

Three phase hybrid inverter 8kW to 12kW 3 MPPTs

Models:
AH-8KTH-G3
AH-10KTH-G3
AH-12KTH-G3



Easy-to-install

- Contact connectors for reliable tool-free DC connection
- Compact wall mount design
- Simple battery and smart meter interfaces for faster installation
- Compatible with high-voltage batteries from leading suppliers



Reliable

- Up to 150% PV array oversizing for higher yields
- 100% unbalanced three-phase AC output
- AohaiShade - improved generation under non-ideal conditions
- UPS level switching time < 10 ms
- IP66 rated design for outdoor use



User-friendly

- Setup, commissioning and monitoring via the HaiSolar app
- Intelligent work modes and customisable battery management for DOD / Time of Use / Power setting
- Max. 16A input current, ideal for bifacial and large PV modules

Technical Datasheet

	AH-8KTH-G3	AH-10KTH-G3	AH-12KTH-G3
PV input			
Max. PV array power	12000 Wp	15000 Wp	18000 Wp
Max. input voltage	1100 V		
MPP voltage range / rated input voltage	200 V to 950 V / 600 V		
Min. input voltage / start voltage	60 V / 180 V		
No. of independent MPPT trackers / strings per MPPT input	3 / 1		
Max. input current per MPP tracker	16 A		
Max. short-circuit current per MPP tracker	24 A		
AC output			
AC voltage range / nominal AC voltage	270 V to 480 V / 3/N/PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
Rated AC grid frequency	50 Hz / 60 Hz		
AC grid frequency range	45 ~ 55 Hz / 55 ~ 65 Hz		
Rated apparent power	8000 VA	10000 VA	12000 VA
Max. apparent power	8000 VA	10000 VA	12000 VA
Rated grid output current (@400 V)	11.6 A	14.5 A	17.4 A
Max. grid output current (@400 V)	12.8 A	16.0 A	19.2 A
Harmonics THDi (@Nominal power)	< 3% (of nominal power)		
AC input			
Rated grid voltage	3/N/PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
Rated grid frequency	50 Hz / 60 Hz		
Max. input power from grid	16000 W	20000 W	24000 W
Max. input current from grid	23.2 A	29.0 A	34.8 A
Battery input			
Battery voltage range	120 V to 600 V		
Max. charging / discharging power	8000 W	10000 W	12000 W
Max. charging current / Max. discharging current	36 A		
Rated charging current / Rated discharging current	30 A		
Battery type	LiFePO4		
EPS output			
Nominal output voltage	3/N/PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
Nominal output frequency	50 Hz / 60 Hz		
Rated apparent power	8000 VA	10000 VA	12000 VA
Peak output apparent power	2 times of rated power, 10 s		
Rated Current (@400 V)	11.6 A	14.5 A	17.4 A
Max. switch time	< 10 ms		
Output THDv (@Linear load)	2%		
Efficiency			
MPPT efficiency	99.9%		
Euro efficiency / Max. efficiency	97.2% / 98.0%	97.9% / 98.4%	
Safety protection			
DC surge protection (Type II, according to EN/IEC 61643-11)	●		
Insulation resistance detection	●		
PV string input reverse polarity protection	●		
Battery input reverse polarity protection	●		
Ground fault monitoring	●		
Residual current monitoring unit	●		
AC short circuit protection	●		
Anti-islanding protection	●		
General data			
Power factor at rated power / adjustable displacement	1 / 0.8 leading to 0.8 lagging		
Dimensions (W / H / D)	545 mm / 465 mm / 205 mm		
Weight	26 kg		
Operating temperature range	-25 °C ... +60 °C		
Cooling concept	Natural convection		
Degree of protection (as per IEC 60529)	IP66		
Max. relative humidity	100%		
Max. operating altitude	4000 m		
Features			
User interface	LED & App		
BMS interface	CAN		
Smart meter interface	RS485		
Internet communication interfaces	Wifi / LAN / 4G		
Digital output (dry contact) / No. of outputs	● / 2		
Digital input (dry contact) / No. of inputs	● / 4		
Integrated power control / export power control	● / ●		

● standard features ○ optional features - not available
Version: Mar 2023