

Three-Phase Hybrid Inverter



X3-ULTRA-GLV

10kW/15kW



High Performance

- 200% PV oversizing
- 200% EPS overload for 10s
- Max. 60A charging / discharging current
- Low start-up voltage for longer operation



Assured Reliability

- Battery terminal temperature detection
- IP66 protection degree
- Type II SPD on AC&DC side
- Optional AFCI protection*



Smart Management

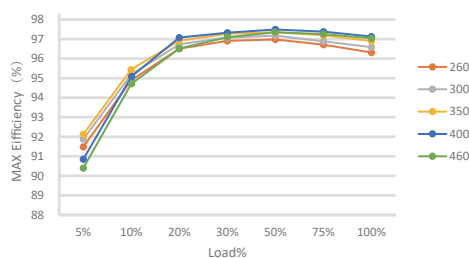
- Single unit UPS-level switchover time <10ms
- Built-in shadow tracking
- Smart loads management(eg., heat pump, smart EV charger)
- Loads respond time within 0.3 s



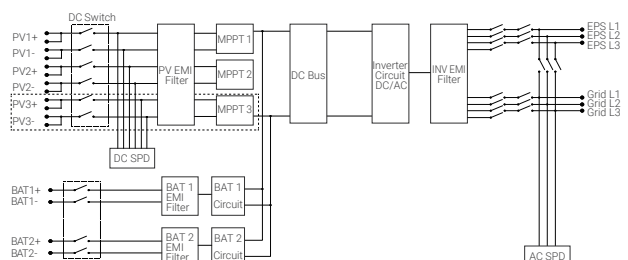
Flexible Adaptability

- Max. 10pcs parallel for on-grid and off-grid*
- Microgrid and generator function for versatile operations
- Max. 36A PV input per MPPT, optimized for high-power solar panel
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)*

Efficiency Curve



Circuit Diagram



X3-ULT-10K-GLV
X3-ULT-15K-GLV

PV INPUT		
Max. recommended PV array power	20000 Wp	30000 Wp
Max. PV input voltage ^①	600 V	
Nominal PV input voltage	360 V	
Operating voltage range	120 ~ 600 V	
MPPT voltage range ^②	160 ~ 560 V	
Start output voltage	200 V	
No. of MPP trackers / Strings per MPP tracker	2 (2 / 2)	3 (2 / 2 / 2)
Max. input current per MPPT(MPPT1/2/3)	36 A / 36 A	36 A / 36 A / 36 A
Max. input short circuit current per MPPT(MPPT1/2/3)	45 A / 45 A	45 A / 45 A / 45 A
AC INPUT & OUTPUT (ON-GRID)		
Rated output power	9999 VA	15000 VA
Rated output current	25.2 A	37.7A
Max. output apparent power	9999 VA	15000 VA
Max. output continuous current	25.2 A	37.7A
Nominal AC voltage	3P3W,220V/127V,230V/133V	
Max. AC input apparent power	10000 VA	15000 VA
Max. AC input current	25.2 A	37.7A
Nominal 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-ion	
Battery voltage range	120 ~ 550 V	
Max. charge / discharge current	60 (30 * 2) A	
EPS (OFF-GRID) OUTPUT (WITH BATTERY)		
Rated EPS output voltage, frequency	230 V / 133 V, 50 Hz / 60 Hz	
Rated EPS output power	10000VA	15000VA
Peak EPS output power	2 times of rated power, 10s	
Switchover time	< 10 ms	
EFFICIENCY		
Max. efficiency	98.0%	
European efficiency	97.7%	
Night power consumption	< 5 W	
ENVIRONMENT LIMIT		
Ingress protection	IP66	
Operating ambient temperature range ^③	-35 ~ 60°C	
Max. operating altitude	3000 m	
Relative humidity	0 ~ 100% RH (condensing)	
Overvoltage Category	Mains: III, PV: II	
GENERAL		
Dimensions (W × H × D)	696 × 526 × 240 mm	
Net weight	47 kg	
Cooling concept	Smart cooling	
Communication interfaces	Meter (RS-485), DI x 2, DO x 1, Modbus (RS485)	
Power consumption (night)	< 5 W	
Topology	Transformerless	
Certificates and approvals	VDE4105 / G99 / AS4777 / EN50549/ CEI 0-21 / IEC61727/PEA/MEA/NRS-097-2-1/RD1699/TOR	
PROTECTION		
Protections	Over / Under voltage protection, DC reverse-polarity protection, Residual current detection, Over temperature protection, DC isolation protection, Grid monitoring, DC injection monitoring, Back feed current monitoring	
Active anti-islanding method	Frequency shift	
Surge protection (DC / AC)	DC: Type II, AC: Type II	
Arc-fault circuit interrupter (AFCI)	Built-in	
AC auxiliary power supply (APS)	Built-in	

①The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter

②Input voltage exceeding the MPPT voltage range may triggers inverter protection

③Derating above +45°C