



S1 Series

Three Phase Hybrid Inverter
(5-10) KW



KEY FEATURES

OUTSTANDING PERFORMANCE

- **180V** extra low start-up voltage
- Max. Efficiency **98.4%**
- **MAX. 10.6kW** charge / discharge power
- Three-phase asymmetrical output under **100%** unbalanced loads

FLEXIBLE APPLICATION

- **150%** DC input oversizing
- **MAX. 48A** 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 backup
- Rated output power **10kW/10kVA**
- Peak output power **12000VA**

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-5kW-TH | SiH-6kW-TH | SiH-8kW-TH | SiH-10kW-TH |
|---|---|-------------------------------------|-------------------------------------|-------------------------------------|
| Input (DC) | | | | |
| Recommend max. PV input power | 7500 Wp | 9000 Wp | 12000 Wp | 15000 Wp |
| Max. PV input voltage | 1000V | 1000V | 1000V | 1000V |
| Start-up input voltage | 180V | 250V | 250V | 250V |
| Rated PV input voltage | 600V | 600V | 600V | 600V |
| MPPT voltage range | 150-950V | 200-950V | 200-950V | 200-950V |
| No. of independent MPPT inputs | 2 | 2 | 2 | 2 |
| Default No. of PV strings per MPPT | 1\1 | 1\1 | 1\1 | 1\2 |
| Max. input current | 32A(16A/16A) | 32A(16A/16A) | 32A(16A/16A) | 48A(16A/32A) |
| Max. input short-circuit current | 40A(20A/20A) | 40A(20A/20A) | 40A(20A/20A) | 60A(20A/40A) |
| Input/Output (AC) | | | | |
| Max. AC input power from grid | 12500 VA | 15000 VA | 18600 VA | 20600 VA |
| Rated AC output power | 5000 W | 6000 W | 8000 W | 10000 W |
| Max. AC output power | 5500 VA | 6600 VA | 8800 VA | 11000 VA |
| Rated AC output current | 7.6A | 9.1A | 12.1A | 15.2A |
| Max. AC output current | 8.4A | 10A | 13.3A | 16.7A |
| Rated AC voltage | 3/N/PE 220V/380V 230V/400V 240V/415V | | | |
| AC voltage range | 270V-480V | | | |
| Rated grid frequency | 50Hz/60Hz | | | |
| Grid frequency range | 45~55Hz/55~65Hz | | | |
| Harmonic(THD) at rated burden | < 3% | | | |
| Power factor at rated power | > 0.99 | | | |
| Adjustable power factor | adj.0.8.Overexcited/leading to 0.8 underexcited/lagging | | | |
| Grid Typer | Three-phase | | | |
| Efficiency | | | | |
| Max. efficiency | 98.00% | 98.20% | 98.40% | 98.40% |
| European efficiency | 97.20% | 97.50% | 97.90% | 97.90% |
| Protection&Function | | | | |
| LVRT | Yes | Yes | Yes | Yes |
| Grid monitoring | Yes | Yes | Yes | Yes |
| DC reverse polarity protection | Yes | Yes | Yes | Yes |
| AC short circuit protection | Yes | Yes | Yes | Yes |
| Leakage current protection | 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 switch (PV) | Yes | Yes | Yes | Yes |
| DC fuse (battery) | Yes | Yes | Yes | Yes |
| Battery input reverse polarity protection | Yes | Yes | Yes | Yes |
| Battery Data | | | | |
| Battery Type | Li-ion battery | | | |
| Battery voltage | 150-600V | | | |
| Max. charge current | 30 A | | | |
| Max. discharge current | 30 A | | | |
| Max. charge power | 7500 W | 9000 W | 10600 W | 10600 W |
| Max. discharge power | 6000 W | 7200 W | 10600 W | 10600 W |
| General Data | | | | |
| Dimensions(W*H*D) | 450*550*185mm | | | |
| Weight | 31kg | | | |
| Mounting method | Wall-mounting bracket | Wall-mounting bracket | Wall-mounting bracket | Wall-mounting bracket |
| Topology(Solar/Battery) | Transformerless/Transformerless | Transformerless/Transformerless | Transformerless/Transformerless | Transformerless/Transformerless |
| Degree of protection | IP65 | IP65 | IP65 | IP65 |
| Operating ambient temperature range | -25°C~60°C, No derating below 45 °C | -25°C~60°C, No derating below 45 °C | -25°C~60°C, No derating below 45 °C | -25°C~60°C, No derating below 45 °C |
| Allowable relative humidity range | 0~100% | 0~100% | 0~100% | 0~100% |
| Cooling method | Natural convection | Natural convection | Natural convection | Natural convection |
| Max. operating altitude | 4000m | 4000m | 4000m | 4000m |
| Display | LED | LED | LED | LED |
| Communication | RS485/CAN/WLAN | RS485/CAN/WLAN | RS485/CAN/WLAN | RS485/CAN/WLAN |
| DI/DO | D1x1/DOx1/DRM | D1x1/DOx1/DRM | D1x1/DOx1/DRM | D1x1/DOx1/DRM |
| DC connection type | MC4 | MC4 | MC4 | MC4 |
| Battery connection type | MC4 | MC4 | MC4 | MC4 |
| AC connection type | Plug and play connector | Plug and play connector | Plug and play connector | Plug and play connector |
| Backup Data(off-grid mode) | | | | |
| Rated voltage | 3 / N / PE, 220 Vac / 230 Vac / 240 Vac (±2%) | | | |
| Frequency range | 50Hz/60Hz(±0.5%) | | | |
| Total output THDV for liner load | ≤2% | | | |
| Switch time to emergency mode | ≤10 ms | | | |
| Rated output power | 5000 W /5000 VA | 6000 W /6000 VA | 8000 W /8000 VA | 10000 W /10000 VA |
| Peak output power | 6000VA 5min/10000 VA,10s | 7200VA 5min/10000 VA,10s | 9600 VA,5min | 12000 VA,5min |