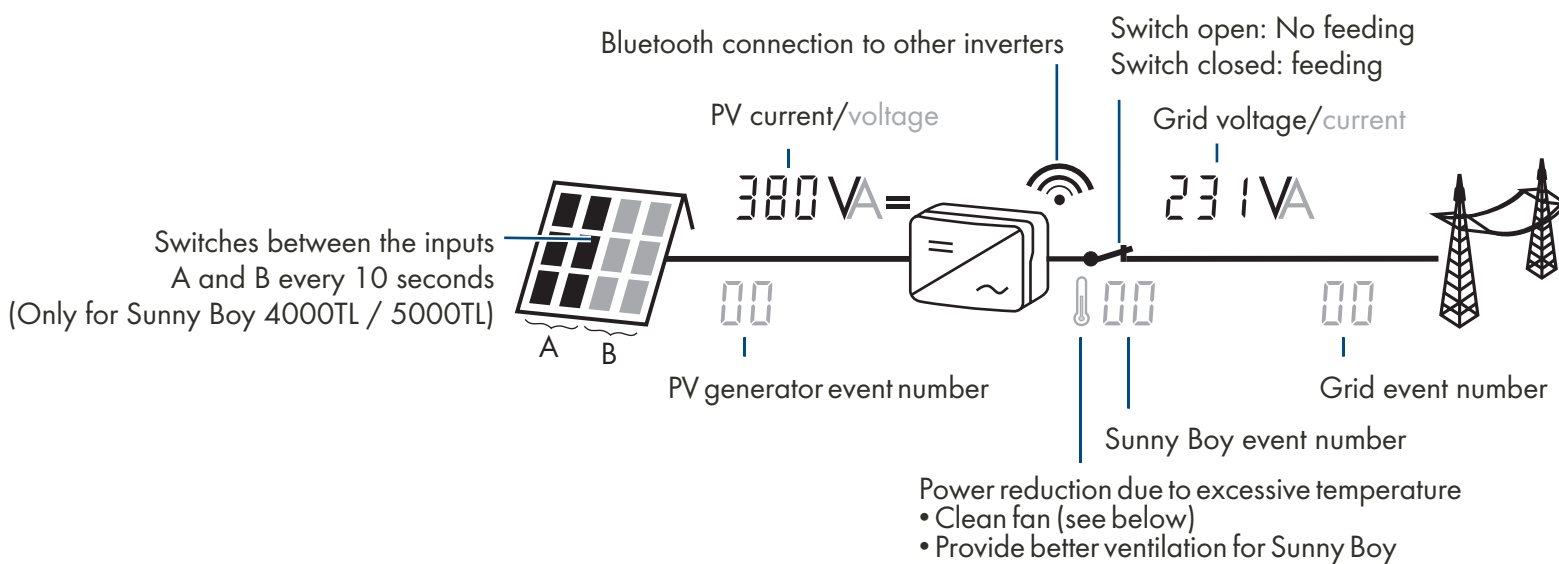


SMA Solar Technology AG	
SUNNY BOY	
Model	SB 4000TL-20
Serial No.	2100012445
V _{DC max}	550V
V _{DC min}	125-440 V
I _{DC max}	2 x 15 A
V _{AC max}	230 V
I _{AC max}	50/60 Hz
P _{DC max}	4000 W
I _{AC max}	17.5 A
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Graphic display



System Overview



Cleaning and Maintenance

Visual inspection

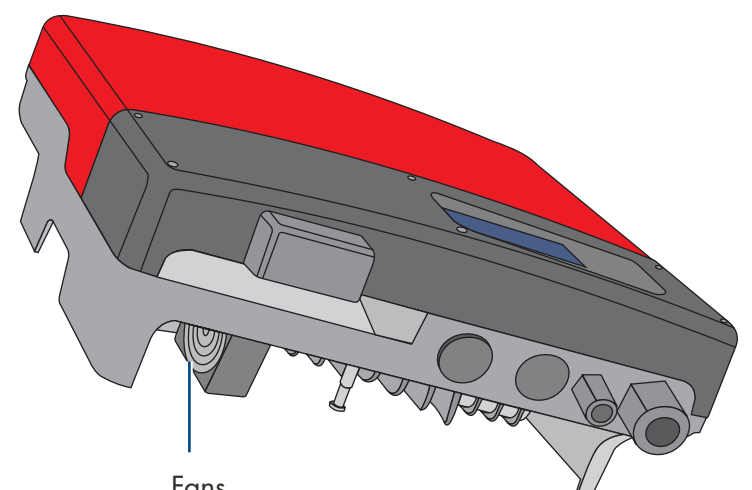
Regularly inspect the Sunny Boy and the cable for visible damage and dirt. In case of damage, contact your installer.

Clean fan (Only Sunny Boy 4000TL / 5000TL)

You can clean the fan housing from the outside using a vacuum cleaner. If there is a considerable amount of dirt, contact your installer.

Dirty housing and display

Clean the housing and the display using a damp cloth. Do not use solvents, abrasives or corrosive liquids.



Fans