/ SI30-20 / SI50-20

powered by ennexOS

Sunny Island X

Next generation SMA battery inverter – more powerful than ever

/ Compatible with many approved third-party batteries

25 YEAR DESIGN LIFE

Benefits at a glance

- Nominal output, even at high temperatures (45 °C)
- Modular scalability of AC power and battery capacity in on- and off-grid installations
- Compatible with numerous approved batteries thanks to integrated DC-to-DC converter
- Flexible use of generators or the utility grid in off-grid installations using Sunny Island X Connection Box[1)]
- Designed and manufactured in Germany with 100% SMA quality standards
- 10-year warranty (5 + 5*)[2)]
- Integrated energy management in on-grid installations without battery backup
- Compatible with SMA Hybrid Controller or other Modbus system controllers
- Comprehensive system monitoring thanks to Sunny Portal powered by ennexOS
- Sunny Design design tool
- Advanced training available for project planning, installation and commissioning

Whether in off-grid areas or connected to the utility grid, the highly versatile Sunny Island X battery inverter supports a wide range of on-grid and off-grid installations.

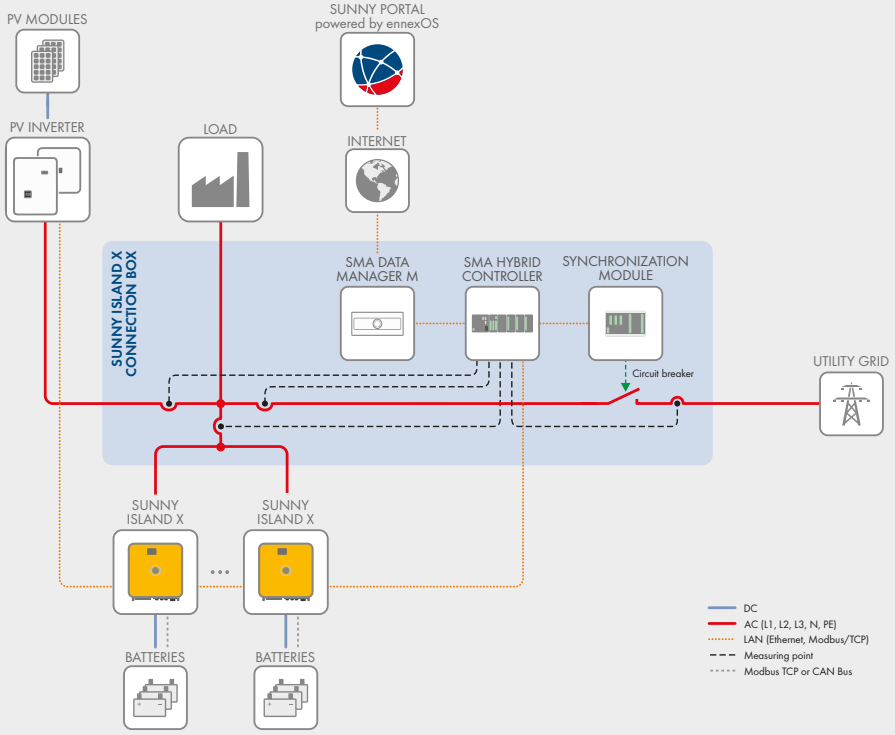
As a central element of your system, it ensures that self-generated solar energy can be stored and made available at all times. The Sunny Portal powered by ennexOS interface allows you to visualize all the components in the Sunny Island system and monitor the energy flows.
The Sunny Island X ensures the required system flexibility and reliability. The broad temperature range ensures, for example, that the Sunny Island X can operate even under the most extreme conditions – desert heat, tropical humidity or snowy conditions are never a problem for Sunny Island X. Intelligent load and energy management keeps the system running, even in critical situations. The Sunny Island X is a highly robust battery inverter – and comes with an up to 10-year warranty[2)].

