



SMA Backup

Off-Grid / Backup Box for Sunny Island X and Sunny Tripower Storage X¹⁾

Easy setup of powerful off-grid and
backup applications

Flexible

- Use of the SMA Energy Management system for commercial applications on the utility grid
- System power classes from 50 kW to 300 kW
- For stand-alone grids and battery-backup systems

Simple

- Prewired AC Box
- Integrated AC distribution for battery inverters, generators and PV
- Integrated load-shedding contactor

Safe

- Automatic bypass for the generator and/or utility grid
- Reverse current monitoring
- Grid-compliant through direct integration of the external grid and system protection unit

Robust

- Outdoor installation possible²⁾
- 5-year SMA warranty

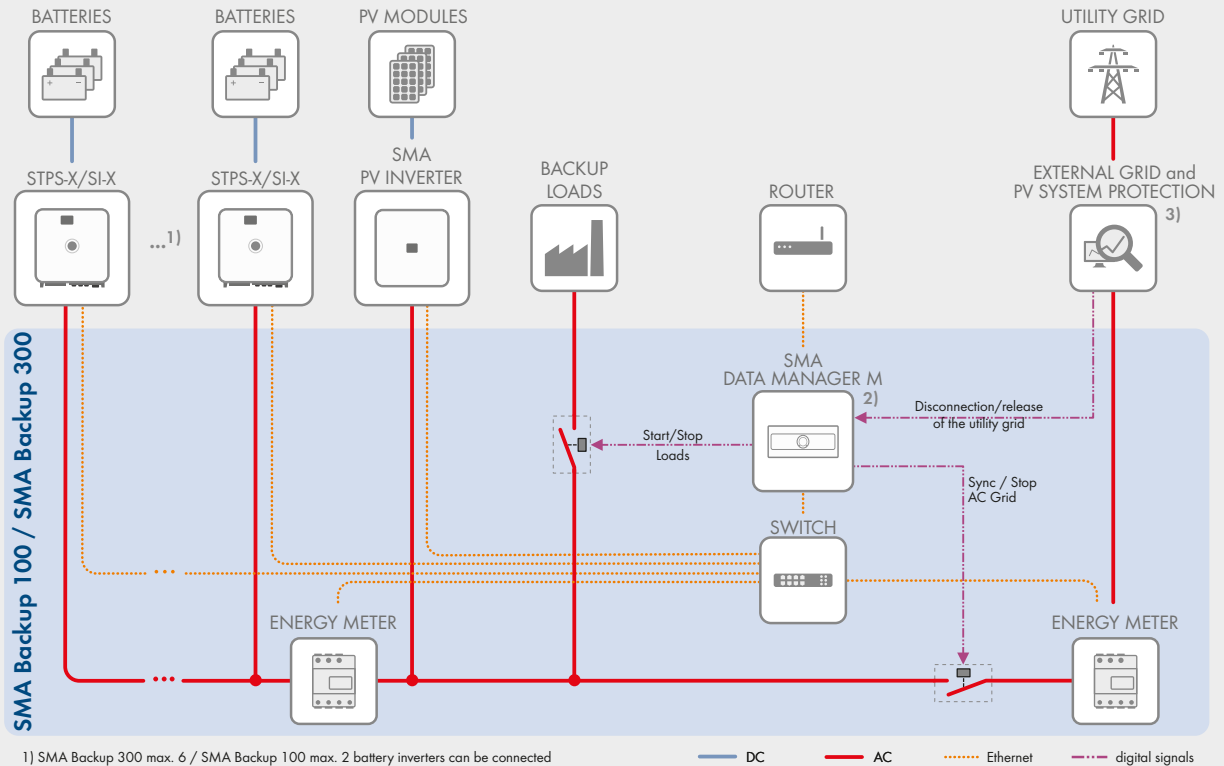
With the SMA Off-Grid and Backup Boxes for the Sunny Island X and Sunny Tripower Storage X¹⁾ battery inverters, stand-alone grids and battery-backup systems can be implemented easily and cost-effectively.

Powerful battery backup systems or off-grid systems with up to 2 or 6 battery inverters and up to 300 kW of connectable PV inverter power can be realized for systems connected to the utility grid or without grid access. All AC Boxes are prewired ex-works. They feature a main connection for generators or the utility grid and connections for loads, PV and battery inverters.

