Three-phase Low-voltage Residential Hybrid Inverter

X3-NEO-LV

5kW / 8kW / 10kW
12kW / 15kW

Smart Management

- Single unit UPS-level switchover time <3 ms
- Dedicated load interface for intelligent load management
- 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 10 s
- Max. 300A 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. 36A DC input per MPPT, optimized for high-power solar panel

** Feature to be upgraded in the future*

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V1.5. Information may be subject to modify without notice. 650.00078.00

	X3-NEO-5K-LV	X3-NEO-8K-LV	X3-NEO-10K-LV	X3-NEO-12K-LV	X3-NEO-15K-LV
PV INPUT					
Max. recommended PV array power	10 kWp	16 kWp	20 kWp	24 kWp	30 kWp
Max. PV input voltage①	1000 V				
Nominal PV input voltage	640 V				
Operating voltage range	160 ~ 950 V				
MPPT voltage range②	160 ~ 950 V				
Start-up voltage	150 V				
No. of MPP trackers / Strings per MPP tracker	2 / (1 / 1)		2 / (2 / 1)	2 / (2 / 2)	
Max. input current per MPPT(MPPT1/2)	18 A / 18 A		36 A / 18 A	36 A / 36 A	
Max. input short circuit current per MPPT(MPPT1/2)	25 A / 25 A		50 A / 25 A	50 A / 50 A	
AC INPUT&OUTPUT (On-Grid)					
Rated output power	5 kW	8 kW	10 kW	12 kW	15 kW
Rated output current	7.3 A	11.6 A	14.5 A	15.3 A	17.4 A
Max. output apparent power	5.5 kVA	8.8 kVA	11 kVA	13.2 kVA	16.5 kVA
Max. output continuous current	8.4 A	13.4 A	16.8 A	20.0A	25.0 A
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V				
Max. AC input apparent power	10 kVA	16 kVA	20 kVA	24 kVA	30 kVA
Max. AC input current	15.2 A	24.3 A	30.4 A	36.4 A	45.5 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 / Lead - acid				
Battery voltage range	40 ~ 60 V				
Max. charge / discharge current	125 A	200 A	250 A	280 A	300 A
EPS (OFF-GRID) OUTPUT (WITH BATTERY)					
Rated EPS output power	5 kVA	8 kVA	10 kVA	12 kVA	15 kVA
Peak EPS output power	2 times of rated power, 10 s				
Switchover time	< 3 ms				
EFFICIENCY					
Max. efficiency	97.6%				
European efficiency	97.0%				
ENVIRONMENT LIMIT					
Ingress protection	IP65				
Operating ambient temperature range④	-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)	520 × 705 × 258 mm				
Net weight	44.6 kg				
Cooling concept	Smart cooling				
Communication interfaces	LED+LCD / CAN, RS485, CT, Meter, NTC, WiFi+LAN				
Power consumption (night)	< 15 W				
Topology	Non-isolated				
Certificates and approvals	EN IEC 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, Residual current detection, 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 di fferent country codes
④ Derating above +45°C