

# H1 Series

Three Phase Hybrid Inverter (15-30) kW



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## Technical data

Type Designation	SiH-15kW-TH	SiH-20kW-TH	SiH-22kW-TH	SiH-25kW-TH	SiH-30kW-TH
<b>Input (PV)</b>					
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	180 V				
Rated PV input voltage	650 V				
MPPT voltage range	150 V- 950 V				
No. of independent MPPT inputs	3				
No. of PV strings per MPPT	2/1/1		2/2/1		2/2/2
Max. PV input current	64A (32A / 16A / 16 A)		80A (32A/32A/16A)		96A (32A/32A/32A)
Max. DC short-circuit current	80A ( 40A / 20A /20A)		100A (40A/40A/20A)		120A (40A/40A/40A)
<b>Battery</b>					
Battery type	Li-ion battery				
Battery voltage	100 V - 700 V				
Max. charge / discharge current	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
<b>Input / Output (AC)</b>					
Max. AC input power	15000 W	20000 W	22000 W	25000 W	30000 W
Max. AC power from grid	30000 W / 30000 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 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				
AC voltage range	270 V - 480 V				
Rated grid frequency	50 Hz / 60 Hz				
Grid frequency range	45 Hz - 55 Hz / 55 Hz - 65 Hz				
Harmonic (THD)	< 3% (of rated power)				
Power factor at Rated power / Adjustable power factor	> 0.99 / 0.8 leading to 0.8 lagging				
<b>Backup Data</b>					
Rated voltage	3 / N / PE, 220 Vac / 230 Vac / 240 Vac (±2%)				
Frequency range	50Hz / 60Hz				
Total harmonic factor output voltage(Linear load)	2%				
Back-up switching time	< 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**	22000 W/22000 VA 10s		36500 W / 36500 VA 10s		42000 W/42000 VA 10s
Rated output power for backup load during on grid mode	30000 W / 30000 VA		40000 W / 40000 VA		45000 W / 45000 VA
<b>Efficiency</b>					
Max. efficiency / European efficiency	98.3 % / 97.9 %	98.3 % / 97.9 %	98.3 % / 97.9 %	98.3 % / 97.9 %	98.3 % / 97.9 %
<b>Protection &amp; Function</b>					
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 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
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
<b>General Data</b>					
Topology (solar / battery)	Transformerless / Transformerless				
Degree of protection	IP65				
Dimensions (W * H * D)	615 *500 *245 mm				
Weight	34 kg	36 kg	36 kg	37 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				
Allowable relative humidity range (Non-condensing)	0 % - 100 %				
Cooling method	Natural convection		Fan cooling		
Max. operating altitude	2000 m		2000 m		2000 m
Noise(Typical)	35 dB ( A )		50 dB ( A )		
Display	LED		LED		
Communication	2 × RS485, WLAN, 2 × CAN, 4 × DI, 1 × 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, VDE4105 / EN50549 / TOR / CEI0-21				
Country of manufacture	China	China	China	China	China

\* Depending on the connected battery

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

## 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