



# Three-phase Residential Hybrid Inverter



## X3-HYBRID G4

5.0kW / 6.0kW / 8.0kW / 10.0kW /  
12.0kW / 15.0kW



### Smart Management

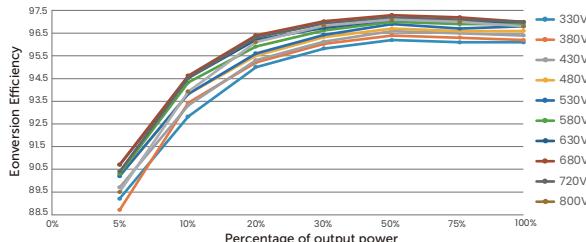
- VPP ready, ancillary service in power market
- Global MPP scan for optimal energy harvest
- Smart loads management(e.g. heat pump, smart EV charger)
- Intelligent ToU-driven energy management



### High Performance

- 200% PV oversizing and up to 110% AC output
- Up to 97.5% efficiency in charging and discharging
- Up to 200% PV input
- Three-phase unbalanced output: Max. 5kW per phase

### Efficiency Curve



### Assured Reliability

- Up to 200% EPS overload output for 10 seconds\*
- UPS-level switchover time <10ms
- IP65 Ingress protection
- Type II SPD on AC&DC side

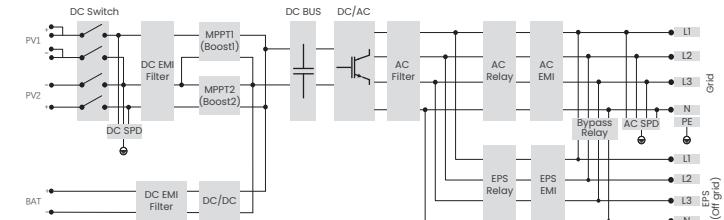


### Flexible Adaptability

- Lithium & Lead-acid battery compatible
- On-grid and off-grid parallel function, up to 150kW
- Max. 28A input per MPPT, optimized for high-power solar panels.
- Quick configuration via U-disk

\*Overload capabilities vary by model. Please refer to the specification page for detailed information

### Circuit Diagram



PV INPUT									
Max. recommended PV array power	10 kWp	12 kWp	16 kWp	20 kWp	24 kWp	30 kWp			
Max. PV input voltage <sup>①</sup>				1000 V					
Rated PV input voltage				640 V					
MPPT voltage range <sup>②</sup>				180 ~ 950 V					
Start-up voltage				200 V					
No. of MPP trackers / strings per MPP tracker	2 (1 / 1)		2 (2 / 1)						
Max. input current per MPPT <sup>③</sup>	16 A / 16 A		28 A / 16 A						
Max. input short circuit current per MPPT	20 A / 20 A		35 A / 20 A						
AC INPUT & OUTPUT (ON-GRID)									
Rated output power	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW			
Rated output current	7.2 A	8.7 A	11.6 A	14.5 A	17.5 A	21.8 A			
Max. output apparent power	5.5 kVA	6.6 kVA	8.8 kVA	11.0 kVA	13.2 kVA	15.0 kVA			
Max. output continuous current	8.1 A	9.7 A	12.9 A	16.1 A	19.3 A	24.1 A			
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V								
Max. AC input apparent power	10 kVA	12 kVA	16 kVA	20 kVA	20 kVA	20 kVA			
Max. AC input current	16.1 A	19.3 A	25.8 A	32.0 A	32.0 A	32.0 A			
Rated AC frequency	50 Hz / 60 Hz								
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)								
THDi (rated power)	< 3%								
BATTERY									
Battery type	Lithium / Lead-acid								
Battery voltage range <sup>④</sup>	120 ~ 800 V								
Max. charge / discharge current	30 A								
EPS (OFF-GRID) OUTPUT (WITH BATTERY)									
Rated EPS output voltage, frequency	230 V / 400 V, 50 Hz / 60 Hz								
Rated EPS output power	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA			
Peak EPS output power	12.0 kVA, 10 s	12.0 kVA, 10 s	18.0 kVA, 10 s	18.0 kVA, 10 s	22.5 kVA, 10 s	22.5 kVA, 10 s			
Switchover time	< 10 ms								
EFFICIENCY									
Max. efficiency	98.0%								
European efficiency	97.7%								
ENVIRONMENT LIMIT									
Ingress protection	IP65								
Operation temperature range	-35 ~ 60°C (> 45°C derating)								
Max. operation altitude	3000 m								
Relative humidity	4 ~ 100% RH (condensing)								
Overvoltage category	Mains: III, Battery: II, PV: II								
GENERAL									
Dimensions (W x H x D)	503 x 503 x 199 mm								
Net weight	30 ± 1 kg								
Cooling concept	Natural cooling			Smart air cooling					
Communication interfaces	CT / Meter (optional), External control RS485, Pocket WiFi (Optional: Pocket LAN/4G), DRM, NTC (optional)								
Power consumption (night)	< 40 W for standby, < 5 W for idle								
Topology	Non-isolated								
Certifications	EN/IEC62109-1/-2, VDE4105, G99, G98, AS4777, EN50549, CEI 0-21, IEC61727, PEA/MEA, NRS-097-2-1, RD1699, TOR								
PROTECTION									
Protections	DC reverse-polarity protection, DC isolation protection, Residual current detection, AC overcurrent protection, AC short-circuit protection, Over / under voltage protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Over temperature protection								
Active anti-islanding method	Frequency shift								
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 Input voltage exceeding the MPPT voltage range may trigger inverter protection

③ When PV1 is connected to 2 strings, the maximum input current is 28A; when PV1 is connected to 1 string, the maximum input current is 20A

④ Compatible with a minimum of 3 units of HS25/HS36 batteries, but if the total voltage of the 3 batteries is less than 127V and there is no PV input, the system will not able to startup