## **SUNNY ISLAND 4548-US / 6048-US**





### **Efficient**

- $\bullet$  CEC efficiency of 94.5% and 94%
- State of charge calculation
- Intelligent battery management for maximum battery life
- Now supports external BMS and lithium-ion technology

#### 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<sup>TM</sup> 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 multicluster technology, up to 12 Sunny Islands can be integrated into off-grid power systems up 110 kW in size.

AC output			
Robert gard voltage / AC voltage range Robert Spanney Frances (educational) RC power of 123 °C / at 40 °C file 3 hours RC power of 23 °C for 40 °C file 3 hours RC power of 23 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min / 3 s RC power of 24 °C for 30 min / 1 min	Technical data		
Robert Fragewory / Insequency /	AC output (loads)		
AC power in 23 **C / at ab 7-5 (in 5 a) bours   5000 W/4000 W   5730 W	The state of the s	·	•
Read Sower (B U), 25 °C / 9 cos p = 1) A 500 W A 500 W   575 W   Read current / max. cutput current (pecal) Color harmonic follow could vollage / power factor with related power AC input five very or grid Item days with provided for the provided power AC input five very or grid Read and pavellage / AC input vollage range (120 V/80 V = 150 V 120 V/80 V = 150 V/80 V = 150 V 120 V 120 V 1		·	
AC power at 25 °C for 30 min / 1 min / 3 +		•	·
Related Current / max. colipat Current (peeb)  37.5 A / 180 A for approx. 60 ms  3 (8 / 1 - 1)  3 (8 / 1 - 1)  3 (8 / 1 - 1)  3 (8 / 1 - 1)  3 (8 / 1 - 1)  120 (7 / 80 V - 150 V - 15		4500 W	5750 W
Teach harmonic factor author vallage / power factor with rated power  Act from IPV array or grid)  120 V/80 V 150 V  120	AC power at 25 °C for 30 min / 1 min / 3 s	5300 W / 8400 W / 11000 W	7000 W / 8400 W / 11000 W
Teach harmonic factor author vallage / power factor with rated power  Act from IPV array or grid)  120 V/80 V 150 V  120	Rated current / max. output current (peak)	37.5 A/180 A for approx. 60 ms	48 A/180 A for approx. 60 ms
Table   Tabl	Total harmonic factor output voltage / power factor with rated power		
Relading Interfuguency   Allowable input frequency range   60 Hz/54 Hz 66 Hz   60 Hz   6	AC input (PV array or grid)		
Relading Interfuguency   Allowable input frequency range   60 Hz/54 Hz 66 Hz   60 Hz   6	Rated input voltage / AC input voltage range	120 V/80 V - 150 V	120 V/80 V - 150 V
Mas. AC input oursent / adjustable Mas. AC input power Battery DC input Battery DC input Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery berging current / DC reted charging current Max. Entery opposition / DC As 1, 1000 A (8.5 A)  Leach NIGIC Little in / 1000 Ah. 1000		•	•
March AC Input power   Bothery DC imply Related Input vallage ( DC vallage range)   A8 V/41 V = 63 V   A8 V/41 V = 63 V/41 V   A8 V/41 V = 63		•	·
Bathery DC input Max. bathery sharping current) DC roted charging current Max. bathery sharping current) DC roted charging current Max. bathery sharping current) DC roted charging current Max. bathery sharp Subsequency opposity range Lead, NiCd, Lison, 1100 Ab. Ladd, NiCd, Lison, 1100 Ab. Lead, NiCd, Lison, 1	•		·
Reted input voltage / DC voltage range  A8 V/4 I V - 63 V 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A 100 A / 85 A 130 A / 110 A 100 A	• •	0.7 KYY	0.7 KTT
100 A / 83 A   130 A / 110 A		40 V / 41 V 42 V	40 V / 41 V 42 V
Elicitory byse / bottlery capacity range Estimated BMS compatible  Charge control  Charge control  Charge control  Charge control  Elicitancy / self-consumption  Mos. efficiency of Self-consumption  Mos. efficiency / Self-consumption  Mos. effici		·	•
Efficiency / self-consumption  Mox. efficiency / Self-consumption	, , , , , , , , , , , , , , , , , , , ,	·	· ·
Charge central   Charge procedure with automatic full charge and equalization charge   Charge central full charge and equalization charge		Lead, NiCd, Li-ion / 100 Ah 10000 Ah	Lead, NiCd, Li-ion / 100 Ah 10000 Ah
