

# SUNNY BOY 2000HF / 2500HF / 3000HF

SB 2000HF-30 / SB 2500HF-30 / SB 3000HF-30



## High Yields

- Maximum efficiency 96.3 %
- The best tracking efficiency with OptiTrac MPP tracking
- Shade management with OptiTrac Global Peak \*

## Safe

- Galvanic isolation
- Integrated ESS DC switch-disconnector
- Theft protection

## Simple

- Quick and easy configuration thanks to Quick Module
- DC plug system SUNCLIX
- Suitable for generator grounding\*\*

## Communicative

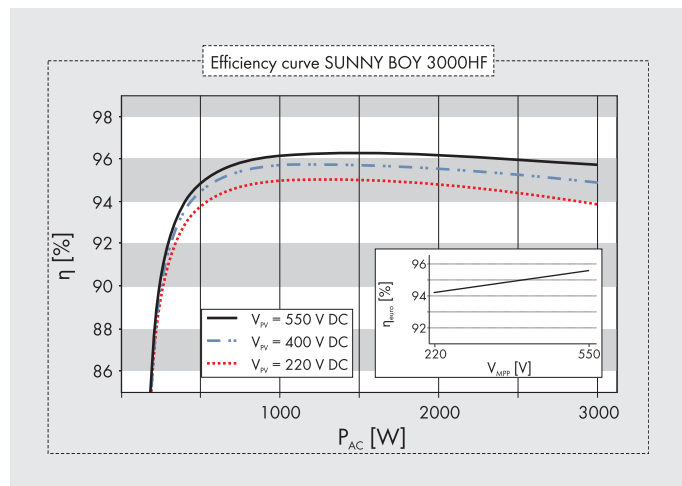
- Graphic display
- *Bluetooth* technology as standard

## SUNNY BOY 2000HF / 2500HF / 3000HF

Simply high yields

This is the new generation of galvanically isolated inverters – packed full of the latest SMA technology, the Sunny Boy HF series provides the highest yields for transformer inverters of this performance class. Installation is now easier than ever thanks to the DC connector system SUNCLIX, the plug-in generator grounding (optional), and an easily accessible configuration area – including easier mounting due to the reduced weight. The wide input voltage range from 175 to 700 volts gives you extraordinary flexibility for your plant design, and the modern graphic display and wireless *Bluetooth* communication system make the devices highly user-friendly.