1) Sunny Island X Connection Box is an accessory
2) Device registration via the SMA product registration homepage (my.sma-service.com)

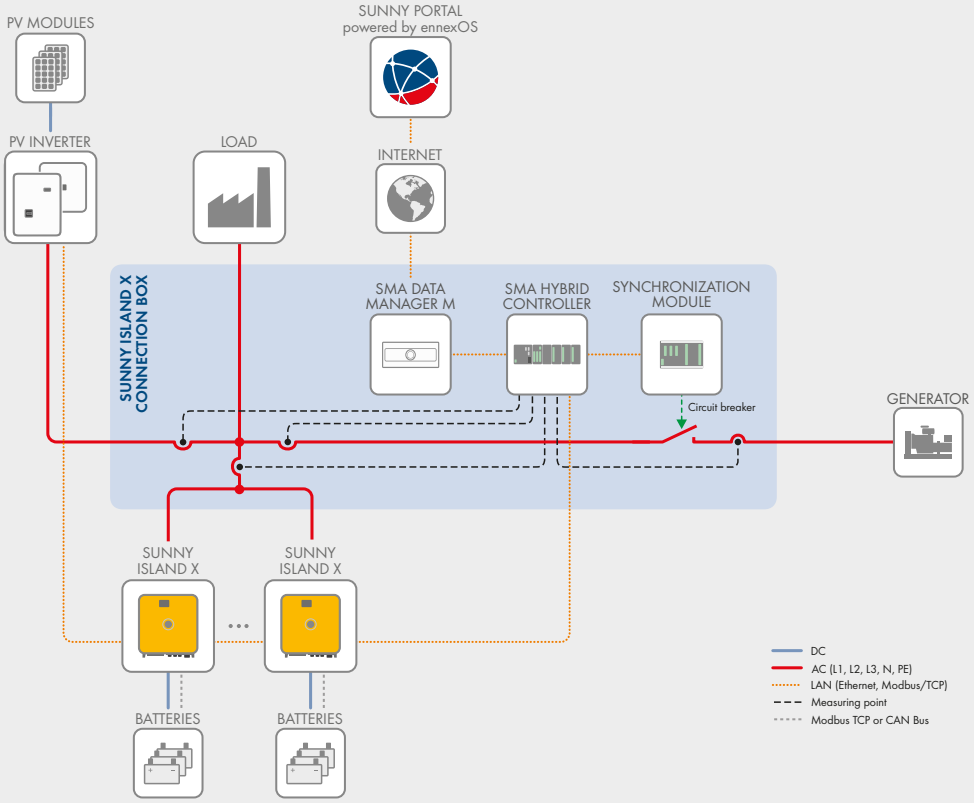
Sunny Island X systems

The Sunny Island X Connection Box is the AC distribution board for off-grid and battery-backup systems, facilitating the connection and management of all system components. With the included Hybrid Controller, it can offer different system options with the Sunny Island X. The Hybrid Controller and Data Manager M are pre-installed in the Sunny Island X Connection Box for the energy management of various applications.

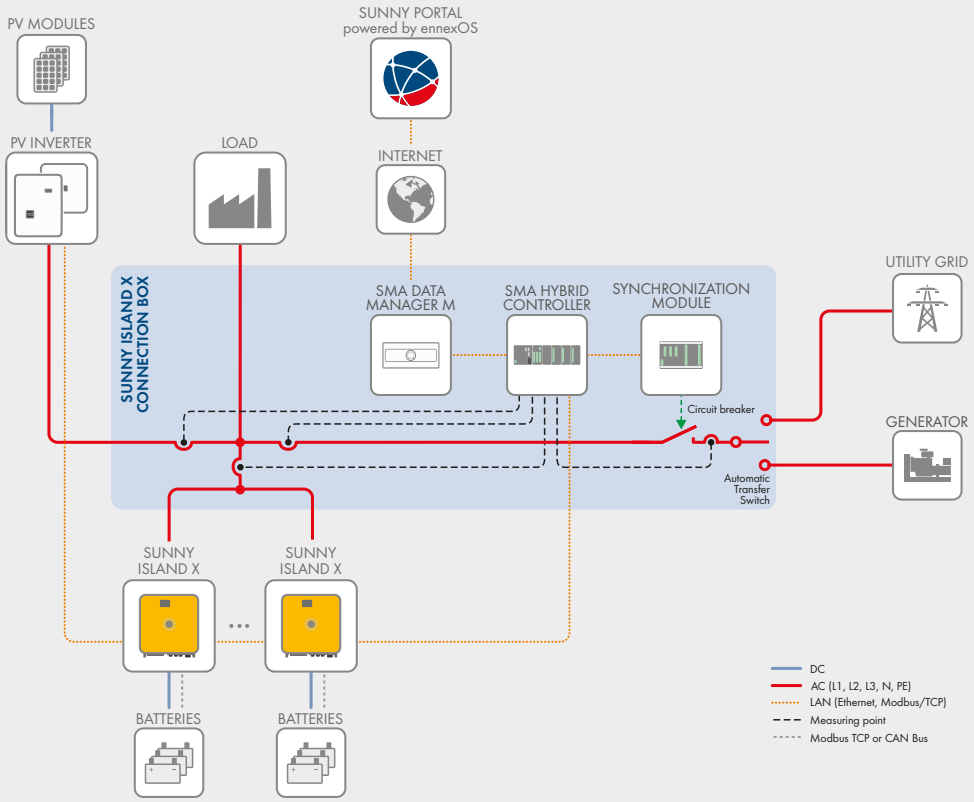
Sunny Island X – system with utility grid connection



