S1 Series

Single Phase Hybrid Inverter
(HV)

KEY FEATURES

OUTSTANDING PERFORMANCE

- **50V** extra low start-up voltage
- **210~330%** DC input oversizing
- **MAX. 6.6kW** charge / discharge power

SUPERB OFF-GRID LOAD

- Whole-home back up
- Rated output power **6kW/6kVA**
- Peak output power **8400VA**

FLEXIBLE APPLICATIONS

- **MAX. 16A** PV Input Current
- **< 10ms** off-grid switching

FRIENDLY DESIGN

- Die-casting design, fanless design, low noise
- Support AFCI
- Remote troubleshooting and program upgrading

INTELLIGENT MULTIPLE OPERATING MODES AVAILABLE

- Self-generated, zero power feeder, VPP, battery-free, battery-free & gridless

SOLAS
ENERGY FOR ALL

S1 Series

Single Phase Hybrid Inverter (HV)

Technical data

Type Designation	SiH-3kW-SH	SiH-3.6kW-SH	SiH-4kW-SH	SiH-5kW-SH	SiH-6kW-SH
Input (PV)					
Recommend max. PV input power	10000 Wp	10700 Wp	11000 Wp	12000 Wp	13000 Wp
Max. PV input voltage	600V	600V	600V	600V	600V
Min. operating PV voltage	40V	40V	40V	40V	40V
Start-up input voltage	50V	50V	50V	50V	50V
Rated PVinput voltage	360V	360V	360V	360V	360V
No. of independent MPPT inputs	2	2	2	2	2
Default No. of PV strings per MPPT	1	1	1	1	1
Max. PV input current	16A	16A	16A	16A	16A
Max. DC short-circuit current	20A	20A	20A	20A	20A
Input/Output (AC)					
Max. AC input power from grid	10700 VA	10700 VA	11000 VA	12000 VA	13000 VA
Rated AC output power	3680 W	3680 W	4000 W	5000 W	6000 W
Max. AC output power	3680 VA	3680 VA	4000 VA	5000 VA	6000 VA
Rated AC output current(at 230V)	16 A	16 A	17.4 A	21.8 A	26.1 A
Max. AC output current	16 A	16 A	18.2 A	22.8 A	27.3 A
Rated AC voltage	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V
AC voltage range	154V~276V	154V~276V	154V~276V	154V~276V	154V~276V
Rated grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Grid freguency range	45~55Hz/55~65Hz	45~55Hz/55~65Hz	45~55Hz/55~65Hz	45~55Hz/55~65Hz	45~55Hz/55~65Hz
Harmonic (THD)	<3%	<3%	<3%	<3%	<3%
Power factor at rated power	>0.99	>0.99	>0.99	>0.99	>0.99
Adjustable power factor	adj.0.8.overexcited/leading to 0.8 underexcited/lagging	adj.0.8.overexcited/leading to 0.8 underexcited/lagging	adj.0.8.overexcited/leading to 0.8 underexcited/lagging	adj.0.8.overexcited/leading to 0.8 underexcited/lagging	adj.0.8.overexcited/leading to 0.8 underexcited/lagging
Grid Type	Single phase	Single phase	Single phase	Single phase	Single phase
Efficiency					
Max. efficiency	97.30%	97.50%	97.30%	97.30%	97.30%
European efficiency	97.00%	97.00%	97.00%	97.00%	97.00%
Protection&Function					
Grid monitoring	Yes	Yes	Yes	Yes	Yes
DCreverse polarity protection	Yes	Yes	Yes	Yes	Yes
AC short circuit protection	Yes	Yes	Yes	Yes	Yes
Leakage current protection	Yes	Yes	Yes	Yes	Yes
Surge Protection	DC type II /AC type II	DC type II /AC type II	DC type II /AC type II	DC type II /AC type II	DC type II /AC type II
DC switch (PV)	Yes	Yes	Yes	Yes	Yes
DC fuse (battery)	Yes	Yes	Yes	Yes	Yes
Battery input reverse polarity protection	Yes	Yes	Yes	Yes	Yes
Battery Data					
Battery Type	Li-ion battery	Li-ion battery	Li-ion battery	Li-ion battery	Li-ion battery
Battery voltage	80~460V	80~460V	80~460V	80~460V	80~460V
Max. charge current	30 A	30 A	30 A	30 A	30 A
Max. discharge current	30 A	30 A	30 A	30 A	30 A
Max. charge power	6600 W	6600 W	6600 W	6600 W	6600 W
Max. discharge power	6600 W	6600 W	6600 W	6600 W	6600 W
General Data					
Dimensions (W*H*D)	500*350*180mm	500*350*180mm	500*350*180mm	500*350*180mm	500*350*180mm
Weight	≤20kg	≤20kg	≤20kg	≤20kg	≤20kg
Mounting method	Wall-mounting bracket	Wall-mounting bracket	Wall-mounting bracket	Wall-mounting bracket	Wall-mounting bracket
Topology (Solar/Battery)	Transformerless/Transformerless	Transformerless/Transformerless	Transformerless/Transformerless	Transformerless/Transformerless	Transformerless/Transformerless
Degree of protection	IP65	IP65	IP65	IP65	IP65
Operating ambient temperature range	-25°C~60°C	-25°C~60°C	-25°C~60°C	-25°C~60°C	-25°C~60°C
Allowable relative humidity range	0~100%	0~100%	0~100%	0~100%	0~100%
Cooling method	Natural convection	Natural convection	Natural convection	Natural convection	Natural convection
Max. operating altitude	4000m	4000m	4000m	4000m	4000m
Display	LED indicator	LED indicator	LED indicator	LED indicator	LED indicator
Communication	RS485/CAN/WLAN	RS485/CAN/WLAN	RS485/CAN/WLAN	RS485/CAN/WLAN	RS485/CAN/WLAN
DI/DO	DIx1/DOx1/DRM	DIx1/DOx1/DRM	DIx1/DOx1/DRM	DIx1/DOx1/DRM	DIx1/DOx1/DRM
DC connection type	MC4	MC4	MC4	MC4	MC4
Battery connection type	MC4	MC4	MC4	MC4	MC4
AC connection type	Screws & Fasteners	Screws & Fasteners	Screws & Fasteners	Screws & Fasteners	Screws & Fasteners
Backup Data (on-grid)					
Rated output power for backup load	6000 W	6000 W	6000 W	6000 W	6000 W
Rated output current for backup load	27A	27A	27A	27A	27A
Backup Data (off-grid model)					
Rated voltage	220V/230V/240V (±2%)	220V/230V/240V (±2%)	220V/230V/240V (±2%)	220V/230V/240V (±2%)	220V/230V/240V (±2%)
Frequency range	50Hz/60Hz(±0.5%)	50Hz/60Hz(±0.5%)	50Hz/60Hz(±0.5%)	50Hz/60Hz(±0.5%)	50Hz/60Hz(±0.5%)
Total output THDV for liner load	≤2%	≤2%	≤2%	≤2%	≤2%
Switch time to emergency mode	≤10 ms	≤10 ms	≤10 ms	≤10 ms	≤10 ms
Rated output power	3000 W/3000 VA	3680 W/3680 VA	4000 W/4000 VA	5000 W/5000 VA	6000 W/6000 VA
Peak output power	8400 VA,10s	8400 VA,10s	8400 VA,10s	8400 VA,10s	8400 VA,10s