



Efficient

- 96.0 % efficiency
- Transformerless

Safe

- Optional ESS DC load disconnecting unit

Reliable

- Worldwide SMA service including Service Line
- Attractive SMA warranty program

Simple

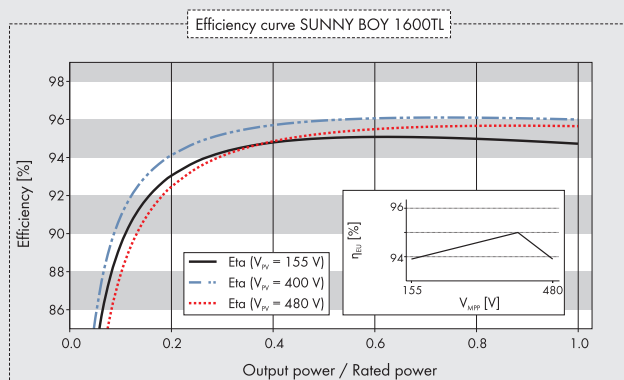
- DC plug system SUNCLIX

SUNNY BOY 1600TL

The great among the small

With an efficiency level of 96.0 % the transformerless Sunny Boy 1600TL guarantees first-class energy yields and thus an outstanding price/performance ratio. The tried and tested inverter is particularly suitable for use in small PV systems as well as in sub-generators in larger systems. Its low weight and robust housing enable easy installation. In addition, the Sunny Boy is equipped with an all-pole sensitive leakage current monitoring unit, which guarantees safe operation at all times. As with all Sunny Boy, the Sunny Boy 1600TL is also compatible with SMA communication products.

Technical data	Sunny Boy 1600TL
Input (DC)	
Max. DC power (@ $\cos \varphi = 1$)	1700 W
Max. DC voltage	600 V
MPP voltage range	155 V – 480 V
DC nominal voltage	400 V
Min. DC voltage / start voltage	125 V / 150 V
Max. input current / per string	11 A / 11 A
Number of MPP trackers / strings per MPP tracker	1 / 1
Output (AC)	
AC nominal power (@ 230 V, 50 Hz)	1600 W
Max. AC apparent power	1600 VA
Nominal AC voltage; range	220, 230, 240 V; 180 V – 260 V
AC grid frequency; range	50 Hz; -4.5 Hz, +2.5 Hz
Max. output current	11 A
Power factor ($\cos \varphi$)	1
Phase conductors / connection phases	1 / 1
Efficiency	
Max. efficiency / Euro-eta	96.0 % / 95.0 %
Protection devices	
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
General data	
Dimensions (W / H / D) in mm	440 / 339 / 214
Weight	16 kg
Operating temperature range	-25 °C ... +60 °C
Noise emission (typical)	≤ 33 dB(A)
Internal consumption (night)	< 0.1 W
Topology	transformerless
Cooling concept	Convection
Electronics protection rating / connection area (as per IEC 60529)	IP65 / IP65
Climatic category (per IEC 60721-3-4)	4K4H
Features	
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, EN 50438*, C10/C11, PPDS, UTE C15-712-1, AS4777
* Does not apply to all national deviations of EN 50438	
● Standard features ○ Optional features – not available	
Data at nominal conditions	
Type designation	SB 1600TL-10



Accessories



RS485 interface of type
485PB-NR



Bluetooth® Piggy Back
BTPBINV-NR