SUNNY TRIPOWER CORE1 STP 50-41





Cost-Effective

- Floor-mounted device easy to install
- No DC fuses required

• Integrated DC disconnector

Highly Integrated

- Integrated Wi-Fi access with any mobile device
- 12 direct string inputs reduce labor and material costs
- Arc-fault circuit interrupter (AFCI)AC/DC overvoltage protection
 - (optional)

Fastest Installation

- Fast grid connection due to easy inverter configuration and commissioning
- Completely accessible connection areas

Maximum Yields

- Up to 150% DC:AC ratio
- Yield increase without installation effort due to integrated shade management SMA ShadeFix
- I-V Generator diagnosis

SUNNY TRIPOWER CORE1

Stands on its own

The Sunny Tripower CORE1 is the world's first free-standing string inverter for decentralized rooftop and ground-based PV systems as well as covered parking spaces. The CORE1 is the third generation in the successful Sunny Tripower product family and is revolutionizing the world of commercial inverters with its innovative design. SMA engineers developed an inverter that combines a unique design with an innovative installation method to significantly reduce installation time and provide all target groups with a maximum return on investment.

From delivery and installation to operation, the Sunny Tripower CORE1 generates widespread savings in logistics, labor, materials and services. Commercial PV installations are now quicker, more reliable and easier to complete than ever before.

BLOCK DIAGRAM

STP 50-41



Technical Data	Sunny Tripower CORE1	Technical Data	Sunny Tripower CORE1
Input (DC)		Efficiency	
Max. generator power	75000 Wp STC	Max. efficiency / European efficiency	98.1% / 97.8%
Max. input voltage	1000 V	General data	
MPP voltage range / rated input voltage	500 V to 800 V / 670 V	Dimensions (W/H/D) without feet or DC load	569 mm / 733 mm / 621 mm
Min. input voltage / start input voltage	150 V / 188 V	break switch	(22.4 in / 28.8 in / 24.4 in)
Max. operating input current / per MPPT	120 A / 20 A	Weight	84 kg (185 lb)
Max. short circuit current per MPPT / per string input	30A / 30A	Operating temperature range Noise emission (typical)	-25°C to +60°C (-13°F to +140°F) < 65 dB(A)
Number of independent MPPT inputs / strings		Self-consumption (at night)	4.8 W
per MPP input	6/2	Topology / Cooling concept	Transformerless / OptiCool
Output (AC)		Degree of protection (as per IEC 60529)	IP65
Rated power (at 230 V, 50 Hz)	50000 W	Climatic category (according to IEC 60721-3-4)	4K4H
Max. apparent AC power	50000 VA	Max. permissible value for relative humidity	100%
AC nominal voltage	220 V / 380 V	(non-condensing)	
	230 V / 400 V 240 V / 415 V	Features / functions / accessories	
	202 V to 305 V	DC connection / AC connection	SUNCLIX / screw terminal
AC voltage range AC grid frequency / range	50 Hz / 44 Hz to 55 Hz	Mounting feet	
AC gria frequency / range	60 Hz / 54 Hz to 65 Hz	LED indicators (status / fault / communication) LC display	•
Rated power frequency / rated grid voltage	50 Hz / 230 V	Interface: Ethernet / WLAN / RS485	• (2 ports) / • / 0
Max. output current / Rated output current	72.5 A / 72.5 A	Data interface: SMA Modbus / SunSpec	
Output phases / AC connection	3 / 3-(N)-PE	Modbus / Speedwire, Webconnect	• / • / •
Power factor at rated power / Adjustable displacement power factor	1 / 0.0 leading to 0.0 lagging	Multi-Function relay / Expansion Module Slots Shade management SMA ShadeFix /	● / ● (2 ports)
THD	< 3%	Integrated Plant Control / Q on Demand 24/7	• / • / •
Protective devices		Off-grid capable / SMA Fuel Save Controller	• / •
Input-side disconnection device	•	compatible	,
Ground fault monitoring / grid monitoring	• / •	Guarantee: 5/10/15/20 years	•/0/0/0
DC reverse polarity protection / AC short-cir- cuit current capability / galvanically isolated	• / • / -	Certificates and permits (more available on request)	C10/11:2019, EN50549-1/-2, CE, VDE 0126-1-1, VDE AR-N 4110, VDE AR-N 4105:2018, NRS097-2-1:2017 (A3), CEI 0-16/0-21: 2020, VFR 2019, RD 1699/413, RD 661, TED/749/2020, AS 4777, IEC 61727, IEC 62109-1/2, IEC 62116, IEC 60068-2-x, TOR Erzeuger,
All-pole sensitive residual-current monitoring unit	•		
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 62109-1)	I / AC: III; DC: II		
Arc-fault circuit interrupter (AFCI) / I-V Generator diagnosis	• / •		G99, NBR 16149
AC/DC surge arrester (type 2, type 1/2)	0	Type designation	STP 50-41

• Standard features Optional - Not available Data at nominal conditions - status: 06/2021



Assessories



SMA-Solar.com

SMA Solar Technology