

H1 Series

Three Phase Hybrid Inverter
(15-30) kW



KEY FEATURES

OUTSTANDING PERFORMANCE

- **Max. 50A** battery charging and discharging design
- **200%** DC input overmatching
- Three-phase asymmetrical output under **100%** unbalanced loads

FLEXIBLE APPLICATION

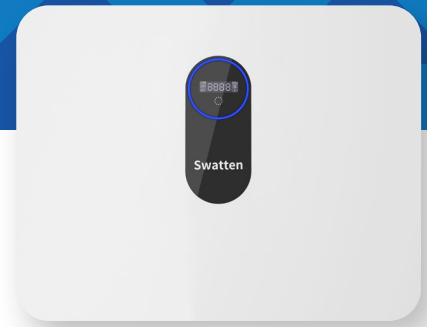
- Support multi-parallel connection
- Support single-phase power output mode
- **100~700V** wide battery voltage range

SUPERB OFF-GRID LOAD

- Whole-home backup
- Support half-wave load and shock load
- **< 10ms** off-grid switching

FRIENDLY DESIGN

- **< 37KG**, lighter installation
- Die-casting design, fanless design, low noise
- Support AFCI
- Remote troubleshooting and program upgrading



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Technical data

Type Designation	SiH-15kW-TH	SiH-20kW-TH	SiH-22kW-TH	SiH-25kW-TH	SiH-30kW-TH
Input (PV)					
Recommended max. PV input power	30000 W	40000 W	44000 W	50000 W	60000 W
Max. PV input voltage	1000 V	1000 V	1000 V	1000 V	1000 V
Min. PV input voltage / Startup input voltage	150 V / 180 V	150 V / 180 V	150 V / 180 V	150 V / 180 V	150 V / 180 V
Rated PV input voltage	650 V	650 V	650 V	650 V	650 V
MPPT voltage range	150 V - 800 V	150 V - 800 V	150 V - 800 V	150 V - 800 V	150 V - 800 V
No. of independent MPPT inputs	3	3	3	3	3
No. of PV strings per MPPT	2/1/1	2/2/1	2/2/1	2/2/1	2/2/2
Max. PV input current	64A (32A / 16A / 16 A)	80A (32A/32A/16A)	80A (32A/32A/16A)	80A (32A/32A/16A)	96A (32A/32A/32A)
Max. DC short-circuit current	80A (40A / 20A / 20A)	100A (40A/40A/20A)	100A (40A/40A/20A)	100A (40A/40A/20A)	120A (40A/40A/40A)
Battery					
Battery type	Li-ion battery	Li-ion battery	Li-ion battery	Li-ion battery	Li-ion battery
Battery voltage	100 V - 700 V	100 V - 700 V	100 V - 700 V	100 V - 700 V	100 V - 700 V
Max. charge / discharge current	50 A * / 50 A	50 A * / 50 A	50 A * / 50 A	50 A * / 50 A	50 A * / 50 A
Max. charge / discharge power	30000 W / 15000 W	30000 W / 20000 W	30000 W / 22000 W	30000 W / 25000 W	30000 W / 30000 W
Input / Output (AC)					
Max. AC input power	15000 W	20000 W	22000 W	25000 W	30000 W
Max. AC power from grid	30000 W / 30000 VA	40000 W / 40000 VA	44000 W / 44000 VA	50000 W / 50000 VA	60000 W / 60000 VA
Rated AC output power	15000 W	20000 W	22000 W	25000 W	30000 W
Max. AC output apparent power	15000 VA	20000 VA	22000 VA	25000 VA	30000 VA
Rated AC output apparent power	15000 VA	20000 VA	22000 VA	25000 VA	30000 VA
Rated AC output current	21.8 A	29 A	31.9 A	36.3 A	43.5A
Max. AC output current	22.8 A	30.4 A	33.4 A	37.9 A	45.5 A
Rated AC voltage	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V
AC voltage range	270 V - 480 V	270 V - 480 V	270 V - 480 V	270 V - 480 V	270 V - 480 V
Rated grid frequency	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz
Grid frequency range	45 Hz - 55 Hz / 55 Hz - 65 Hz	45 Hz - 55 Hz / 55 Hz - 65 Hz	45 Hz - 55 Hz / 55 Hz - 65 Hz	45 Hz - 55 Hz / 55 Hz - 65 Hz	45 Hz - 55 Hz / 55 Hz - 65 Hz
Harmonic (THD)	< 3% (of rated power)	< 3% (of rated power)	< 3% (of rated power)	< 3% (of rated power)	< 3% (of rated power)