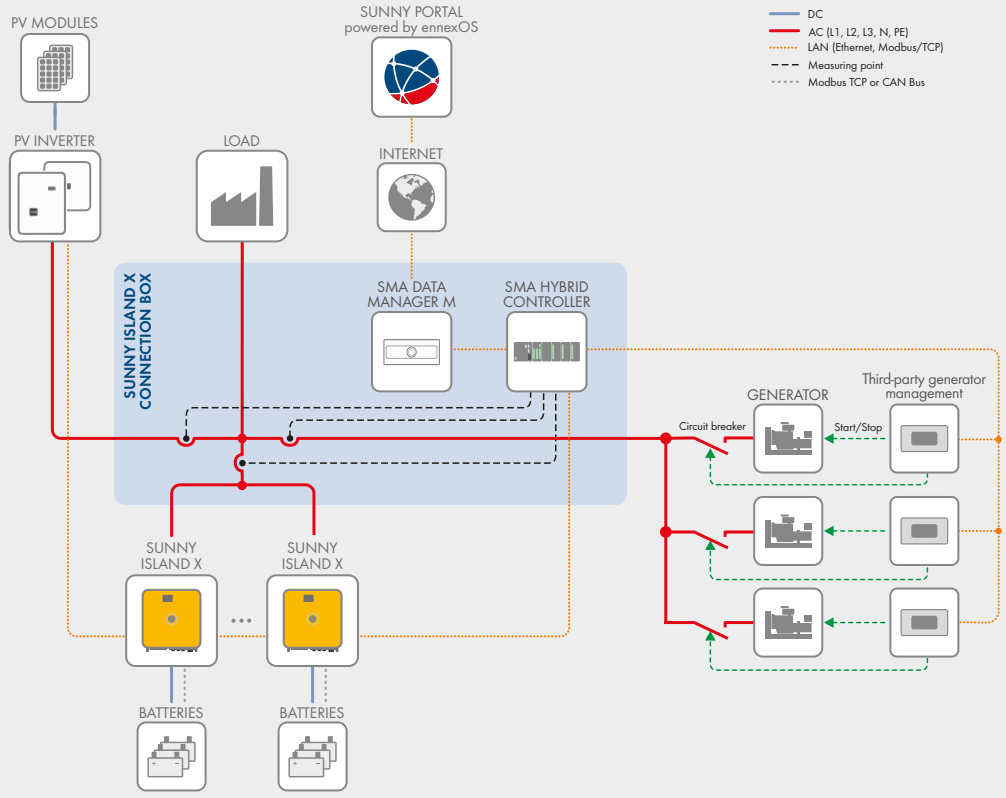
Sunny Island X – system with generator



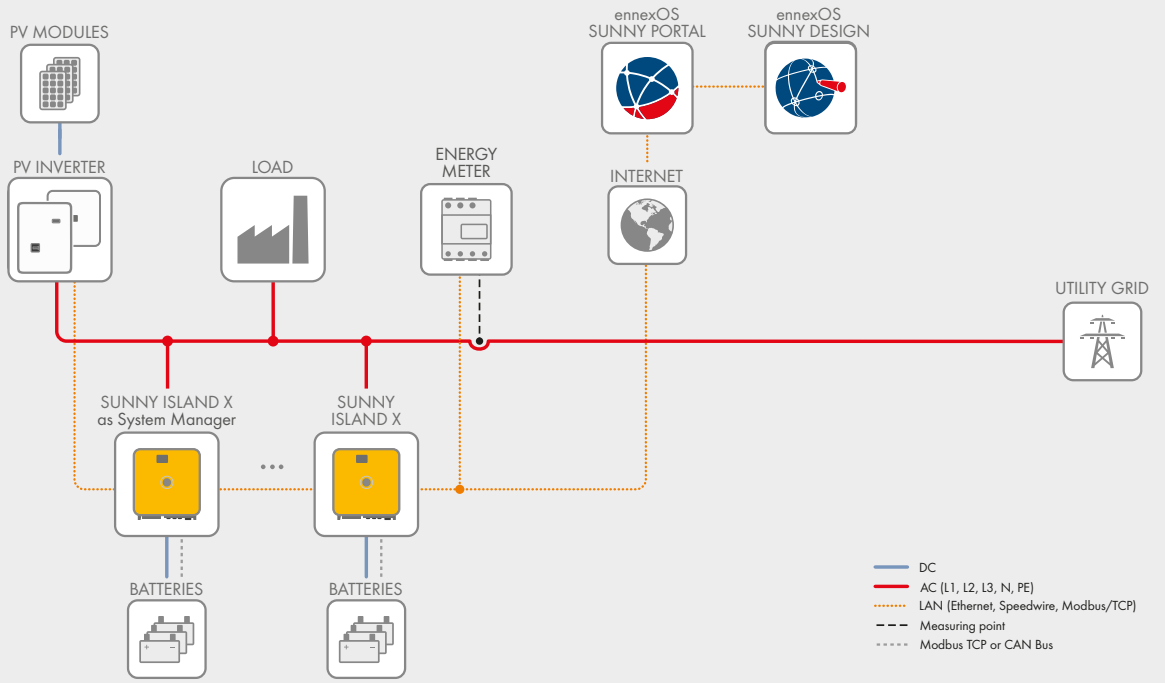
