

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

FLEXIBLE APPLICATIONS

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

INTELLIGENT MULTIPLE OPERATING MODES AVAILABLE

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

SUPERB OFF-GRID LOAD

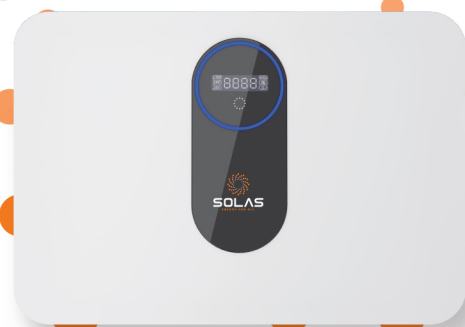
- Whole-home back up
- Rated output power **6kW/6kVA**
- Peak output power **8400VA**

FRIENDLY DESIGN

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

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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 frequency 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 Single phase | adj.0.8.overexcited/leading to 0.8 underexcited/lagging Single phase | adj.0.8.overexcited/leading to 0.8 underexcited/lagging Single phase | adj.0.8.overexcited/leading to 0.8 underexcited/lagging Single phase | adj.0.8.overexcited/leading to 0.8 underexcited/lagging Single phase |
| Grid Type | 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 |