Power factor at Rated power / Adjustable power factor	> 0.99 / 0.8 leading to 0.8 lagging	> 0.99 / 0.8 leading to 0.8 lagging	> 0.99 / 0.8 leading to 0.8 lagging	> 0.99 / 0.8 leading to 0.8 lagging	> 0.99 / 0.8 leading to 0.8 lagging
Feed-in phases/connection phases	3 / 3-N-PE	3 / 3-N-PE	3 / 3-N-PE	3 / 3-N-PE	3 / 3-N-PE
Backup Data					
Rated voltage	3 / 3-N-PE	3 / 3-N-PE	3 / 3-N-PE	3 / 3-N-PE	3 / 3-N-PE
Frequency range	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
Total harmonic factor output voltage(Linear load)	2%	2%	2%	2%	2%
Back-up switching time	< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms
Rated output power	15000 W / 15000 VA	20000 W / 20000 VA	22000 W / 22000 VA	25000 W / 25000 VA	30000 W / 30000 VA
Peak output power**	26000 W/26000 VA 10s	32000 W/32000 VA 10s	37000 W/37000 VA 10s	37000 W/37000 VA 10s	42000 W/42000 VA10s
Rated output power for backup load during on grid mode	30000 W / 30000 VA (25°C)	30000 W / 30000 VA (25°C)	40000 W / 40000 VA (25°C)	40000 W / 40000 VA (25°C)	40000 W / 40000 VA (25°C)
Efficiency					
Max. efficiency / European efficiency	98.1 % / 97.7 %	98.1 % / 97.7 %	98.2 % / 97.8 %	98.2 % / 97.8 %	98.3 % / 97.9 %
Protection & Function					
Grid monitoring	Yes	Yes	Yes	Yes	Yes
DC reverse polarity protection	Yes	Yes	Yes	Yes	Yes
AC short-circuit protection	Yes	Yes	Yes	Yes	Yes
Leakage current protection	Yes	Yes	Yes	Yes	Yes
DC switch (solar)	Yes	Yes	Yes	Yes	Yes
Surge Protection	DC Type II / AC Type III	DC Type II / AC Type III	DC Type II / AC Type III	DC Type II / AC Type III	DC Type II / AC Type III
PID recovery function	Yes	Yes	Yes	Yes	Yes
On-grid parallel	Master-slave mode	Master-slave mode	Master-slave mode	Master-slave mode	Master-slave mode
Battery input reverse polarity protection	Yes	Yes	Yes	Yes	Yes
General Data					
Topology (solar / battery)	Transformerless / Transformerless				
Degree of protection	IP65	IP65	IP65	IP65	IP65
Dimensions (W * H * D)	620 *480 *240 mm	620 *480 *240 mm	620 *480 *240 mm	620 *480 *240 mm	620 *480 *240 mm
Weight	34 kg	34 kg	36 kg	36 kg	37 kg
Mounting method	Wall-mounting bracket	Wall-mounting bracket	Wall-mounting bracket	Wall-mounting bracket	Wall-mounting bracket
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 (Non-condensing)	0 % - 100 %	0 % - 100 %	0 % - 100 %	0 % - 100 %	0 % - 100 %
Cooling method	Natural convection	Natural convection	Fan cooling	Fan cooling	Fan cooling
Max. operating altitude	2000 m	2000 m	2000 m	2000 m	2000 m
Noise(Typical)	35 dB (A)	35 dB (A)	50 dB (A)	50 dB (A)	50 dB (A)
Display	LED	LED	LED	LED	LED
Communication	RS485, WLAN, 2 x CAN, 1 x DI, 1 x DO, DRM				
DC connection type	MC4 (PV)	MC4 (PV)	MC4 (PV)	MC4 (PV)	MC4 (PV)
AC connection type	OT Terminals	OT Terminals	OT Terminals	OT Terminals	OT Terminals
Compliance	IEC / EN 62109, IEC / EN 61000-6, EN 62477-1, IEC 61727, IEC62920, EN55011, CISPR 11, TBD				
Country of manufacture	China	China	China	China	China

* Depending on the connected battery

** Can be reached only if PV and battery power is sufficient