charge and equalization charge thicinery / self-consumption Max. efficiency / ECC efficiency  96 % / 94.5 %  96 % / 94.5 %  96 % / 94.5 %  96 % / 94.5 %  96 % / 94.5 %  96 % / 94.5 %  97 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  98 % / 94.5 %  99		•	•
Efficiency / Self-consumption  Max. efficiency / CEC efficiency Self-consumption without load / standby  25 W/4 W  26 W/4 W  26 W/4 W  26 W/4 W  26 W/4 W  27 W/4 W  27 W/4 W  27 W/4 W  27 W/4 W  28 W/4 W  26 W/4 W  27 W/4 W  27 W/4 W  28 W/4 W  26 W/4 W  27 W/4 W  28 W/4 W  27 W/4 W  27 W/4 W  28 W/4 W  28 W/4 W  26 W/4 W	Charge control	IUoU charge procedure with automatic full	IUoU charge procedure with automatic full
Max. difficiency / CEC efficiency  25 W/4 W  26 W/6 C		charge and equalization charge	charge and equalization charge
Max. difficiency / CEC efficiency  25 W/4 W  26 W/6 C	Efficiency / self-consumption		
Self-consumption without load // standby Protective devices DC reverse polarity protection / DC fuse AC shart-circial / AC aveaload  - / •	Max. efficiency / CEC efficiency	96 % / 94.5 %	96 % / 94 %
Protective devices  AC short-circuit / AC overload  Overtemperature / battery deep discharge  6	Self-consumption without load / standby	•	•
DC reverse polarity protection / DC fuse AC short-circial / AC overload	Protective devices		,
AC short-circuit / AC overload Overtemperature / battery deep discharge  A67 / 612 / 235 mm (18.4 / 24.1 / 9.3 inch) (19.4 inc		• / •	• / •
Overtemperature / battery deep discharge         ● / ●         ● / ●         ● / ●         ● / ●         General data         ● / ●         ● / ●         General data         467 / 612 / 235 mm (18.4 / 24.1 / 9.3 inch)         467 / 612 / 235 mm (18.4 / 24.1 / 9.3 inch)         18.4 / 24.1 / 9.3 inch)         63 kg / 139 lb         69 kg / 149 lb         64 lb		•	
Seneral data   Dimensions (W   H   D)		·	
Dimensions (W   H   D)	· · · · · · · · · · · · · · · · · · ·	• / •	• / •
(18.4 / 24.1 / 9.3 inch)   (18.4 / 24.1 / 9.3 inch)   (18.4 / 24.1 / 9.3 inch)   (3 kg / 139 lb			
Weight Operating temperature range Peratures / function Operation and display / multi-function relay Degree of protection (according to IEC 60529) Internal / 2 Degree of protection (according to IEC 60529) Internal / 2 Degree of protection (according to IEC 60529) Internal / 2 Degree of protection (according to IEC 60529) Internal / 2 Degree of protection (according to IEC 60529) Internal / 2 Degree of protection (according to IEC 60529) Integrated byposs / multicluster operation Integrated byposs / multicluster operation Integrated soft start / generator support Integrated byposs / generato	Dimensions (W / H / D)		
Operating temperature range  -25 °C+60 °C/-13 °F+122 °F  Features/ function  Operation and display / multi-function relay  Degree of protection (according to IEC 60529)  Internal / 2  Internal / 2  Internal / 2  Indoors (NEMA 1)  Intergrated bypass / multicluster operation  -/ •  State of charge calculation / full charge / equalization charge  Integrated shypass / multicluster operation  -/ •  State of charge calculation / full charge / equalization charge  Integrated shypass / multicluster operation  -/ •  State of charge calculation / full charge / equalization charge    • / •   • / •      • / •			
Peatures / function Operation and display / multifunction relay Degree of protection (according to IEC 60529) Interceptase systems / parallel connection Integrated bypass / multicluster operation State of charge calculation / full charge / equalization charge Integrated soft start / generator support State of charge calculation / full charge / equalization charge Integrated soft start / generator support State of charge calculation / full charge / equalization charge Integrated soft start / generator support State of charge calculation / full charge / equalization charge Integrated soft start / generator support State of charge calculation / full charge / equalization charge Integrated soft start / generator support States of the charge / equalization charge Integrated soft start / generator support Syears Syears Syears Syears Syears Syears Syears Syears Syears Seatlery cable / battery fuse O / O O O O O O O O O O O O O O O O O O	Weight	Ŭ.	ŭ.,
