

# SUNNY ISLAND 6.0H / 8.0H FOR OFF-GRID AND ON-GRID APPLICATIONS



SI6.0H-11 / SI8.0H-11



## Flexible

- For self-consumption and battery backup systems in on-grid and off-grid applications
- All lead-acid and many lithium-ion batteries can be used

- Ideal for retrofits or modular expansions of single-phase and three-phase systems

## Efficient

- Maximum efficiency of up to 96 %
- High efficiency of overall system
- Easy and fast installation and commissioning

## Reliable

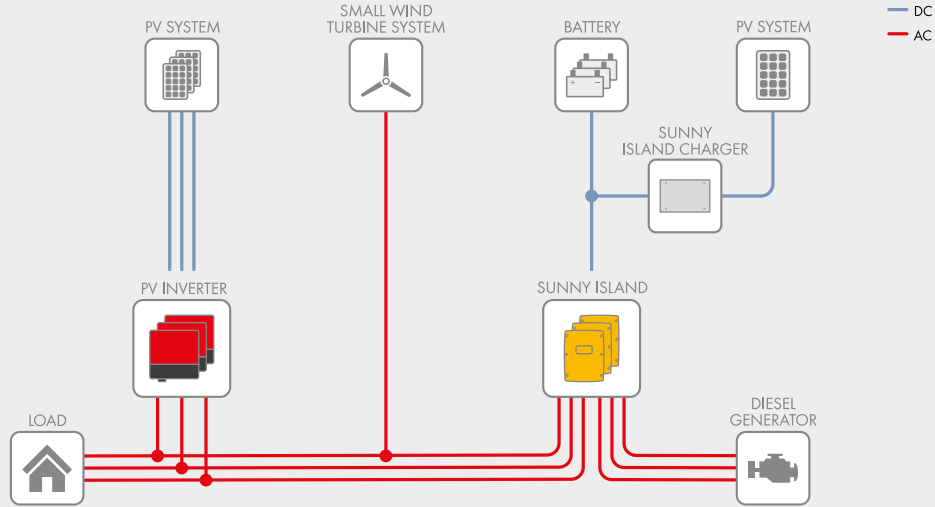
- Proven safety thanks to external certification
- Long battery service life thanks to intelligent battery management
- Reliable operation thanks to extreme overload capacity

## SUNNY ISLAND 6.0H / 8.0H

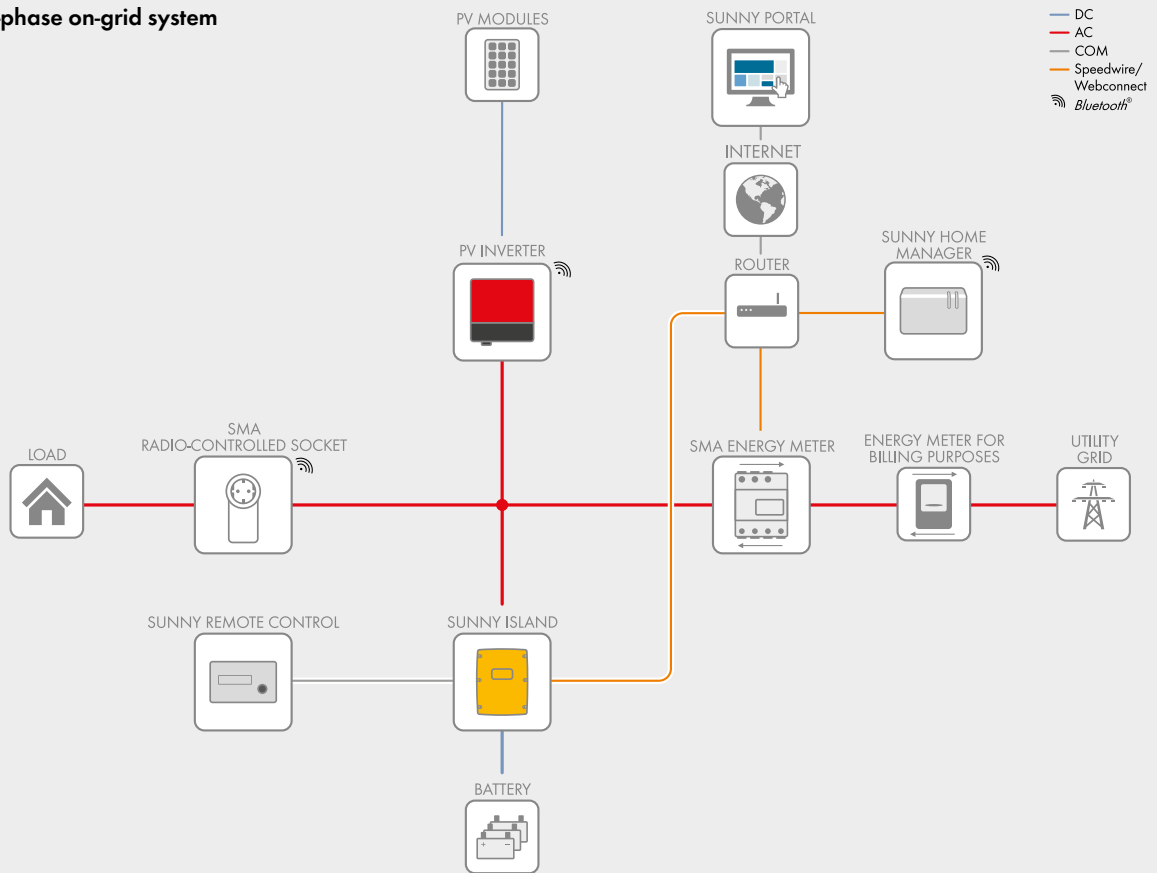
The all-rounder for on-grid and off-grid

