

Single-phase Low-voltage Residential Hybrid Inverter



X1-Lite-LV

8kW / 10kW / 12kW



Smart Management

- Smart loads management
- Single unit UPS-level switchover time < 8ms
- Global MPP scan for optimal energy harvest*



Assured Reliability

- Battery terminal temperature detection
- IP65 protection degree
- Type II SPD on AC&DC side
- Optional AFCI protection*



High Performance

- 200% PV oversizing and up to 110% AC output
- 200% peak EPS power for 10s*
- Max. 250A charging / discharging current
- Low start-up voltage for longer operation



Flexible Adaptability

- Max. 3pcs parallel for on-grid and off-grid*
- Microgrid and generator function for versatile operations
- Max. 32A input per MPPT, optimized for high-power solar panels.

* Feature to be upgraded in the future

X1-Lite-8.0-LV
X1-Lite-10.0-LV
X1-Lite-12.0-LV

PV INPUT			
Max. recommended PV array power	16 kWp	20 kWp	24 kWp
Max. PV input voltage ^①	600 V		
Nominal PV input voltage	360 V		
Operating voltage range	50 ~ 550 V		
MPPT voltage range ^②	50 ~ 550 V		
Start-up voltage	110 V		
No. of MPP trackers / Strings per MPP tracker	2 / (2 / 2)	3 / (2 / 2 / 2)	
Max. input current per MPPT(MPPT1/2/3)	32 A / 32 A	32 A / 32 A / 32 A	
Max. input short circuit current per MPPT(MPPT1/2/3)	40 A / 40 A	40 A / 40 A / 40 A	
AC INPUT & OUTPUT (ON-GRID)			
Rated output power	8000 W	10000 W	12000 W
Rated output current	34.8 A	43.5 A	52.2 A
Max. output apparent power	8800 W	11000 W	13200 W
Max. output continuous current	40 A	50 A	60 A
Nominal AC voltage	1 / N / PE, 220 / 230 / 240 V		
Max. AC input apparent power	12650 VA	14950 VA	18400 VA
Max. AC input current	55 A	65 A	80 A
Nominal AC frequency	50 Hz / 60 Hz		
AC frequency range ^③	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 / Lead - acid		
Battery voltage range	40 ~ 60 V		
Max. charge / discharge current	190 A	220 A	250 A
EPS (OFF-GRID) OUTPUT (WITH BATTERY)			
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz		
Rated EPS output power	8 kVA	10 kVA	12 kVA
Peak EPS output power	2 times of rated power, 10 s		
Switchover time	< 8 ms		
EFFICIENCY			
Max. efficiency	97.6%		
European efficiency	97.0%		
ENVIRONMENT LIMIT			
Ingress protection	IP65		
Operating ambient temperature range	-25 ~ 60°C		
Max. operating altitude	3000 m		
Relative humidity	4 ~ 100% RH (condensing)		
Overvoltage Category	Mains: III, Battery: II, PV: II		
GENERAL			
Dimensions (W × H × D)	462 × 651 × 280 mm		
Net weight	38.5 kg		
Cooling concept	Smart cooling		
Communication interfaces	LED + LCD / CAN, RS485, CT, Meter, NTC, WiFi+LAN		
Power consumption (night)	< 20 W		
Topology	Non-isolated		
Certificates and approvals	IEC/EN 62109-1/-2, NRS 097-2-1, IEC 61727, IEC 62116, PEA, MEA, BIS		
PROTECTION			
Protection	Over / under voltage protection, DC isolation protection, DC reverse-polarity protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Over temperature protection		
Active anti-islanding method	Frequency shift		
Surge protection (DC / AC)	DC: Type II, AC: Type II		

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 The AC frequency range may vary from different country codes