

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

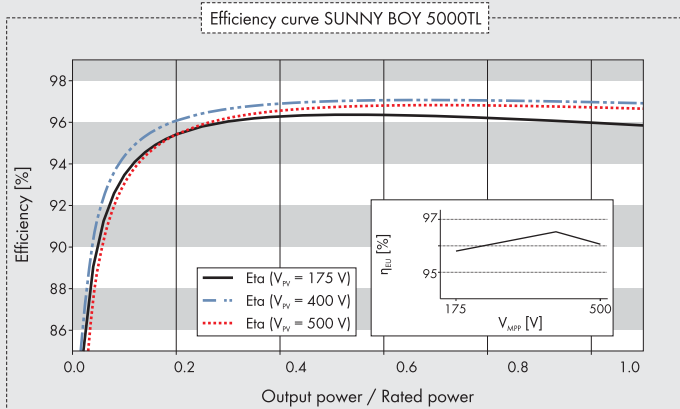
SUNNY BOY 3000TL / 3600TL / 4000TL / 5000TL with Reactive Power Control

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 (@ $\cos \varphi = 1$) | 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 (@ $\cos \varphi = 1$) | 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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