| Technical data                                                           | Sunny Boy<br>2000HF                                                                             | Sunny Boy<br>2500HF             | Sunny Boy<br>3000HF             |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------|---------------------------------|
| <b>Input (DC)</b>                                                        |                                                                                                 |                                 |                                 |
| Max. DC power (@ $\cos \varphi = 1$ )                                    | 2100 W                                                                                          | 2600 W                          | 3150 W                          |
| Max. DC voltage                                                          | 700 V                                                                                           | 700 V                           | 700 V                           |
| MPP voltage range                                                        | 175 V – 560 V                                                                                   | 175 V – 560 V                   | 210 V – 560 V                   |
| DC nominal voltage                                                       | 530 V                                                                                           | 530 V                           | 530 V                           |
| Min. DC voltage / start voltage                                          | 175 V / 220 V                                                                                   | 175 V / 220 V                   | 175 V / 220 V                   |
| Max. input current / per string                                          | 12 A / 12 A                                                                                     | 15 A / 15 A                     | 15 A / 15 A                     |
| Number of MPP trackers / strings per MPP tracker                         | 1 / 2                                                                                           | 1 / 2                           | 1 / 2                           |
| <b>Output (AC)</b>                                                       |                                                                                                 |                                 |                                 |
| AC nominal power (@ 230 V, 50 Hz)                                        | 2000 W                                                                                          | 2500 W                          | 3000 W                          |
| Max. AC apparent power                                                   | 2000 VA                                                                                         | 2500 VA                         | 3000 VA                         |
| Nominal AC voltage; range                                                | 220, 230, 240 V;<br>180 – 280 V                                                                 | 220, 230, 240 V;<br>180 – 280 V | 220, 230, 240 V;<br>180 – 280 V |
| AC grid frequency; range                                                 | 50, 60 Hz; $\pm 4.5$ Hz                                                                         | 50, 60 Hz; $\pm 4.5$ Hz         | 50, 60 Hz; $\pm 4.5$ Hz         |
| Max. output current                                                      | 11.4 A                                                                                          | 14.2 A                          | 15 A                            |
| Power factor ( $\cos \varphi$ )                                          | 1                                                                                               | 1                               | 1                               |
| Phase conductors / connection phases                                     | 1 / 1                                                                                           | 1 / 1                           | 1 / 1                           |
| <b>Efficiency</b>                                                        |                                                                                                 |                                 |                                 |
| Max. efficiency / Euro-eta                                               | 96.3 % / 95.0 %                                                                                 | 96, 3 % / 95.3 %                | 96.3 % / 95.4 %                 |
| <b>Protection devices</b>                                                |                                                                                                 |                                 |                                 |
| DC reverse-polarity protection                                           | ●                                                                                               | ●                               | ●                               |
| ESS switch-disconnector                                                  | ●                                                                                               | ●                               | ●                               |
| AC short circuit protection                                              | ●                                                                                               | ●                               | ●                               |
| Ground fault monitoring                                                  | ●                                                                                               | ●                               | ●                               |
| Grid monitoring (SMA Grid Guard)                                         | ●                                                                                               | ●                               | ●                               |
| Galvanically isolated / all-pole sensitive fault current monitoring unit | ●/–                                                                                             | ●/–                             | ●/–                             |
| Protection class / overvoltage category                                  | I / III                                                                                         | I / III                         | I / III                         |
| <b>General data</b>                                                      |                                                                                                 |                                 |                                 |
| Dimensions (W / H / D) in mm                                             | 348 / 580 / 145                                                                                 | 348 / 580 / 145                 | 348 / 580 / 145                 |
| Weight                                                                   | 17 kg                                                                                           | 17 kg                           | 17 kg                           |
| Operating temperature range                                              | –25 °C ... +60 °C                                                                               | –25 °C ... +60 °C               | –25 °C ... +60 °C               |
| Noise emission (typical)                                                 | www.SMA-Solar.com                                                                               | www.SMA-Solar.com               | www.SMA-Solar.com               |
| Internal consumption: (night)                                            | < 1 W                                                                                           | < 1 W                           | < 1 W                           |
| Topology                                                                 | HF transformer                                                                                  | HF transformer                  | HF transformer                  |
| Cooling concept                                                          | OptiCool                                                                                        | OptiCool                        | OptiCool                        |
| Electronics protection rating / connection area (as per IEC 60529)       | IP65 / IP54                                                                                     | IP65 / IP54                     | IP65 / IP54                     |
| Climatic category (per IEC 60721-3-4)                                    | 4K4H                                                                                            | 4K4H                            | 4K4H                            |
| <b>Features</b>                                                          |                                                                                                 |                                 |                                 |
| DC connection: SUNCLIX                                                   | ●                                                                                               | ●                               | ●                               |
| AC connection: screw terminal / plug connector / spring-type terminal    | –/●/–                                                                                           | –/●/–                           | –/●/–                           |
| Display: text line / graphic                                             | –/●                                                                                             | –/●                             | –/●                             |
| Interfaces: RS485 / Bluetooth                                            | ○/●                                                                                             | ○/●                             | ○/●                             |
| Warranty: 5 / 10 / 15 / 20 / 25 years                                    | ●/○/○/○/○                                                                                       | ●/○/○/○/○                       | ●/○/○/○/○                       |
| Certificates and permits (more available on request)                     | CE, VDE 0126-1-1, Enel-GUIDA Ed. 1.1, RD 1663, G83/1-1, PPC, AS4777, EN 50438***, C10/C11, PPDS |                                 |                                 |
| * In planning                                                            |                                                                                                 |                                 |                                 |
| ** Variants for France under preparation                                 |                                                                                                 |                                 |                                 |
| *** Does not apply to all national deviations of EN 50438                |                                                                                                 |                                 |                                 |
| ● Standard features ○ Optional features – not available                  |                                                                                                 |                                 |                                 |
| Provisional data, as of September 2010 – data at nominal conditions      |                                                                                                 |                                 |                                 |
| Type designation                                                         | SB 2000HF-30                                                                                    | SB 2500HF-30                    | SB 3000HF-30                    |



## Accessories



SMA Plug-in Grounding  
PLUG-IN-GRD-10-NR\*\*



Quick Module RS485  
+ multi-function relay  
485QM-10-NR