The Sunny Island 6.0H / 8.0H supports a wide range of on-grid and off-grid applications with compelling product features – from operation in remote off-grid areas to home energy management. Users can benefit from more than 25 years of SMA experience in the field of battery inverters. The high protection class, wide temperature range and exceptional overload capacity provide the kind of security needed for off-grid use. Intelligent load and energy management keeps the system running, even in critical situations. And being a core element in the SMA Flexible Storage System for new and existing PV systems, the Sunny Island 6.0H / 8.0H stores generated solar energy and works with the Sunny Home Manager to intelligently manage home energy consumption. The Quick Configuration Guide and intuitive user interface help ensure an easy, convenient installation in any application scenario. That makes the Sunny Island 6.0H / 8.0H the ultimate all-purpose product solution – for on-grid and off-grid.

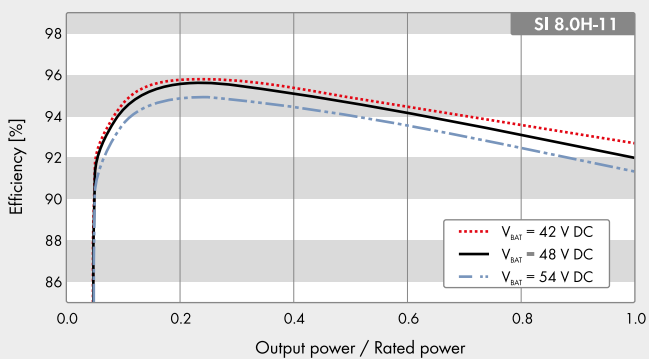
### Three-phase off-grid system



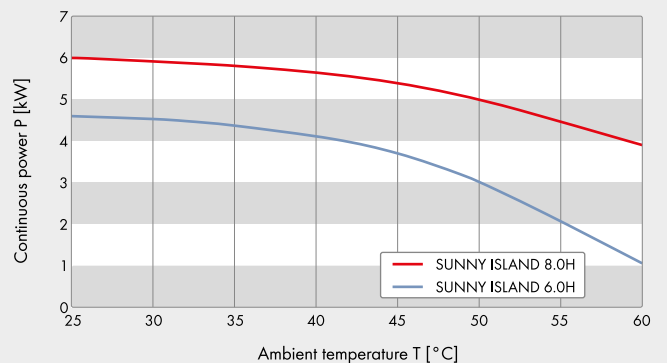
### Single-phase on-grid system



### Efficiency curve



### Power-temperature curve



# SUNNY ISLAND 6.0H / 8.0H

Technical Data	Sunny Island 6.0H	Sunny Island 8.0H
<b>Operation on the utility grid or generator</b>		
Rated grid voltage / AC voltage range	230 V / 172.5 V to 264.5 V	230 V / 172.5 V to 264.5 V
Rated grid frequency / permitted frequency range	50 Hz / 40 Hz to 70 Hz	50 Hz / 40 Hz to 70 Hz
Maximum AC current for increased self-consumption (grid operation)	20 A	26 A
Maximum AC power for increased self-consumption (grid operation)	4,6 kVA	6 kVA
Maximum AC input current	50 A	50 A
Maximum AC input power	11500 W	11500 W
<b>Stand-alone or emergency power operation</b>		
Rated grid voltage / AC voltage range	230 V / 202 V to 253 V	230 V / 202 V to 253 V
Rated frequency / frequency range (adjustable)	50 Hz / 45 Hz to 65 Hz	50 Hz / 45 Hz to 65 Hz
Rated power (at Unom, fnom / 25°C / cos φ = 1)	4600 W	6000 W
AC power at 25°C for 30 min / 5 min / 3 sec	6000 W / 6800 W / 11000 W	8000 W / 9100 W / 11000 W
AC power at 45°C permanently	3700 W	5430 W
Rated current / maximum output current (peak)	20 A / 120 A	26 A / 120 A
Total harmonic distortion output voltage / power factor at rated power	< 4 % / -1 to +1	< 4 % / -1 to +1
<b>Battery DC input</b>		
Rated input voltage / DC voltage range	48 V / 41 V to 63 V	48 V / 41 V to 63 V
