Three-phase Residential Hybrid Inverter



X3-HYB G4 PRO

4kW / 5kW / 6kW / 8kW
10kW / 12kW / 15kW

Smart Management

- V2X ready for smart home energy integration①
- Smart Schedule, Smart Scene, and 7*24h ToU
- Wireless meter compatibility
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)①

Assured Reliability

- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms
- Optional Rapid Shutdown function for enhanced safety
- Type II SPD on AC&DC side
- Optional AFCI protection

High Performance

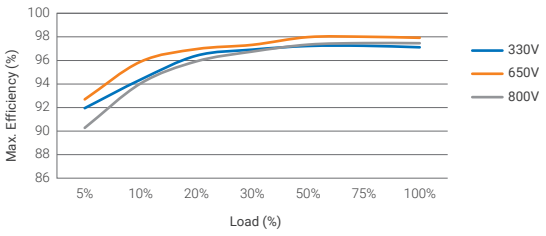
- 20A DC input per MPPT with 3 trackers
- 200% PV oversizing and up to 110% AC output
- Ultra-wide MPPT range of 110-950V

Flexible Adaptability

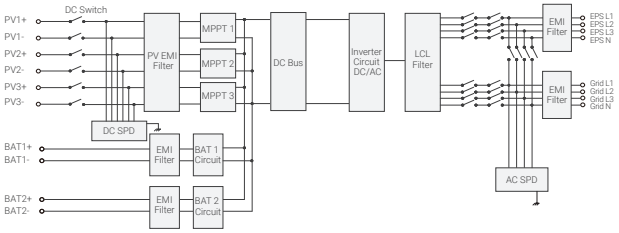
- Dual battery ports & 2-in-1 function for expansion
- Additional ports for simplified wiring and installation
- Functional and stylish wiring cover
- Microgrid and generator modes for versatile operations

① *Feature to be upgraded in the future*

Efficiency Curve (15kW)



Circuit Diagram



*V2.7 Information may be subject to modify without notice. 650.00082.00

	X3-HYB-4.0-P	X3-HYB-5.0-P	X3-HYB-6.0-P	X3-HYB-8.0-P	X3-HYB-10.0-P	X3-HYB-12.0-P	X3-HYB-15.0-P
PV INPUT							
Max. recommended PV array power	8 kWp	10 kWp	12 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 d.c. V						
Rated PV input voltage	650 d.c. V						
Operating voltage range	110 - 950 d.c. V						
Start-up voltage	120 d.c.V						
No. of MPP trackers / Strings per MPP tracker	2 (1 / 1)			3 (1 / 1 / 1)			
Max. input current per MPPT	20 / 20 d.c. A			20 / 20 /20 d.c. A			
Max. input short circuit current per MPPT	25 / 25 d.c. A			25 / 25 / 25 d.c. A			
AC INPUT & OUTPUT (ON-GRID)							
Rated output apparent power	4000 W	5000 W (AS 4777 4999 W)	6000 W	8000 W	10000 W (AS 4777 9999 W)	12000 W	15000 W (AS 4777 14999 W)
Rated output current	5.8 A	7.2 A	8.7 A	11.6 A	14.5 A	17.5 A	21.8 A
Max. output apparent power	4400 VA	5500 VA (AS 4777 4999 VA)	6600 VA	8800 VA	11000 VA (AS 4777 9999 VA)	13200 VA	16500 VA (AS 4777 14999 VA)
Max. output continuous current	6.7 A	8.4A	10A	13.4 A	16.7 A	20.0 A	25.0 A
Rated AC voltage	3W / N / PE, 220 / 380 a.c. V 3W / N / PE, 230 / 400 a.c. V						
Max. AC input apparent power	8.4 kVA	10.5 kVA	12.6 kVA	16.8 kVA	21.0 kVA		
Max. AC input current	32 a.c. A						
Rated AC Frequency	50 / 60 Hz						
AC frequency range②	50 ± 5 / 60 ± 5 Hz						
Adjustable power factor range	1 (- 0.8 ~ 0.8)						
BATTERY							
Battery type	Lithium						
Battery voltage range ③④	120 ~ 800 d.c. V						
Max. charge / discharge current⑤	50 d.c. A (25 × 2) / 30 d.c. A (single port)						
EPS (OFF-GRID) OUTPUT (WITH BATTERY)							
Rated EPS apparent power	4 kVA	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 time of rated power, 10s						
Rated EPS output voltage, frequency	230 / 400 a.c. V, 50 / 60 Hz						
Switchover time	< 10 ms						
EFFICIENCY							
Max. efficiency	98.0%						
European Efficiency	97.7%						
ENVIRONMENT LIMIT							
Ingress protection	IP66						
Operating temperature range	-35 ~ 60°C (> 45°C derating)						
Max. operating altitude	3000 m						
Relative humidity	0 ~ 100% RH (condensing)						
Overvoltage category	Mains: III, Battery: II, PV: II						
GENERAL							
Demensions(W x H x D)	560 × 503 × 210 mm						
Net weight	38 kg						
Cooling concept	Natural cooling					Smart air cooling	
Communication interfaces	RS485, CAN, DRM, DI/DO						
Power consumption (night)	< 5 W						
Topology	Non-isolated						
Cetifications	IEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012, VDE-AR-N 4105, G98, G99, AS4777, EN50549, CEI 0-21						
PROTECTION							
Protections	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Residual current detection, Over temperature protection, AC overcurrent protection, AC short-circuit protection						
Surge protection	DC: Type II, AC: Type II						
Arc-fault circuit interrupter (AFCI)	Optional						

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter ② The AC frequency range may vary from different country codes ③ Compatible with a minimum of 3 units of HS Series batteries, but if the total volage of the 3 batteries is less than 127V and there is no PV input, the system will not able to startup ④ When the voltage is below 180V, the inverter will limit the battery current to less than 20A ⑤ If each of the two battery ports is connected to a separate battery, it's 25A per port. If one port is connected to a single battery, it's 30A. If both ports are connected to a single battery using a 2-in-1 splitter cable(sold separately), it's 50A