Sunny Island X – system with utility grid and generator



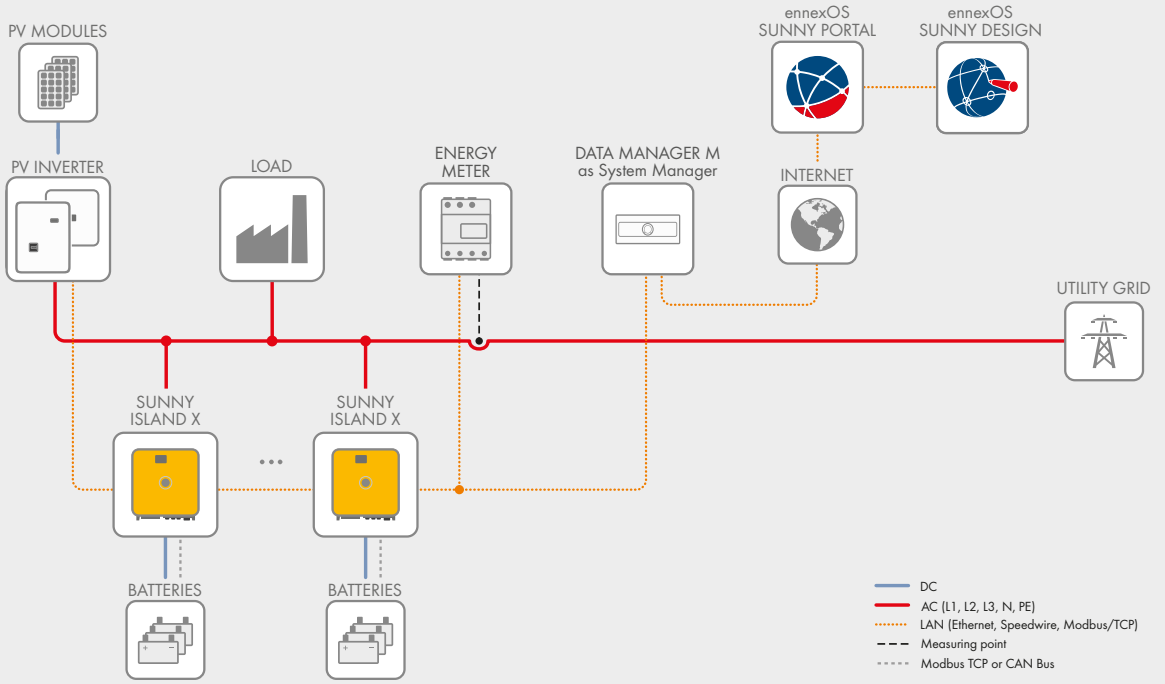
Sunny Island X – system with multiple generators



