



# Single-phase Low-voltage Residential Hybrid Inverter



## X1-Lite-LV

8kW / 10kW / 12kW



### Smart Management

- Global MPP scan for optimal energy harvest<sup>①</sup>
- Smart loads management



### Assured Reliability

- Battery terminal temperature detection
- IP65 ingress protection
- Type II SPD on AC&DC side
- AFCI protection (optional)<sup>①</sup>
- Up to 200% EPS output for 10s
- Single unit UPS-level switchover time < 6 ms



### High Performance

- Max. 3 MPPTs for versatile application scenarios
- 200% oversizing and 200% PV input power
- Max. 32A PV input per MPPT
- Low start-up voltage for higher energy harvest



### Flexible Adaptability

- Max. 3pcs parallel for on-grid and off-grid
- Micro-grid and generator function for versatile operations<sup>①</sup>

**X1-Lite-8K-LV**
**X1-Lite-10K-LV**
**X1-Lite-12K-LV**

PV INPUT			
Max. recommended PV array power	16000 Wp	20000 Wp	24000 Wp
Max. PV input voltage <sup>②</sup>	600 V		
Rated PV input voltage	360 V		
Operating voltage range	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	32 A / 32 A	32 A / 32 A / 32 A	
Max. input short circuit current per MPPT	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 @ 230 V	43.5 A @ 230 V	52.2 A @ 230 V
Max. output apparent power	8800 VA	11000 VA	13200 VA
Max. output continuous current	38.3 A @ 230 V	47.9 A @ 230 V	57.4 A @ 230 V
Rated AC voltage	220 / 230 / 240 V		
Max. AC input apparent power	12650 VA	14950 VA	18400 VA
Max. AC input current	55 A @ 230 V	65 A @ 230 V	80 A @ 230 V
Max. continuous AC passthrough (grid to load)	75 A	80 A	90 A
Rated AC frequency	50 Hz / 60 Hz		
AC frequency range <sup>③</sup>	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	LFP / Lead - acid		
Battery voltage range	40 ~ 60 V		
Max. charge / discharge current	190 A / 190 A	220 A / 220 A	250 A / 250 A
EPS (OFF-GRID) OUTPUT (WITH BATTERY)			
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz		
Rated EPS output power	8000 VA	10000 VA	12000 VA
Peak EPS output power	16000 VA 2 times of rated power, 10s	20000 VA 2 times of rated power, 10s	24000 VA 2 times of rated power, 10s
Switchover time	< 6 ms		
EFFICIENCY			
Max. efficiency	97.6%		
European efficiency	97.0%		
ENVIRONMENT LIMIT			
Ingress protection	IP65		
Operating temperature range	-25 ~ 60°C (> 45°C derating)		
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 air cooling		
Communication interfaces	RS485, CAN, USB, DI/DO		
Display	LCD		
Topology	Non-isolated for PV side / HF for battery side		
Certifications	IEC/EN 62109-1/-2, NRS 097-2-1, IEC 61727, IEC 62116, PEA, MEA, BIS		
PROTECTION			
Protections	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		
Arc-fault circuit interrupter (AFCI)	Optional		

① Feature to be upgraded in the future

② The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter

③ The AC frequency range may vary from different country codes