

SUNNY TRIPOWER X

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The integrated System Manager function with direct access to Sunny Portal powered by ennexOS monitors up to five SMA inverters and one energy meter. This enables the dynamic closed-loop control of active and reactive power via SMA Dynamic Power Control.

Thanks to the wide input voltage range and the high input current capability, it is compatible with the latest generation of high-performance PV modules.

The innovative enclosure design ensures efficient cooling of the electronic components and thus guarantees maximum lifetime of the Sunny Tripower X.

Commissioning can be performed quickly and easily as well as centrally for all devices in the system.

During operation, users benefit from integrated software solutions: SMA ShadeFix increases PV yields even in the event of partial shading, while SMA ArcFix detects electric arcs effectively and can reliably reduce the risk of fire.

Integrated system manager

- Monitoring and control for up to 5 inverters (max. 135 kVA) included
- Direct access to Sunny Portal powered by ennexOS
- SMA Dynamic Power Control

Safety included

- SMA ArcFix arc-fault circuit interrupter
- DC overvoltage protection
- Simplified grid and PV system protection

Maximum yields

- Yield increase through integrated SMA ShadeFix
- I-V generator diagnostics
- Direct selling with SMA SPOT
- SMA Smart Connected

More flexibility

- 3 MPP trackers
- High input current for highperformance PV modules
- Modular design allowing expansion for future energy management functions

SPECIFICATIONS

	Sunny Tripower X 12	Sunny Tripower X 15	Sunny Tripower X 20	Sunny Tripower X 25
Input (CC)				
Máx. PV Array power	18.000 Wp STC	22.500 Wp STC	30.000 Wp STC	37.500 Wp STC
Max. input voltage	1000 V	1000 V	1000 V	1000 V
MPP voltage range	206 to 800 V	257 to 800 V	340 to 800 V	430 to 800V
Rated input voltage	580 V	580 V	580 V	580 V
Min. input voltage / Initial input voltage	150 V / 188 V	150 V / 188 V	150 / 188 V	150 / 188 V
Max. input current per MPP tracker	24 A	24 A	24 A	24 A
Max. short-circuit current per MPP tracker	35 A	35 A	35 A	35 A
Number of independent MPP trackers / strings per MPP tracker	3 / 2	3 / 2	3 / 2	3 / 2
Output AC				
Rated power AC	12.000 W	15.000 W	20.000 W	25.000 W
Apparent power	12.000 VA	15.000 VA	20.000 VA	25.000 VA
Nominal voltage		3 / N / PE: 220 V / 380 V 3 / N / PE: 230 V / 400 V 3 / N / PE: 240 V / 415 V		
Voltage range		176 to 275 V / 304 to 477 V		
Grid Frequency		50 - 60 Hz		
Frecuency range		44 - 66 Hz		
Max. output current	36,6 A	36,6 A	36,6 A	36,6 A
Rated output current	17,4 A	21,7 A	29 A	26,2 A
Power factor at rated power		1		
Adjustable displacement power factor		1 / 0.8 overexcited to 0.8 underexcited		
THD		< 3%		

Injection phases / phases	3 / 3			
Efficiency				
Max. efficiency	98,2 %	98,2 %	98,2 %	98,2 %
European efficiency	97,6 %	97,8 %	97,9 %	98,0 %
Protective Devices				
Input-side disconnection point	Yes	Yes	Yes	Yes
Ground fault monitoring	Yes	Yes	Yes	Yes
Grid monitoring	Yes	Yes	Yes	Yes
DC Surge arrester (type 2, type 1/2)	Optional	Optional	Optional	Optional
DC reverse polarity protection	Yes	Yes	Yes	Yes
AC Short-circuit current capability	Yes	Yes	Yes	Yes
All-pole sensitive residual-current monitoring units	Yes	Yes	Yes	Yes
Arc-fault circuit interrupter (AFCI)	Yes	Yes	Yes	Yes
I-V Generator diagnostics	Yes	Yes	Yes	Yes
Protection class (according to IEC 62109-1)	I	I	I	I
Overvoltage category (according to IEC 62109-1)	AC: III; DC: II	AC: III; DC: II	AC: III; DC: II	AC: III; DC: II
General Data				
Dimensions	728 x 762 x 266 mm			
Weight	35 Kg			
Operating temperature range	-25 to 60 °C			
Noise emission, maximum (1 m)	< 65 dB			
Self-consumption (night)	< 5 W			
Topology	No galvanic isolation			
Cooling concept	Opticool			
Degree of protection (according to IEC 60529)	IP65			
Climatic category (according to IEC 60721-3-4)	4K26			
Max. permissible value for relative humidity (non-condensing)	100% (sin condensación)			
Features / Functions / Accessories				
DC Connection	SUNCLIX			
AC Connection	Spring-cage terminal			
LES displays (Status / Fault / Communication)	Yes	Yes	Yes	Yes
Ethernet	Yes, 2 ports.	Yes, 2 ports	Yes, 2 ports	Yes, 2 ports
Wlan	Yes	Yes	Yes	Yes
RS485	Optional	Optional	Optional	Optional
Data protocols	SMA Modbus / SunSpec Modbus / Speedwire			
Multi-function relay	Yes	Yes	Yes	Yes
Slot for expansion module	Yes, 1 port	Yes, 1 port	Yes, 1 port	Yes, 1 port
Number of digital inputs	6	6	6	6
SMA ShadeFix	Yes	Yes	Yes	Yes
Integrated plant control	Yes	Yes	Yes	Yes
Q on demand 24/7	Yes	Yes	Yes	Yes
Off-grid capable	Yes	Yes	Yes	Yes
SMA Hybrid controller compatible	Yes	Yes	Yes	Yes
Warranty	5 years (Optional 10, 15, 20 years)			
Certificates and approvals	VDE AR-N 4105/4110:2018, EN 50549-1/-2:2018, CE, UKCA			
System manager function				
Total number of supported devices, of which:	6			
Max. number of supported SMA inverters	5			
Max. number of supported energy meters	1			
Maximum nominal system power of PV inverters	135 kVA			
Centralized commissioning of all devices in the system	Yes			
Remote parameterization of SMA devices with Sunny Portal, by ennexOS	Yes			
SMA Dynamic power control (Example: Zero injection)	Optional			

DOWNLOADS

CATÁLOGO SMA SUNNY TRIPOWER X

 [STPx-50-DS-es-12.pdf](#)

Size: 1.29 MiB

SMA SUNNY TRIPOWER X BROCHURE

 [STPx-50-DS-en-12.pdf](#)

Size: 862.77 KiB