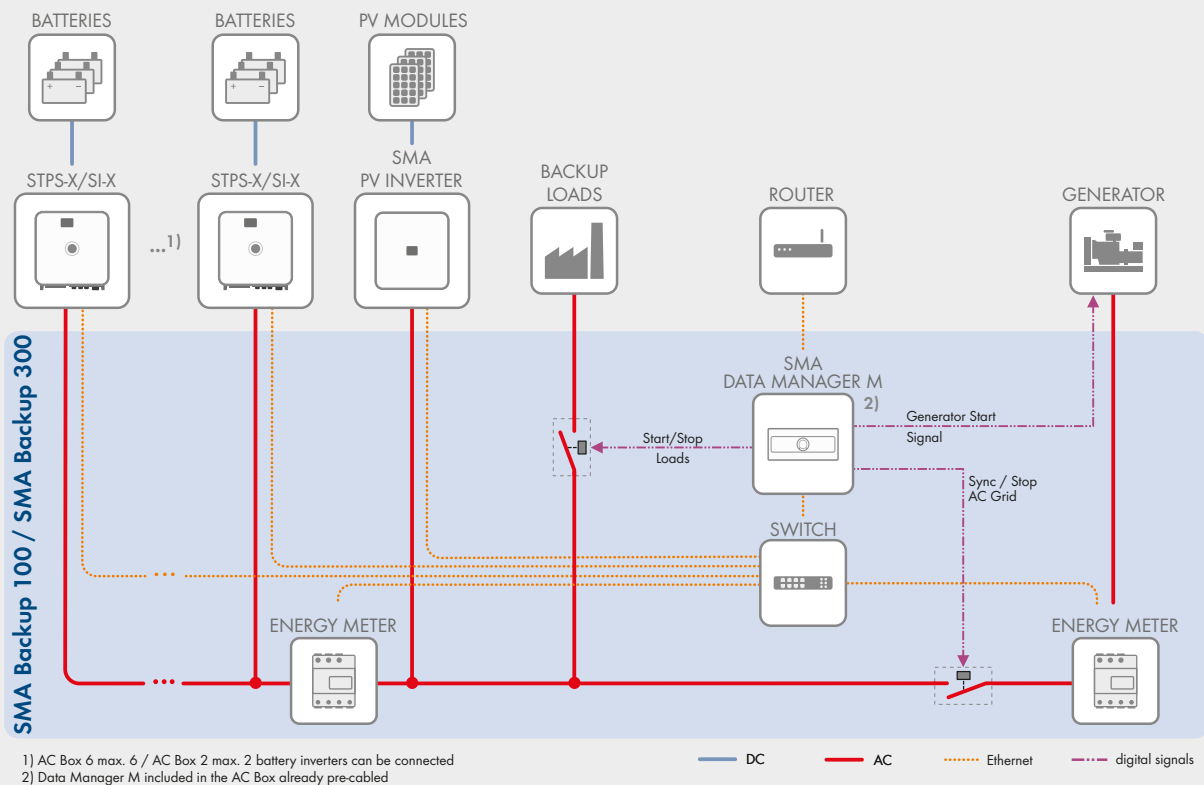
They are suitable for commercial enterprises in combination with the SMA energy management and for setting up an electricity supply in remote regions. For critical infrastructure, a backup generator can be installed in addition.

1) Already installed inverters with a serial number lower than "xx22839659" and a production date prior to 04/2025 require a hardware replacement free of charge. Please contact the SMA Online Service Center for this. 2) Protection against direct solar irradiation necessary