Maximum battery charging current / rated DC charging current / DC discharging current	110 A / 90 A / 103 A	140 A / 115 A / 130 A
Battery type / battery capacity (range)	Li-Ion*, FLA, VRLA / 100 Ah to 10000 Ah (lead-acid) 50 Ah to 10000 Ah (Li-Ion)	Li-Ion*, FLA, VRLA / 100 Ah to 10000 Ah (lead-acid) 50 Ah to 10000 Ah (Li-Ion)
Charge control	IUoU charge procedure with automatic full charge and equalization charge	
<b>Efficiency / self-consumption of the device</b>		
Maximum efficiency	95,8 %	95,8 %
No-load consumption / standby	25,8 W / 6,5 W	25,8 W / 6,5 W
<b>Protective devices (inverter)</b>		
AC short-circuit / AC overload	● / ●	● / ●
DC reverse polarity protection / DC fuse	- / -	- / -
Overtemperature / battery deep discharge	● / ●	● / ●
Overvoltage category as per IEC 60664-1	III	III
<b>General data</b>		
Dimensions (W / H / D)	467 mm / 612 mm / 242 mm (18.4 inch / 21.1 inch / 9.5 inch)	
Weight	63 kg (138.9 lb)	
Operating temperature range	-25°C to +60°C (-13°F to +140°F)	
Protection class as per IEC 62103	I	I
Climatic category as per IEC 60721	3K6	3K6
Degree of protection as per IEC 60529	IP54	IP54
<b>Features / function</b>		
Operation and display / multifunction relay	External via SRC-20 / 2	External via SRC-20 / 2
Three-phase systems / battery backup function	● / ●	● / ●
State of charge calculation / full charge / equalization charge	● / ● / ●	● / ● / ●
Battery temperature sensor / data cables	● / ●	● / ●
Certificates and approvals	www.SMA-Solar.com	www.SMA-Solar.com
Warranty	5 years	5 years
<b>For off-grid applications</b>		
Automatic rotating magnetic field detection / generator support	● / ●	● / ●
Parallel connection / Multicluster	● / ●	● / ●
Integrated soft start / generator support	● / ●	● / ●
<b>Accessory</b>		
<b>For off-grid applications</b>		
Battery fuse / external battery current measurement	○ / ○	○ / ○
Interface SI-COMSMA (RS485) / SI-SYSCAN (Multicluster)	○ / ○	○ / ○
Sunny Island Charger SIC50-MPT**	○	○
<b>For on-grid applications</b>		
Interface SI-COMSMA (RS485) / Interface SWDMSI-10 (Speedwire)	○	○
Sunny Home Manager / SMA Energy Meter / automatic transfer switch for battery backup**	○ / ○ / ○	○ / ○ / ○
● Standard features ○ Optional features – Not available		
* see „List of Approved Lithium-Ion Batteries“ at www.SMA-Solar.com		
** procurement via external supplier		
All specifications, last updated: April 2016		
Type designation	SI6.0H-11	SI8.0H-11

# SUNNY DESIGN

System design made easy

