

SUNNY ISLAND 4548-US / 6048-US

SI4548-US-10 / SI6048-US-10



Efficient

- Maximum efficiency of 96%
- CEC efficiency of 94.5% and 94%
- State of charge calculation
- Intelligent battery management for maximum battery life

Simple

- Easy commissioning with the "Quick Configuration Guide"
- Complete off-grid management
- Excellent for grid-tied battery back up

Flexible

- For Sunny Island systems from 4.5 to 100 kW
- Single, split-phase and three-phase operation, connectable in parallel and modularly expandable
- AC and DC coupling

Durable

- Extreme overload capability
- OptiCool™ active temperature management system
- 5-year standard warranty

SUNNY ISLAND 4548-US / 6048-US

The efficient off-grid manager

The SMA Sunny Island 4548-US and 6048-US inverters are based on proven off-grid technology and feature industry leading power output. A maximum efficiency of 96 percent ensures peak production, which results in reduced diesel usage in rural communities. More flexible sizing allows for simplified system planning. And, with multiclustert technology, up to 12 Sunny Islands can be integrated into off-grid power systems up 110 kW in size.

Technical data	Sunny Island 4548-US	Sunny Island 6048-US
AC output (loads)		
Rated grid voltage / AC voltage range	120 V/105 V - 132 V	120 V/105 V - 132 V
Rated frequency / frequency range (adjustable)	60 Hz/55 Hz ... 65 Hz	60 Hz/55 Hz ... 65 Hz
AC power (at 25 °C / at 40 °C) for 3 hours	5000 W/4000 W	6000 W/5000 W
Rated power (@ U_{nom} / 25 °C / @ $\cos \phi = 1$)	4500 W	5750 W
AC power at 25 °C for 30 min / 1 min / 3 s	5300 W / 8400 W / 11000 W	7000 W / 8400 W / 11000 W
Rated current / max. output current (peak)	37.5 A/180 A for approx. 60 ms	48 A/180 A for approx. 60 ms
Total harmonic factor output voltage / power factor with rated power	3 % / -1 ... +1	3 % / -1 ... +1
AC input (PV array or grid)		
Rated input voltage / AC input voltage range	120 V/80 V - 150 V	120 V/80 V - 150 V
Rated input frequency / allowable input frequency range	60 Hz/54 Hz ... 66 Hz	60 Hz/54 Hz ... 66 Hz
Max. AC input current / adjustable	56 A/0 A ... 56 A	56 A/0 A ... 56 A
Max. AC input power	6.7 kW	6.7 kW
Battery DC input		
Rated input voltage / DC voltage range	48 V/41 V - 63 V	48 V/41 V - 63 V
Max. battery charging current / DC rated charging current	100 A / 85 A	130 A / 110 A
Battery type / battery capacity range	Lead, NiCd/100 Ah ... 10000 Ah	Lead, NiCd/100 Ah ... 10000 Ah
Charge control	IUoU charge procedure with automatic full charge and equalization charge	IUoU charge procedure with automatic full charge and equalization charge
Efficiency / self-consumption		
Max. efficiency / CEC efficiency	96 % / 94.5 %	96 % / 94 %
Self-consumption without load / standby	25 W/4 W	25 W/4 W
Protective devices		
DC reverse polarity protection / DC fuse	● / ●	● / ●
AC short-circuit / AC overload	● / ●	● / ●
Overtemperature / battery deep discharge	● / ●	● / ●
General data		
Dimensions (W / H / D)	467 / 612 / 235 mm (18.4 / 24.1 / 9.3 inch)	467 / 612 / 235 mm (18.4 / 24.1 / 9.3 inch)
Weight	63 kg / 139 lb	63 kg / 139 lb
Operating temperature range	-25 °C ... +60 °C / -13 °F ... +122 °F	-25 °C ... +60 °C / -13 °F ... +122 °F
Features / function		
Operation and display / multi-function relay	Internal / 2	Internal / 2
Degree of protection (according to IEC 60529)	indoors (NEMA 1)	indoors (NEMA 1)
Three-phase systems / parallel connection	● / ●	● / ●
Integrated bypass / multicluster operation	- / ●	- / ●
State of charge calculation / full charge / equalization charge	● / ● / ●	● / ● / ●
Integrated soft start / generator support	● / ●	● / ●
Battery temperature sensor / data cable	● / ●	● / ●
Warranty	5 years	5 years
Certificates and approvals	www.SMA-Solar.com	www.SMA-Solar.com
Accessories		
Battery cable / battery fuse	○ / ○	○ / ○
Interface (RS 485 / Multicluster PB)	○ / ○	○ / ○
Extended generator start "GenMan"	○ / ○	○ / ○
Load-shedding protection / battery current measurement	○ / ○	○ / ○
● Standard feature ○ Optional feature - Not available		
Type designation	SI4548-US-10	SI6048-US-10

