



## SUNNY BOY 3000-US / 3800-US / 4000-US

SB 3000US / SB 3800-US-10 / SB 4000US



**SB 3800-US NOW AVAILABLE**



### UL Certified

- For countries that require UL certification (UL 1741/IEEE 1547)

### Efficient

- 96.8% peak efficiency
- OptiCool™ active temperature management system

### Safe

- Galvanic isolation

### Simple

- Patented automatic grid voltage detection\*
- Integrated DC disconnect switch

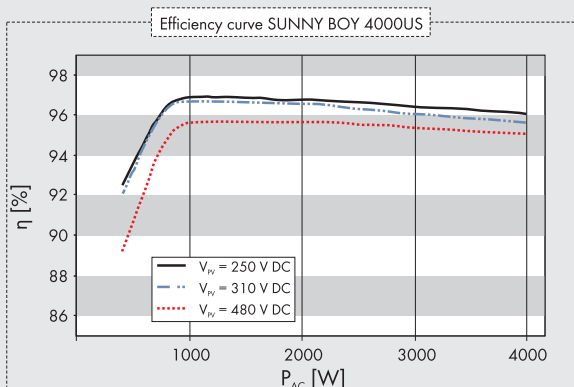
## SUNNY BOY 3000-US / 3800-US / 4000-US

UL certified, reliable system managers

The Sunny Boy 3000-US, 3800-US and 4000-US inverters are specially designed for countries that require UL certification. Automatic grid voltage detection\* and an integrated DC disconnect switch simplifies installation, ensuring safety as well as saving time. These models feature galvanic isolation and can be used with all types of modules—crystalline as well as thin-film. The die-cast aluminum enclosure, with the OptiCool active temperature management system, guarantees the highest yields possible and a long service life, even under extreme conditions. The Sunny Boy 3800-US is designed for projects with a current limit of 16A.

