

Single-phase Residential Hybrid Inverter



X1-VAST

5kW / 6kW / 8kW / 10kW



Smart Management

- V2G/V2H ready for smart home energy integration*
- Smart Schedule, Smart Scene, and 7×24h TOU
- VPP ready with a variety of compatibility(OpenADR, IEEE2030.5, FCAS, API)*
- Wireless meter compatibility
- Support whole-home load without extra devices



High Performance

- 20A DC input per MPPT with 4 trackers
- 200% PV oversizing and high power capacity
- Low PV start-up voltage of 50V



Assured Reliability

- Up to 200% EPS output for 10s
- UPS-level switchover time <10ms
- Type II SPD on AC&DC side
- Optional AFCI protection*

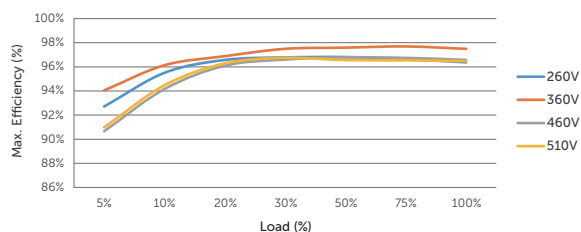


Flexible Adaptability

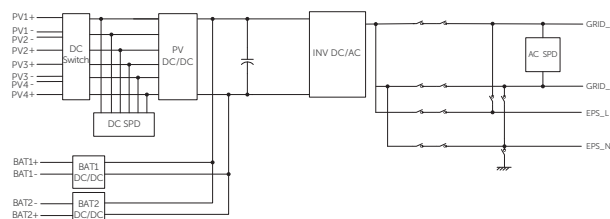
- Dual battery ports & 2-in-1 function for expansion
- Dedicated multi-device connections for streamlined cabling
- Functional and stylish wiring cover
- Microgrid and generator compatible for resilient off-grid solutions

* Feature to be upgraded in the future

Efficiency Curve



Circuit Diagram



X1-VAST-5K
X1-VAST-6K
X1-VAST-8K
X1-VAST-10K

PV INPUT				
Max. recommended PV array power	10 kWp	12 kWp	16 kWp	20 kWp
Max. PV input voltage ^①	600 V			
Nominal PV input voltage	360 V			
Operating voltage range	40 ~ 560 V			
MPPT voltage range ^②	40 ~ 560 V			
Start-up voltage	50 V			
No. of MPP trackers / Strings per MPP tracker	3 / (1 / 1 / 1)		4 / (1 / 1 / 1 / 1)	
Max. input current per MPPT(MPPT1/2/3)	20 A / 20 A / 20 A		20 A / 20 A / 20 A / 20 A	
Max. input short circuit current per MPPT(MPPT1/2/3)	25 A / 25 A / 25 A		25 A / 25 A / 25 A / 25 A	
AC INPUT & OUTPUT(ON-GRID)				
Rated output power	4999 W	6000 W	8000 W	9999 W
Rated output current	21.8 A	26.1 A	34.8 A	43.5 A
Max. output apparent power	4999 VA	6000 VA	8000 VA	9999 VA
Max. output continuous current	21.8 A	26.1 A	34.8 A	43.5 A
Max. AC input apparent power	14500 VA			
Max. AC input current	63 A			
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)			
THDi (rated power)	< 2%			
BATTERY				
Battery type	Lithium			
Battery voltage range	80 ~ 480 V			
Max. charge / discharge current ^③	50 A (25 A × 2)			
EPS (OFF-GRID) OUTPUT (WITH BATTERY)				
Rated EPS output voltage, frequency	230 V, 50 Hz / 60 Hz			
Rated EPS output power	5000 VA (4999 VA for Australia)	6000 VA	8000 VA	10000 VA (9999 VA for Australia)
Peak EPS output power	2 times of rated power, 10 s			
Switchover time	< 10 ms			
EFFICIENCY				
Max. efficiency	97.6%			
ENVIRONMENT LIMIT				
Ingress protection	IP66			
Operating ambient temperature range ^④	-35 ~ 60℃			
Max. operating altitude	3000 m			
Relative humidity	4 ~ 100% RH (condensing)			
GENERAL				
Dimensions (W × H × D)	590 × 400 × 180 mm			
Net weight	28 ± 2 kg			
Cooling concept	Nature cooling			
Communication interfaces	CT/Meter (optional), External control RS485, Dongle interfce , DRM			
Topology	Transformerless			
Certificates and approvals	EN / IEC62109 -1 / -2, AS / NZS 4777, G99, EN 50549-10, BR140, IEC61727, IEC 61683, RD1699, NRS 097-2 -1, PEA / MEA, VFR2019			
PROTECTION				
Protections	DC isolation protection, DC reverse-polarity protection, Residual current detection, 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 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 If each of the two battery ports is connected to a separate battery, it's 25A per port. If one port is connected to a single battery, it's 30A. If both ports are connected to a single battery using a 2-in-1 splitter cable(sold separately), it's 50A.

④ Derating above +45°C