SB 3000TL-21 / SB 3600TL-21 / SB 4000TL-21 / SB 5000TL-21

**Economical**

- Maximum efficiency of 97%
- Multi-string technology in all power classes
- Cost saving due to fewer parallel strings
- Shade management with OptiTrac Global Peak

**Flexible**

- Maximum DC input voltage of 750 V
- Integrated grid management functions and reactive power provision

**Simple**

- Without fan
- Easier wall mounting
- SUNCLIX DC plug-in system
- Fast connection, no tools required

**Communicative**

- Simple country configuration
- *Bluetooth*® technology as standard
- Multi-function relay as standard

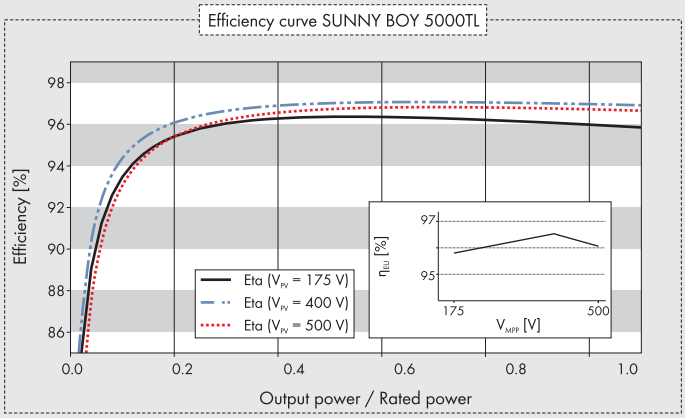
# SUNNY BOY 3000TL / 3600TL / 4000TL / 5000TL with Reactive Power Control

The same. Only better. The universally usable Sunny Boy.

It all remains the best: The new transformerless Sunny Boy is the ideal solution, especially for demanding PV arrays and partly shaded plants. Version 20 of the successful Sunny Boy offers a further array of advantages. It's more flexible in its range of applications, provides even more efficient yields, and it's easier to use. The high DC voltage of 750 V proves to be a cost advantage, since fewer parallel strings are required. In addition, the integrated grid management functions make the devices suitable for universal applications and allow them to actively support the grid.

# SUNNY BOY 3000TL / 3600TL / 4000TL / 5000TL
# with Reactive Power Control

| Technical data | Sunny Boy 3000TL | Sunny Boy 3600TL |
|---|---|---|
| **Input (DC)** | | |
| Max. DC power (@ cos φ = 1) | 3200 W | 3880 W |
| Max. input voltage | 750 V | 750 V |
| MPP voltage range / rated input voltage | 175 V ... 500 V/400 V | 175 V ... 500 V/400 V |
| Min. input voltage / initial input voltage | 125 V / 150 V | 125 V / 150 V |
| Max. input current input A / input B | 15 A / 15 A | 15 A / 15 A |
| Max. input current per string input A / input B | 15 A / 15 A | 15 A / 15 A |
| Number of independent MPP inputs / strings per MPP input | 2 / A:2; B:2 | 2 / A:2; B:2 |
| **Output (AC)** | | |
| Rated power (@ 230 V, 50 Hz) | 3000 W | 3680 W |
| Max. apparent AC power | 3000 VA | 3680 VA |
| Nominal AC voltage / range | 220 V, 230 V, 240 V / 180 V – 280 V | 220 V, 230 V, 240 V / 180 V – 280 V |
| AC power frequency / range | 50 Hz, 60 Hz / -5 Hz ... +5 Hz | 50 Hz, 60 Hz / -5 Hz ... +5 Hz |
| Rated power frequency / rated grid voltage | 50 Hz / 230 V | 50 Hz / 230 V |
| Max. output current | 16 A | 16 A |
| Power factor at rated power | 1 | 1 |
| Displacement power factor, adjustable | 0.8 overexcited ... 0.8 underexcited | 0.8 overexcited ... 0.8 underexcited |
| Feed-in phases / connection phases | 1 / 1 | 1 / 1 |
| **Efficiency** | | |
| Max. efficiency / European weighted efficiency | 97 % / 96 % | 97 % / 96.3 % |
| **Protective devices** | | |
| DC disconnect device | ● | ● |
| Ground fault monitoring / grid monitoring | ● / ● | ● / ● |
| DC reverse polarity protection / AC short-circuit current capability / galvanically isolated | ● / ● / – | ● / ● / – |
| All-pole-sensitive residual-current monitoring unit | ● | ● |
| Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) | I / III | I / III |
| **General data** | | |
| Dimensions (W/H/D) | 490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches) | 490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches) |
| Weight | 26 kg / 57.3 lb | 26 kg / 57.3 lb |
| Operating temperature range | -25°C ... +60°C/-13°F ... +140°F | -25°C ... +60°C/ -13°F ... +140°F |
| Noise emission (typical) | 25 dB(A) | 25 dB(A) |
| Self-consumption (night) | 1 W | 1 W |
| Topology | Transformerless | Transformerless |
| Cooling concept | Convection | Convection |
| Degree of protection (according to IEC 60529) | IP65 | IP65 |
| Climatic category (according to IEC 60721-3-4) | 4K4H | 4K4H |
| Maximum permissible value for relative humidity (non-condensing) | 100 % | 100 % |
| **Features** | | |
| DC connection / AC connection | SUNCLIX / Spring clamp terminal | SUNCLIX / Spring clamp terminal |
| Display | Graphic | Graphic |
| Interface: RS485 / *Bluetooth* / Webconnect / Speedwire[4] | ○ / ● / ○ / ○ | ○ / ● / ○ / ○ |
| Multi-function relay / Power Control Module | ○ / ○ | ○ / ○ |
| Warranty: 5 / 10 / 15 / 20 / 25 years | ● / ○ / ○ / ○ / ○ | |
| Certificates and approvals (additional on request) | CE, VDE0126-1-1, VDE-AR-N 4105, UTE C15-712, C10/11, RD1699, RD661, PPDS, PPC, G83/1-1, G59/2, EN50438[1], IEC 61727, PEA, AS 4777, CEI 0-21 | |
| Version: July 2012 | | |
| ● Standard features ○ Optional features – Not available | | |
| Type designation | SB 3000TL-21 | SB 3600TL-21 |