\* US Patent US7352549B1

| Technical data                                              | Sunny Boy 3000-US                                                              |             | Sunny Boy 3800-US        | Sunny Boy 4000-US        |             |
|-------------------------------------------------------------|--------------------------------------------------------------------------------|-------------|--------------------------|--------------------------|-------------|
|                                                             | 208 V AC                                                                       | 240 V AC    | 240 V AC                 | 208 V AC                 | 240 V AC    |
| Input (DC)                                                  |                                                                                |             |                          |                          |             |
| Max. recommended PV power (@ module STC)                    | 3750 W                                                                         |             | 4750 W                   | 4375 W                   | 5000 W      |
| Max. DC power (@ cos φ = 1)                                 | 3200 W                                                                         |             | 4200 W                   | 4200 W                   |             |
| Max. DC voltage                                             | 500 V                                                                          |             | 600 V                    | 600 V                    |             |
| DC nominal voltage                                          | 250 V                                                                          |             | 310 V                    | 310 V                    |             |
| MPP voltage range                                           | 175 – 400 V                                                                    | 200 – 400 V | 250 – 480 V              | 220 – 480 V              | 250 – 480 V |
| Min. DC voltage / start voltage                             | 175 / 228 V                                                                    | 200 / 228 V | 250 / 285 V              | 220 / 285 V              | 250 / 285 V |
| Max. input current / per string (at DC disconnect)          | 17 A / 17 A                                                                    |             | 18 A / 18 A              | 18 A / 18 A              |             |
|                                                             | 36 A @ combined terminal                                                       |             | 36 A @ combined terminal | 36 A @ combined terminal |             |
| Number of MPP trackers / fused strings per MPP tracker      | 1 / 4 (DC disconnect)                                                          |             |                          |                          |             |
| Output (AC)                                                 |                                                                                |             |                          |                          |             |
| AC nominal power                                            | 3000 W                                                                         |             | 3800 W                   | 3500 W                   | 4000 W      |
| Max. AC apparent power                                      | 3000 VA                                                                        |             | 3800 VA                  | 3500 VA                  | 4000 VA     |
| Nominal AC voltage / adjustable                             | 208 V / ●                                                                      | 240 V / ●   | 240 V / –                | 208 V / ●                | 240 V / ●   |
| AC voltage range                                            | 183 – 229 V                                                                    | 211 – 264 V | 211 – 264 V              | 183 – 229 V              | 211 – 264 V |
| AC grid frequency; range                                    | 60 Hz; 59.3 – 60.5 Hz                                                          |             | 60 Hz; 59.3 – 60.5 Hz    | 60 Hz; 59.3 – 60.5 Hz    |             |
| Max. output current                                         | 15 A                                                                           | 13 A        | 16 A                     | 17 A                     |             |
| Power factor (cos φ)                                        | 1                                                                              |             | 1                        | 1                        |             |
| Phase conductors / connection phases                        | 1 / 2                                                                          |             | 1 / 2                    | 1 / 2                    |             |
| Harmonics                                                   | < 4%                                                                           |             | < 4%                     | < 4%                     |             |
| Efficiency                                                  |                                                                                |             |                          |                          |             |
| Max. efficiency                                             | 96.0%                                                                          | 96.5%       | 96.8%                    | 96.5%                    | 96.8%       |
| CEC efficiency                                              | 95.0%                                                                          | 95.5%       | 96.0%                    | 95.5%                    | 96.0%       |
| Protection devices                                          |                                                                                |             |                          |                          |             |
| DC reverse-polarity protection                              | ●                                                                              |             | ●                        | ●                        |             |
| AC short circuit protection                                 | ●                                                                              |             | ●                        | ●                        |             |
| Galvanically isolated / all-pole sensitive monitoring unit  | ●/–                                                                            |             | ●/–                      | ●/–                      |             |
| Protection class / overvoltage category                     | I / III                                                                        |             | I / III                  | I / III                  |             |
| General data                                                |                                                                                |             |                          |                          |             |
| Dimensions (W / H / D) in mm (in)                           | 450 / 350 / 235 (18 / 14 / 9)                                                  |             |                          |                          |             |
| DC Disconnect dimensions (W / H / D) in mm (in)             | 187 / 297 / 190 (7 / 12 / 7.5)                                                 |             |                          |                          |             |
| Packing dimensions (W / H / D) in mm (in)                   | 390 / 580 / 470 (15 / 23 / 18.5)                                               |             |                          |                          |             |
| DC Disconnect packing dimensions (W / H / D) in mm (in)     | 370 / 240 / 280 (15 / 9 / 11)                                                  |             |                          |                          |             |
| Weight / DC Disconnect weight                               | 38 kg (84 lb) / 3.5 kg (8 lb)                                                  |             |                          |                          |             |
| Packing weight / DC Disconnect packing weight               | 44 kg (97 lb) / 4 kg (9 lb)                                                    |             |                          |                          |             |
| Operating temperature range (full power)                    | –25 °C ... +45 °C (–13 °F ... +113 °F)                                         |             |                          |                          |             |
| Noise emission (typical)                                    | 40 dB(A)                                                                       |             | www.SMA-Solar.com        | 37 dB(A)                 |             |
| Internal consumption at night                               | 0.1 W                                                                          |             | 0.1 W                    | 0.1 W                    |             |
| Topology                                                    | LF transformer                                                                 |             | LF transformer           | LF transformer           |             |
| Cooling concept                                             | OptiCool                                                                       |             | OptiCool                 | OptiCool                 |             |
| Electronics protection rating / connection area             | NEMA 3R / NEMA 3R                                                              |             | NEMA 3R / NEMA 3R        | NEMA 3R / NEMA 3R        |             |
| Features                                                    |                                                                                |             |                          |                          |             |
| Display: text line / graphic                                | ●/–                                                                            |             | ●/–                      | ●/–                      |             |
| Interfaces: RS485 / Bluetooth                               | ○/○                                                                            |             | ○/○                      | ○/○                      |             |
| Warranty: 10 / 15 / 20 years                                | ●/○/○                                                                          |             | ●/○/○                    | ●/○/○                    |             |
| Certificates and permits (more available on request)        | UL1741, UL1998, IEEE 1547, FCC Part 15 (Class A & B), CSA C22.2 No. 107.1-2001 |             |                          |                          |             |
|                                                             |                                                                                |             |                          |                          |             |
| NOTE: US inverters ship with gray lids.                     |                                                                                |             |                          |                          |             |
| Data at nominal conditions                                  |                                                                                |             |                          |                          |             |
| ● Standard features   ○ Optional features   – Not available |                                                                                |             |                          |                          |             |
| Type designation                                            | SB 3000US                                                                      |             | SB 3800-US-10            | SB 4000US                |             |



## Accessories



RS485 interface  
485USPB-NR



Bluetooth® Piggy Back  
BTPBINV-NR



Combi-Switch  
DC disconnect and PV  
array combiner box  
COMBO-SWITCH



Combiner Box  
Simplify wiring for added  
convenience and safety  
SBCB-6-3R or SBCB-6-4