Sunny Island X — system in an on-grid application without battery backup (up to 11 devices)



Sunny Island X — system in an on-grid application without battery backup (up to 50 devices)



Technical Data	Sunny Island X 30	Sunny Island X 50
Battery connection (DC)		
Max. DC power	30600 W	51000 W
DC voltage range (at 400 V_{AC})	200 V to 980 V	
DC voltage range at nominal power	200 V to 980 V	350 V to 980 V
Max. usable input current (I_{DC}, max)	150 A	
Battery type	Li-Ion (Modbus TCP or CAN bus)	
Grid connection (AC)		
Rated power at nominal voltage	30000 W	50000 W
Max. apparent AC power	30000 VA	50000 VA
Max. reactive power	30000 var	50000 var
Max. output current	45.6 A per line conductor	75.5 A per line conductor
Overload capability for 30 min / 3 sec	31 kW / 36 kW	52 kW / 60 kW
Short-circuit current	490 A	
Nominal AC voltage	400 V [3]	
AC voltage range	187 V to 528 V	
Rated grid frequency	50 Hz / 60 Hz	
Power frequency range	44 Hz to 66 Hz	
Power factor at rated power / adjustable displacement power factor	1 / 0 overexcited to 0 underexcited	
Unbalanced load capability / connection lines / grid configuration	100% / 5 (L1, L2, L3, N, grounding conductor) / Yn	
Efficiency		
Max. efficiency / European Efficiency	98.0% / 97.6%	98.0% / 97.2%
Protective devices		
Grid monitoring	●	
Overtemperature / battery deep discharge	● / ●	
AC short-circuit current capability / galvanically isolated	● / –	
All-pole-sensitive residual-current monitoring unit	●	
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 60664-1)	I / DC: II, AC: III	
General Data		
Dimensions (W / H / D)	772 / 837.3 / 443.8 mm (30.4 / 33 / 17.5 inch)	
Weight	104 kg (229 lb)	
Operating temperature range	–25°C to +60°C (–13°F to +140°F) with derating from 45°C	
Noise emission, typical	69 dB(A)	
Standby	25 W	
Topology / cooling concept	Three-phase / active	
Degree of protection (according to IEC 60529 / UL 50E)	IP65 / NEMA 4X	
Climatic category (according to IEC 60721-3-4)	4K4 / 4Z4 /4S2 / 4M3 / 4C2 / 4B2	
Maximum permissible value for relative humidity (non-condensing)	95%	
Features/functions/accessories		
Modbus TCP / Speedwire / Wi-Fi	● / ● / ●	
LED display (status/fault/communication)	● / ● / ●	
On-grid energy management functions (with integrated System Manager)	Self-consumption optimization, peak load shaving, multi-use	
Web user interface / Wi-Fi [2]	● / ●	
System monitoring	Sunny Portal powered by ennexOS	
LCD display	○	
Hybrid Controller functions (integrated Sunny Island X Connection Box)		
Support of Sunny Island X	●	
Blackstart	●	
Diesel-off mode (frequency and voltage control)	●	
Active and reactive power control (PV and battery)	●	
SOC (state of charge) balancing	●	
Diesel generator management	●	
On-grid energy management (increased self-consumption, peak load shaving)	●	
Synchronization with external AC sources (utility grid or generator)	●	
System Manager features for on-grid applications only		
Total number of supported devices with Sunny Island X as System Manager[1]	11	
Total number of supported devices when an SMA Data Manager M (EDMM-20) is system manager[1]	50	
Centralized commissioning of all devices in the system	●	
Remote parameterization of SMA devices with Sunny Portal powered by ennexOS	●	
Accessories		
Sunny Island X Connection Box (third-party)	Available in two sizes: for 10x SI-X and for 16x SI-X	
For on-grid applications without battery backup	600 A (COM-EMETER-A-20) / 200 A (COM-EMETER-B-20)	
For on-grid applications without battery backup	Janitza UMG604	
Model type number	SI30-20	SI50-20

● Standard equipment ○ Optional – Not available Data at nominal conditions Last revised: 03/2025

1) Supported devices: SMA EV Charger Business (only monitoring), SMA PV inverter, Sunny Island X, Energy Meter, and other Modbus devices 2) For commissioning only 3) The AC output voltage can be adjusted (adjustable: 208 V, 415 V and 480 V)

ENERGY
THAT
CHANGES

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