Three-phase Residential Hybrid Inverter



X3-HYB-G4 PRO

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

Smart Management

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

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

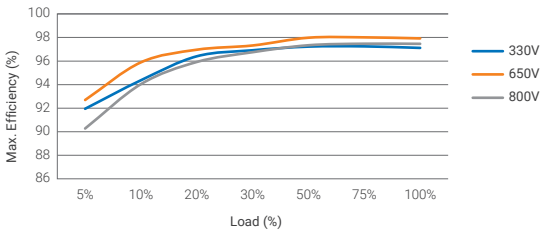
- 20A DC input per MPPT with 3 trackers
- 200% PV oversizing and up to 110% AC output
- Ultra-wide MPPT range of 110-950V

Flexible Adaptability

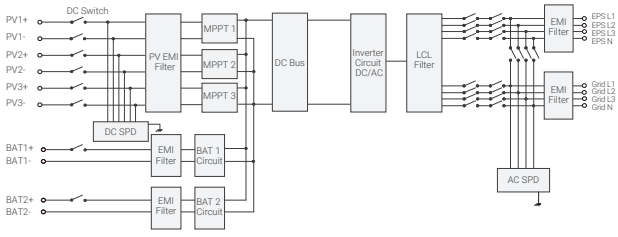
- Dual battery ports & 2-in-1 function for expansion
- Additional ports for simplified wiring and installation
- Functional and stylish wiring cover
- Microgrid and generator modes for versatile operations

** Feature to be upgraded in the future*

Efficiency Curve (15kW)



Circuit Diagram



**V2.4.1 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 V						
Nominal PV input voltage	650 V						
Operating voltage range	110 ~ 950 V						
MPPT voltage range②	110 ~ 950 V						
Start-up voltage	120 V						
No. of MPP trackers / Strings per MPP tracker	2 (1 / 1)			3 (1 / 1 / 1)			
Max. input current per MPPT (MPPT1/2/3)	20 A / 20 A			20 A / 20 A / 20 A			
Max. input short circuit current per MPPT (MPPT1/2/3)	25 A / 25 A			25 A / 25 A / 25 A			
AC INPUT & OUTPUT (ON-GRID)							
Rated output 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	6.7A	8.4 A	10.0 A	13.4 A	20.0 A	25.0 A
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 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	12.2 A	15.2 A	18.2 A	24.3 A	30.4 A		
Nominal AC frequency	50 Hz / 60 Hz						
AC frequency range③	50 ± 5 Hz / 60 ± 5 Hz						
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)						
THDi (Rated power)	< 3%						
BATTERY							
Battery type	Lithium						
Battery voltage range	120 ~ 800 V						
Max. charge / discharge current④	50 A (25 A × 2)						
EPS (OFF-GRID) OUTPUT (WITH BATTERY)							
Rated EPS output voltage, frequency	400 V / 230 V, 50 Hz / 60 Hz						
Rated EPS output power	4 kVA	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10 s						
Switchover time	< 10 ms						
EFFICIENCY							
Max. efficiency	98.0%						
European efficiency	97.7%						
ENVIRONMENT LIMIT							
Ingress protection	IP66						
Operating ambient temperature range⑤	-35 ~ 60°C						
Max. operating altitude	3000 m						
Relative humidity	0 ~ 100% RH (condensing)						
Overvoltage Category	Mains: III, Battery: II, PV: II						
GENERAL							
Dimensions (W × H × D)	560 × 503 × 210 mm						
Net weight	38 kg						
Cooling concept	Nature cooling				Smart cooling		
Communication interfaces	COM1 (Parallel 1, Parallel 2, BMS 1, BMS 2, RS485, Meter / CT); COM2 (DI/DO, EVC, DATAHUB, DRM, V2X, Heatpump)						
Power consumption (night)	< 40 W for standy, < 5 W for idle						
Topology	Non-isolated						
Certificates and approvals	IEC62109-1 / IEC62109-2, VDE 0126-1-1 A1:2012, VDE-AR-N 4105, G98, G99, AS4777, EN50549, CEI 0-21						
AC auxiliary power supply (APS)	Built-in						
PROTECTION							
Protection	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						
Active anti-islanding method	Frequency shift						
Surge protection (DC / AC)	DC: Type II, AC: Type II						
Arc-fault circuit interrupter (AFCI)	Optional						

①The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter ②Input voltage exceeding the MPPT voltage range may trigger inverter protection ③The AC frequency range may vary from different country codes ④If 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 ⑤Derating above +45°C