



SUNNY TRIPOWER 20000TL HIGH EFFICIENCY

STP 20000TLHE-10



Economical

- Class-leading 99% maximum efficiency
- OptiTrac MPP tracking for highest yields possible

Reliable

- OptiCool™ active temperature management

Simple

- Three-phase feed-in
- SUNCLIX DC plug-in system
- Bluetooth® communication

Flexible and Future-Proof

- DC input voltage up to 1,000 V
- Integrated grid management functions
- Reactive power control

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Greater return on investment through halved losses

The new Sunny Tripower TL High Efficiency offers 99 percent, best-in-class efficiency, which results in a short payback period. This efficiency breakthrough reduces conversion losses by half and further improves the unit's specific price—making it the ideal inverter for medium and large decentralized PV plants. This model optimizes efficiency while retaining all necessary integration requirements such as reactive power control, network support and grid management.

Technical Data	Sunny Tripower 20000TL High Efficiency
Input (DC)	
Max. DC power (@ $\cos \varphi = 1$)	20500 W
Max. input voltage	1000 V
MPP voltage range @ 230 V grid voltage	580 V – 800 V
Max. input current	36 A
Max. input current per string	36 A
Number of independent MPP inputs / strings per MPP input	1 / 6
Output (AC)	
Rated power (@ 230 V, 50 Hz)	20000 W
Max. apparent AC power	20000 VA
Nominal AC voltage	3 / N / PE, 230 V / 400 V
Nominal AC voltage range	160 V – 280 V
AC power frequency / range	50 Hz, 60 Hz / –6 Hz, +5 Hz
Rated power frequency / rated grid voltage	50 Hz / 230 V, 400 V
Max. output current	29 A
Power factor at rated power	1
Displacement power factor, configurable	0.8 leading ... 0.8 lagging
Feed-in phases / connection phases	3 / 3
Efficiency	
Max. efficiency / European weighted efficiency	99 % / 98,6 %
Protective devices	
DC-side disconnection device	○
Ground fault monitoring / grid monitoring	● / ●
DC surge arrester (type II), can be integrated	–
DC reverse polarity protection / AC short-circuit protection / galvanically isolated	● / ● / –
All-pole sensitive residual-current monitoring unit	●
Protection class (as per IEC 62103) / overvoltage category (as per IEC 60664-1)	I / III
General Data	
Dimensions (W / H / D) in mm	665 / 690 / 265
Weight	52 kg / 114.6 lb
Operating temperature range	-25 °C ... +60 °C / -13 °F ... 140 °F
Noise emission (typical)	51 dB(A)
Self-consumption (at night)	1 W
Topology / cooling concept	Transformerless / OptiCool
Electronics degree of protection / connection area (per IEC 60529)	IP65 / IP54
Climatic category (per IEC 60721-3-4)	4K4H
Maximum permissible value for relative humidity, non-condensing	100%
Features	
DC terminal	SUNCLIX
AC terminal	Spring terminal
Display	Chart
Interfaces: RS485 / Bluetooth®	○ / ●
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○
Multi-function relay	○
Certificates and licenses (more available on request)	CE, VDE 0126-1-1, BDEW, VDE-AR-N 4105
<p>● Standard features ○ Optional features – not available</p> <p>Provisional data, as of August 2011 – Data at nominal conditions</p> <p>Type designation</p>	
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Accessories



RS485 interface
DM-485CB-10