



# Sunny Tripower X 13-US (208V)

Integrated intelligence for future-proof  
system design.

/ Now suitable for 120/208V grids.

powered by  
**ennexOS**

 SMA  
Smart Connected

 SMA ShadeFix  
STRING LEVEL OPTIMIZATION

 UL 3741 LISTED  
PV Hazard Control

 Rapid Shutdown  
CERTIFIED

## Integrated System Manager

- Monitoring and control for up to 5 inverters (max. 150 kVA)
- Remote access with Sunny Portal powered by ennexOS
- SMA Dynamic Power Control

## Enhanced safety

- Integrated SunSpec PLC signal for module-level shutdown
- Advanced DC AFCI arc-fault protection
- Optional AC disconnect
- Optional DC type 2 and type 1+2 surge protection

## Maximum yields

- Three MPP trackers for flexible array design
- SMA ShadeFix string level optimization
- Integrated I-V curve diagnostics
- Supports 200% DC:AC design capability

## Smart monitoring, control and service

- SMA Smart Connected proactive monitoring and service solution
- SMA ennexOS cross-sector energy management platform

**Sunny Tripower X is the new innovative inverter solution  
for commercial PV systems.**

Specially designed for the 120 V/208 V grid in the US and Canada. Providing three MPP trackers with SMA ShadeFix string optimization technology for optimal PV array design flexibility and maximum energy yields. SMA's proven integrated rapid shutdown support and reliable DC AFCI arc-fault protection ensure enhanced system safety. And now with the new integrated System Manager, powered by SMA's ennexOS cross-sector energy management platform, Sunny Tripower X becomes the centerpiece of the SMA Commercial Energy Solution for comprehensive commercial energy systems now and in the future.

Technical Data		Sunny Tripower X 13-US			
<b>Input (DC)</b>					
Maximum array power	26000 Wp				
Maximum system voltage	800 V				
Rated MPP voltage range	230 V ... 720 V				
MPPT operating voltage range	150 V ... 800 V				
Minimum DC voltage / start voltage	150 V / 188 V				
MPP trackers / strings per MPPT input	3 / 2				
Maximum usable operating input current / Maximum short circuit current per MPPT	24 A / 37.5 A				
<b>Output (AC)</b>					
Nominal output power	13000 W				
Maximum apparent power	13000 VA				
Output phases / line connection	3 / 3-(N)-PE				
Nominal AC voltage	208 V / 120 V				
AC voltage range	108 V ... 132 V				
Maximum output current	36 A				
Rated grid frequency / range	60 Hz / 54 Hz ... 66 Hz				
Power factor at rated power / adjustable displacement	1 / 0.8 overexcited to 0.8 underexcited				
Harmonics (THD)	< 3 %				
<b>Efficiency</b>					
CEC efficiency	97%				
<b>Protection and safety features</b>					
Load rated DC disconnect	●				
Load rated AC disconnect	○				
Ground fault monitoring / grid monitoring	● / ●				
DC reverse polarity protection / AC short-circuit protection	● / ●				
All-pole sensitive residual-current monitoring unit	●				
DC AFCI arc-fault protection	●				
SunSpec PLC signal for rapid shutdown	●				
DC surge protection: Type 2 / Type 1+2	○ / ○				
Protection class / overvoltage category as per UL 840	I / III				
<b>General data</b>					
Dimensions (W/H/D)	728 mm / 762 mm / 266 mm (28.7 in / 30.0 in / 10.5 in)				
Device weight	35 kg (77 lbs)				
Operating temperature range	-25°C to +60°C (-13°F to +140°F)				
Audible noise emission (full power @ 1m and 25°C)	59 dB(A)				
Topology / cooling concept	Transformerless / OptiCool (forced convection, variable speed fans)				
Enclosure protection rating	Type 4X (as per UL 50E)				
Corrosivity classification according to IEC 61701	C5				
Maximum permissible relative humidity (non-condensing)	100 %				
<b>Features / functions / accessories</b>					
Mounting type	Vertical rack / wall mount to 15° from horizontal				
DC connection / AC connection	Amphenol H4 Plus / spring-cage terminal				
LED indicators (status / fault / communication)	●				
Network interfaces: Ethernet / WLAN	● (2 ports) / ●				
Data protocols: SMA Modbus / SunSpec Modbus / Speedwire	● / ● / ●				
Multi-function relay / Extension module slot / Digital inputs	● / ● / ● (6 ports)				
Shadefix technology for string level optimization	●				
I-V curve diagnostic function	●				
Integrated Plant Control / Q on Demand 24/7	● / ●				
SMA Smart Connected (proactive monitoring and service support)	●				
Standard warranty	10 years				
Optional warranty extensions (total warranty coverage cannot exceed 20 years)	+5 years, +10 years				
<b>Certificates and approvals</b>					
Certificates and approvals	UL 62109-1, UL 1699B Ed. 1, CAN/CSA 22.2 No. 62109-1:16 / 62109-2:16, PV Rapid Shutdown System Equipment in accordance with UL1741:2021, UL 3741, UL 1998				
FCC compliance	FCC Part 15 Class A				
Grid interconnection standards	UL 1741 SB, IEEE 1547:2018, compliance to SRDs: CA Rule 21, HECO Rule 14H, ISO-NE, CSA C22.2 No. 107. 1-16 section 14				
<b>Integrated System Manager</b>					
Maximum number of supported inverters / energy meters	5 / 1				
Maximum system power PV inverters (nominal AC power)	150 kVA				
Centralized commissioning of all devices in the system	●				
Remote parameterization of SMA devices	● (via Sunny Portal powered by ennexOS)				
SMA Dynamic Power Control (e.g. zero export / Volt-VAr)	●				
Type designation	STP 13-US-50				
● Standard features   ○ Optional   – Not available   Data in nominal conditions	Last revision: 08/2025				
<b>Accessories</b>					
 SMA Data Manager M EDMM-20	 DC Terminal Cover DC-TERM-COVER	 SMA Sensor Module MD-SEN-US-40	 DC Surge Protection Kits T2: DC_SPD_KIT6-10 T1+2: DC_SPD_KIT7_T1T2	 Roof Mount Kit 210462-00.01	 AC Disconnect Kit 210841-00.01

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