## Accessories

RS485 interface
DM-485CB-10

Webconnect interface with WEBCONDM-10 Speed-wire function

Interface to Speedwire fieldbus SPWDM-10 [4]

Additional fan kit
FANKIT01-10

Multi-function relay
MFR01-10

Power Control Module
PWCMOD-10

[1] Does not apply to all national appendices of EN 50438
[2] 4600 VA with VDE-AR-N-4105 / [3] 4825 W with VDE-AR-N 4105
[4] In planning

| Technical data | Sunny Boy 4000TL | Sunny Boy 5000TL |
|---|---|---|
| **Input (DC)** | | |
| Max. DC power (@ cos φ = 1) | 4200 W | 5250 W[3] |
| Max. input voltage | 750 V | 750 V |
| MPP voltage range / rated input voltage | 175 V ... 500 V/400 V | 175 V ... 500 V/400 V |
| Min. input voltage / initial input voltage | 125 V / 150 V | 125 V / 150 V |
| Max. input current input A / input B | 15 A / 15 A | 15 A / 15 A |
| Max. input current per string input A / input B | 15 A / 15 A | 15 A / 15 A |
| Number of independent MPP inputs / strings per MPP input | 2 / A:2; B:2 | 2 / A:2; B:2 |
| **Output (AC)** | | |
| Rated power (@ 230 V, 50 Hz) | 4000 W | 4600 W |
| Max. apparent AC power | 4000 VA | 5000 VA[2] |
| Nominal AC voltage / range | 220 V, 230 V, 240 V / 180 V – 280 V | 220 V, 230 V, 240 V / 180 V – 280 V |
| AC power frequency / range | 50 Hz, 60 Hz / -5 Hz ... +5 Hz | 50 Hz, 60 Hz / -5 Hz ... +5 Hz |
| Rated power frequency / rated grid voltage | 50 Hz / 230 V | 50 Hz / 230 V |
| Max. output current | 22 A | 22 A |
| Power factor at rated power | 1 | 1 |
| Displacement power factor, adjustable | 0.8 overexcited ... 0.8 underexcited | 0.8 overexcited ... 0.8 underexcited |
| Feed-in phases / connection phases | 1 / 1 | 1 / 1 |
| **Efficiency** | | |
| Max. efficiency / European weighted efficiency | 97 % / 96.4 % | 97 % / 96.5 % |
| **Protective devices** | | |
| DC disconnect device | ● | ● |
| Ground fault monitoring / grid monitoring | ● / ● | ● / ● |
| DC reverse polarity protection / AC short-circuit current capability / galvanically isolated | ● / ● / – | ● / ● |
| All-pole-sensitive residual-current monitoring unit | ● | ● |
| Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1) | I / III | I / III |
| **General data** | | |
| Dimensions (W/H/D) | 490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches) | 490 / 519 / 185 mm (19.3 / 20.4 / 7.3 inches) |
| Weight | 26 kg / 57.3 lb | 26 kg / 57.3 lb |
| Operating temperature range | -25°C ... +60°C/-13°F ... +140°F | -25°C ... +60°C/ -13°F ... +140°F |
| Noise emission (typical) | 25 dB(A) | 25 dB(A) |
| Self-consumption (night) | 1 W | 1 W |
| Topology | Transformerless | Transformerless |
| Cooling concept | Convection | Convection |
| Degree of protection (according to IEC 60529) | IP65 | IP65 |
| Climatic category (according to IEC 60721-3-4) | 4K4H | 4K4H |
| Maximum permissible value for relative humidity (non-condensing) | 100 % | 100 % |
| **Features** | | |
| DC connection / AC connection | SUNCLIX / Spring clamp terminal | SUNCLIX / Spring clamp terminal |
| Display | Graphic | Graphic |
| Interface: RS485 / *Bluetooth* / Webconnect / Speedwire[4] | ○ / ● / ○ / ○ | ○ / ● / ○ / ○ |
| Multi-function relay / Power Control Module | ○ / ○ | ○ / ○ |
| Warranty: 5 / 10 / 15 / 20 / 25 years | ● / ○ / ○ / ○ / ○ | |
| Certificates and approvals (additional on request) | CE, VDE0126-1-1, VDE-AR-N 4105, UTE C15-712, C10/11, RD1699, RD661, PPDS, PPC, G83/1-1, G59/2, EN50438[1], IEC 61727, PEA, AS 4777, CEI 0-21 | |
| | | |
| ● Standard features ○ Optional features – Not available | | |
| Type designation | SB 4000TL-21 | SB 5000TL-21 |

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Professional management, monitoring and presentation of PV plants

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