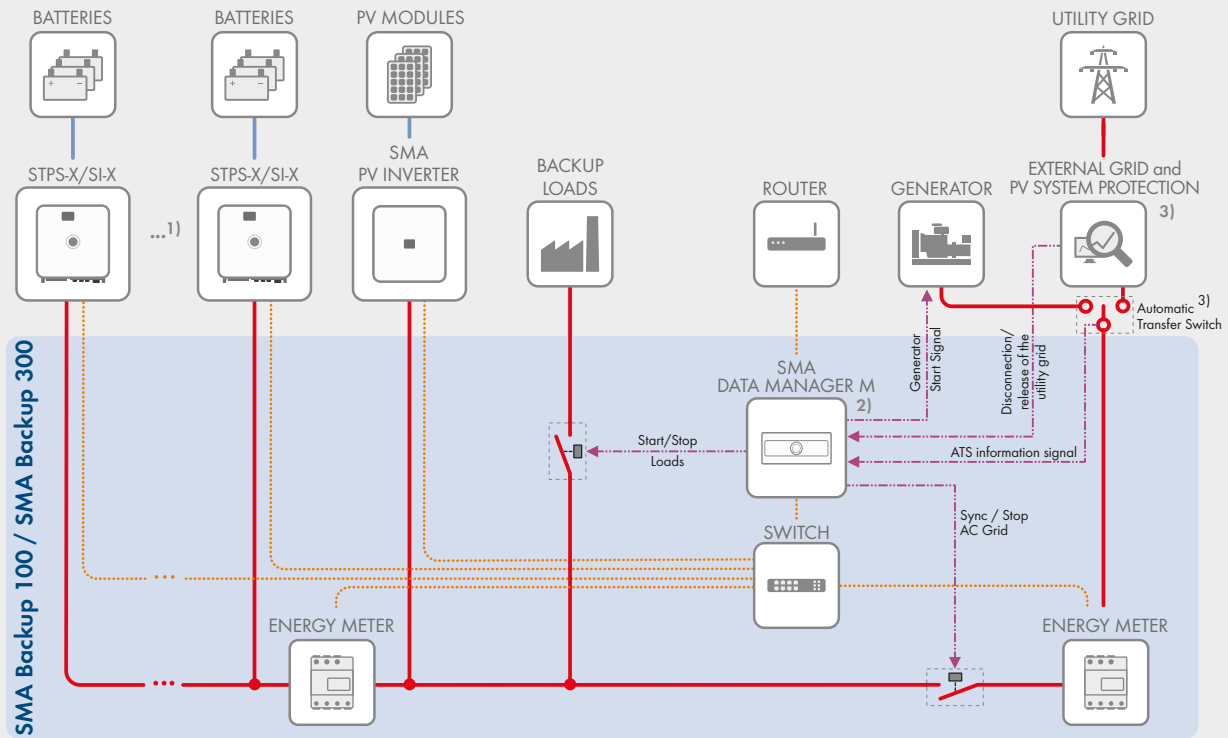
System with utility grid connection



System with generator



System with utility grid and generator connection



Technical Data	SMA Backup 100 / AC-Box 2	SMA Backup 300 / AC-Box 6
Load connection		
Rated voltage	230 V / 400 V	
AC voltage range	300 V to 440 V (L-L)	
Rated frequency / frequency range	50 Hz, 60 Hz ¹⁾ / 45 Hz to 65 Hz	
Number of terminals	1 x three-phase	
Rated power	135 kW	300 kW
AC current at rated values	195 A	435 A
Fuses	NH1 (200 A)	NH3 (500 A)
Battery inverter connections		
Maximum number of devices	2	6
Compatible battery inverters	Sunny Island X 30-50 Sunny Tripower Storage X 30-50 ²⁾	
AC rated power / AC current at rated values	100 kW / 2 x 72.2 A	300 kW / 6 x 72.2 A
AC power (30 min)	104 kW	312 kW
AC power (3 s)	120 kW	360 kW
Fuses	2x circuit breakers B 100 A 4-pole	6x circuit breakers B 100 A 4-pole
Generator or utility grid connection		
Number of terminals	1 x three-phase	
Related grid input power	135 kW	300 kW
AC input current	195 A	435 A
Fuses	NH1 (200 A)	NH3 (500 A)
Connection of PV system		
Number of terminals	1 x three-phase	
PV rated power	135 kW	300 kW
AC current at rated values	195 A	435 A
Fuses	—	—

● Standard features ○ Optional features — Not available

1) With special parameterization of the synchronization module 2) Already installed inverters with a serial number lower than "xx22839659" and a production date prior to 04/2025 require a hardware replacement free of charge. Please contact the SMA Online Service Center for this.

Technical Data	SMA Backup 100 / AC-Box 2	SMA Backup 300 / AC-Box 6
General Data		
Number of line conductors	Three-phase	
Permitted grid configuration	TN-S, TN-C-S	
Dimensions (W / H / D)	1200 / 1600 / 435 mm	1200 / 2000 / 800 mm
Mounting type	Mounted on a base	
Weight	200 kg	400 kg
Ambient temperature	-20 °C to +40 °C	
Degree of protection (according to IEC 60529)	IP55	IP54
Maximum permissible value for relative humidity (non-condensing)	0% to 95%	
Max. installation altitude above MSL ≤ 2000 m	●	
Warranty (5 years)	●	
Certificates and approvals	EN IEC 61439-1 /-2, VDE-AR 2510-2	
SMA Data Manager M (EDMM-20) integrated	●	
8-port LAN switch integrated	●	
Use of the SMA Energy Management in On-Grid applications	●	
Uninterruptible utility grid or generator connection	●	
Integration of external grid and system protection unit	●	
Integration of external AC or DC UPS	●	
Integrated generator management in off-grid operation	●	
Additional generator integration in backup operation	○ (via external ATS)	
Type designation	AC-BOX-2X50-10	AC-BOX-6X50-10

● Standard features ○ Optional features – Not available Version: 05/2026