

Sunny Boy 4200TL/5000TL



Versatile power-packer



Suitable for different strings due to separate MPP-Tracking

Extended input voltage range (125 to 750 V DC)

Transformerless with integrated all-pole sensitive residual current detection

SMA grid guard® (MSD)

Diagnosis and communication via Powerline Communication, radio transmission or via data cable (RS232 or RS485)

Extended temperature range -25 °C to +60 °C

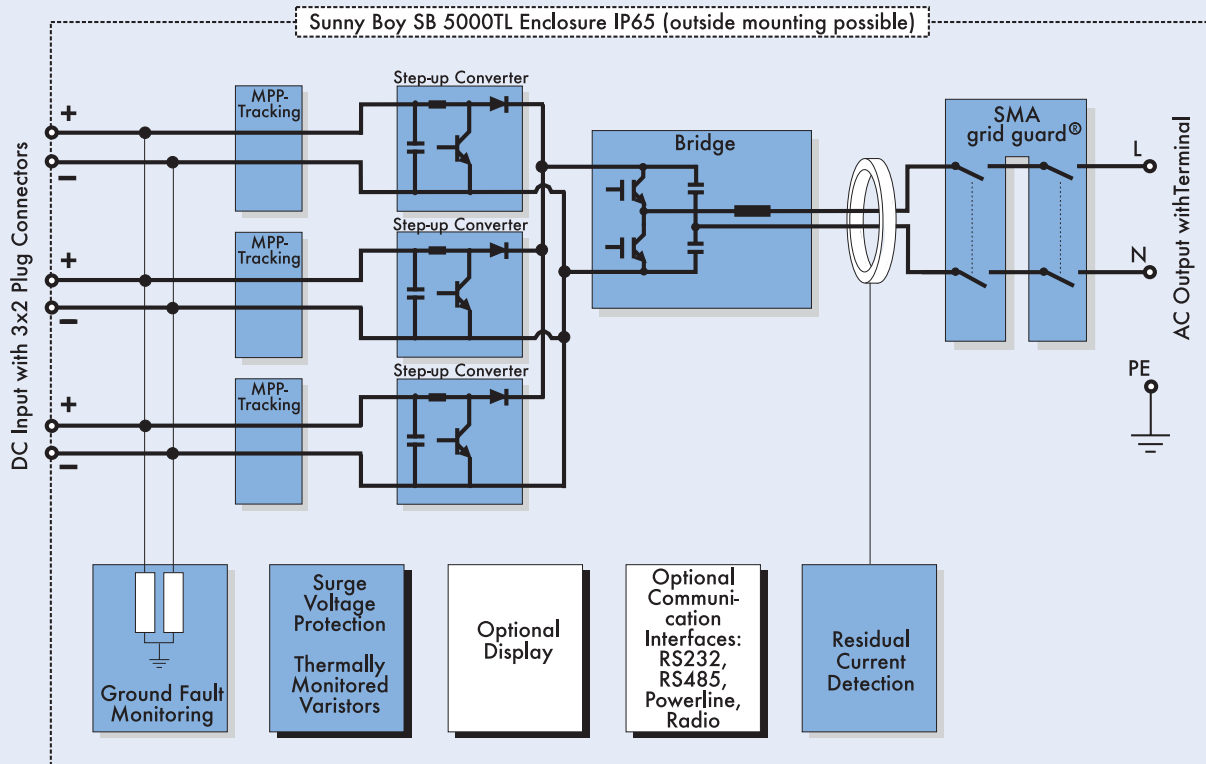
For outdoor and indoor installation

Connection of DC input with waterproof snap cable connectors

Surge voltage protection with integrated thermally monitored varistors

Roofs usually face the sky in more than one direction. So that this isn't a limiting factor when it comes to configuring a solar power system, SMA has developed high-performance multi-string inverters. Whereas up to three separate inverters were needed in the past, now for the first time it is possible to combine completely different solar generators (unequal number of modules, different module types, modules facing in different directions) with just one unit. Each input has its own MPP (maximum power point) tracker to ensure optimum voltage adjustment for the individual strings. This guarantees maximum energy yields even with complex system configurations.





Schematic diagram of the Sunny Boy 4200TL/5000TL

Technical Data

	SB 4200TL Multi-String	SB 5000TL Multi-String
Input		
Recc. maximum PV-power (P_{PV})	approx. 4900 W _p *)	approx. 6000 W _p *)
Max. DC power ($P_{DC, max}$)	4400 W	5300 W
Max. DC voltage ($U_{DC, max}$)	750 V	750 V
PV-voltage range, MPPT (U_{PV})	125 V - 750 V	125 V - 750 V
Max. input current ($I_{PV, max}$)	2 x 7,5 A	3 x 7,5 A
DC voltage ripple (U_{pp})	< 10 %	< 10 %
Max. number of strings	2	3
DC disconnection	Snap cable connectors	Snap cable connectors
Thermally monitored varistors	yes	yes
Ground fault monitoring	yes	yes
Pole confusion protection	Short circuit diode	Short circuit diode
Output		
Max. AC power ($P_{AC, max}$)	4200 W	5000 W
Nominal AC power ($P_{AC, nom}$)	4000 W	4600 W
THD of grid current	< 4 %	< 4 %
Default range of AC voltage (U_{AC})	198 V - 260 V	198 V - 260 V
Possible range of AC voltage	180 V - 265 V	180 V - 265 V
AC frequency (f_{AC})	49.8 Hz - 50.2 Hz	49.8 Hz - 50.2 Hz
Possible range of AC frequency	45.5 Hz - 54.5 Hz	45.5 Hz - 54.5 Hz
Phase shift ($\cos \varphi$)	1	1
Short circuit proof	yes, current control	yes, current control
Connection to utility	AC screw terminal	AC screw terminal
Efficiency		
Max. Efficiency	95.6 %	95.5 %
Euro-eta	94.9 %	94.5 %
Enclosure		
accord. to DIN EN 60529	IP65	IP65
Mechanical Data		
Width / height / depth in mm	470 / 490 / 225	470 / 490 / 225
Weight	approx. 29 kg	approx. 31 kg

*) for PV-Plants in Germany