

SUNNY BOY 4500TL-JP / 5400TL-JP

SB 4500TL-JP-22/MP / SB 5400TL-JP-22/MP



Expanding External Communication Capabilities

Leading Technology

- Peak efficiency of 96.7% and a wide range of input voltage
- Uses H5 switching technology without the use of a transformer
- Optitrac Global Peak: Optimal operation control technology when shadows are partially cast on the array

Quick Implementation

- Easy wiring structure work
- Wiring does not require special tools
- Ergonomic-based design
- Equipped with 2 MPPT circuits for multiple connections with a varied number of strings

Standard 10-year Warranty

- Extend the warranty to 15 or 20 years as a paid option for extended service
- Subscribing to the safe and secure package can minimize losses in the event of defects

Communication

- Standard equipped with a communication module for Internet connectivity
- Equipped with the Modbus TCP function for connecting to output control devices from other manufacturers for remote output control

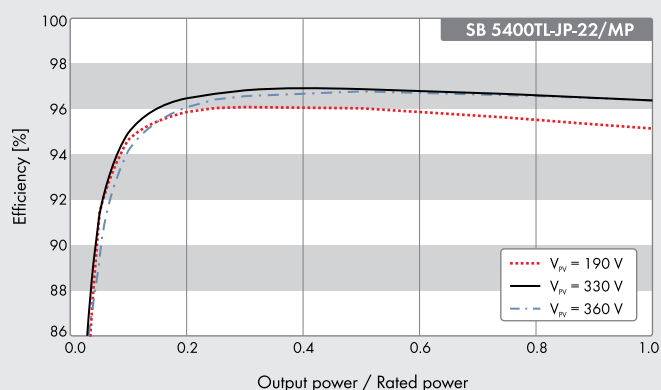
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Single-phase inverter that can handle 200%* overloads

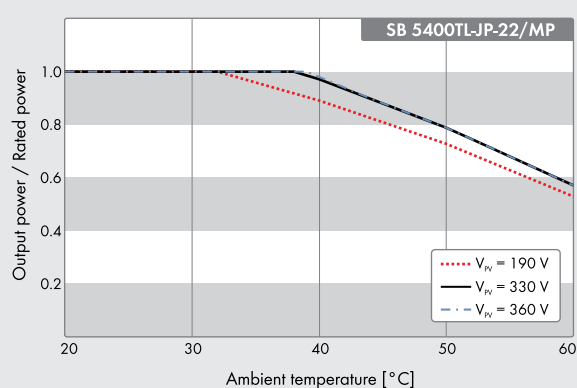
Sunny Boy employs a global platform that is used around the world to provide high reliability and high conversion efficiency. This system uses the OptiCool patented technology to completely separate enclosed electrical components and heat conversion parts, thereby preventing entry of dust and humidity to ensure long operating life. The Sunny Boy series can be equipped with solar panels that have a rated output up to 200% per module, maximizing the lifelong power generation amount of the solar power system. All models in the Sunny Boy series are equipped with LAN cable communication boards and are Internet-ready to allow users to make use of the Sunny Portal monitoring service provided by SMA at no charge. In addition, the models can be connected to output control devices of other manufacturers to enable remote output control provided by power companies in the future.

*250% overloading possible (however, guarantee period including extended guarantee shall be up to 15 years).

Efficiency curve



Derating characteristics



Product name			Sunny Boy 4500TL-JP	Sunny Boy 5400TL-JP
Output	Rated power	Grid mode	4500 W (power factor 1.0 h), 4275 W (power factor 0.95 h)	5400 W (power factor 1.0 h), 5130 W (power factor 0.95 h)
		Standalone mode	1500 W	1500 W
	Rated output voltage (V) and frequency Hz	Grid mode	AC 202 V, 50 Hz/60 Hz	AC 202 V, 50 Hz/60 Hz
		Standalone mode	AC 101 V, 50/60 Hz	AC 101 V, 50/60 Hz
Max. output current		22.3 A	26.7 A	
Input (DC)	Max. generator power		11250 Wp	13500 Wp
	Range of input voltage (V)		70 V to 450 V	70 V to 450 V
	Minimum start-up voltage (V)		110 V (*1)	110 V (*1)
	Rated input voltage		330 V	330 V
	Range of MPP Voltage (V)		160 V to 360 V	185 V to 360 V
	Number of input circuits		2 circuits	2 circuits
	Number of terminals / shape		2 input terminals for each circuit (Max. 4), SUNCLIX	
	Max. input current		2 circuit x 15 A	2 circuits x 18 A (*5)
Max. short-circuit current input A / B		19 A	19 A	
Main circuit type	Inverter control type		Current controlled type	
	Insulation type		Transformerless	
	Phase configuration		Single-phase 2-wire system (3-wire connection system)	
Protection functions	Grid feed-in protection		OV, UV, OF, UF	
	Anti-islanding detection		Passive and active	
Efficiency		96% (*2) (Max. 96.7%)		
Rated power factor		1.0		
Power factor		Above 95% (-0.8 to 0.8 available)		
Harmonic distortion rate (%)		Total: below 5%, Each distortion: below 3%		
Standby power consumption (W)		Below 1W/5.5VA (night time)		
Operating ambient conditions		Indoor and Outdoor Temperature: -25°C to +60°C Humidity: 0 to 100% Below 2000 m asl (*4)		
Cooling system		Passive OptiCool		
Noise emission		Below 25 dB		
Protection class		IP 65 (*3)		
Monitoring function	Enclosure	Monochromatic LCD panel & LED indicator. Instantaneous power, production etc.		
Communication system		Webconnect Speedwire / Webconnect		
Weight		25.5 kg		
Accessories		SUNCLIX connector, Electronic Solar Switch (ESS)		
JET certification number		MP-0085	MP-0133	
Warranty		10 years (15 and 20 years also selectable)		
(*1) Operation may not be maintained due to insufficient power generation even when 110 V is exceeded. (*2) Conforms to JIS C 8961 (*3) Conforms to EN 60529, when ESS is attached (*4) Conforms to IEC 60721-3-4, Installation type C, Class 4K4H (*5) In sum the DC current is limited to 30A (*6) 250% overloading possible (however, guarantee period including extended guarantee shall be up to 15 years).				
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