Operation and display / multi-function relay Degree of protection (according to IEC 60529) Internal / 2 Internal / 2 Indoors (NEMA 1) Internephase systems / parallel connection    •   •   •   •	Operating temperature range	-25 °C +60 °C / -13 °F +122 °F	-25 °C +60 °C / -13 °F +122 °F
Degree of protection (according to IEC 60529)  Inthree-phase systems / parallel connection    • / •   •   •    Integrated bypass / purificults operation   -/ •   -/ •	Features / function		
Three phase systems / parallel connection Integrated bypass / multicluster operation Integrated bypass / multicluster operation Integrated soft start / generator support Integrated soft start / generator / gene	Operation and display / multi-function relay	Internal / 2	Internal / 2
Three phase systems / parallel connection Integrated bypass / multicluster operation Integrated bypass / multicluster operation Integrated soft start / generator support Integrated soft start / generator / gene	Degree of protection (according to IEC 60529)	indoors (NEMA 1)	indoors (NEMA 1)
Integrated bypass / multicluster operation  -/• State of charge calculation / full charge / equalization charge    /•/•   •   • /•	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
State of charge calculation / full charge / equalization charge	· · · · · · · · · · · · · · · · · · ·	·	
Integrated soft start / generator support Battery temperature sensor / data cable  / •	• /	·	·
Batlery temperature sensor / data cable  Warranty  5 years  5 years  5 years  Certificates and approvals  Accessories  Batlery cable / battery fuse Batlery cable / battery fuse Contended generator start "GenMan"  Condodshedding protection / battery current measurement  O/O  Standard feature Optional feature Optional feature Not available  Type designation  Octobr/> Acc  Octobr/> SI4548-US-10  SI6048-US-10			· ·
Warranty  5 years  5 years  5 years  Certificates and approvals  Accessories  Battery coble / battery fuse  Interface (RS 485 / Multicluster PB)  Extended generator staft "GenMan"  O O O O O O O  Standard feature O Optional feature - Not available  Type designation  S14548-US-10  S16048-US-10		·	
Certificates and approvals  Accessories  Battery cable / battery fuse Interface (RS 485 / Multicluster PB) Interface (RS 4	, ,		
Accessories Bottery cable / battery fuse O/O Interface (RS 485 / Multiculster PB) O/O Extended generator start "GenMan" O Cload-shedding protection / battery current measurement O/O Standard feature O Optional feature O Optional feature O Type designation  SI4548-US-10  SI6048-US-10	·	·	
Battery cable / battery fuse  O / O  Interface (RS 485 / Multicluster PB)  O / O  Extended generator start "GenMan"  O O  Standard feature O Optional feature – Not available  Type designation  O O  SI4548-US-10  SI6048-US-10	• •	www.SMA-Solar.com	www.SMA-Solar.com
Interface (RS 485 / Multicluster PB)  O / O  Extended generator start "GenMan"  O O O O O O O  O Standard feature O Optional feature O Optional feature O Optional feature O Contact of the standard feature O Optional feature O Contact of the standard feature O Optional feature O			
Extended generator start "GenMan"  O O O O O O O O O O O O O O O O O O O	Battery cable / battery fuse	0/0	0/0
Load-shedding protection / battery current measurement  O / O  Standard feature O Optional feature - Not available Type designation  SI4548-US-10  SI6048-US-10  DC - AC	Interface (RS 485 / Multicluster PB)	0/0	0/0
Standard feature O Optional feature - Not available Type designation  SI4548-US-10  SI6048-US-10	Extended generator start "GenMan"	0	0
Standard feature O Optional feature - Not available Type designation  SI4548-US-10  SI6048-US-10	Load-shedding protection / battery current measurement	0/0	0/0
Type designation  SI4548-US-10  SI6048-US-10			
- DC - AC		SI4548-US-10	SI6048-US-10
	Type dosignation	01.10.10.00.10	0.00 .0 00 .0
Three-phase system  Split-phase system	— DC — AC	- DC - AC	
	Three-phase system	Split-phas	se system
			_