Single-Phase Hybrid Inverter

X1-VAST

5kW / 6kW / 8kW / 10kW

Flexible Expansion

- Dual battery ports and 2-in-1 function for effortless expansion
- Additional ports for simplified wiring and installation
- Functional and stylish wiring cover
- Microgrid and generator modes for versatile operations

Smart Energy

- V2G/V2H ready for smart home energy integration
- Intuitive management with Smart Schedule, Scene, and TOU
- VPP ready, supporting FCAS, 2030.5, and OpenADR.
- Wireless meter compatible for convenient setup

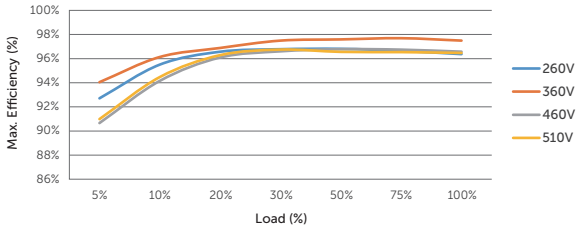
Safe and Reliable

- 10s 200% EPS output with ≤10ms UPS level switch time
- Support whole-home load without extra devices required
- SPD-II protection on both DC/AC, AFCI optional

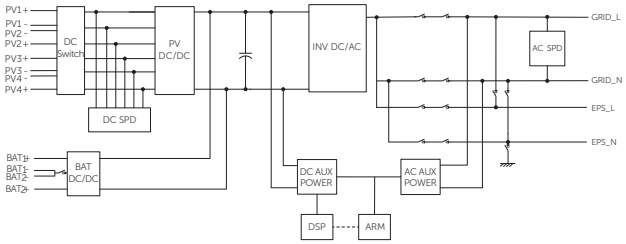
Economically Efficient

- 20A DC input per MPPT with 4 trackers
- 200% PV oversizing and Power Input Capacity
- Low PV Start-Up voltage of 40V

Efficiency Curve



Circuit Diagram



	X1-VAST-5K	X1-VAST-6K	X1-VAST-8K	X1-VAST-10K
INPUT PV				
Max. PV input power [Wp]①	10000	12000	16000	20000
Max. DC voltage [V]	600			
Norminal DC operating voltage [V]	360			
Max. input current (per MPPT) [A]	20 / 20 / 20		20 / 20 / 20 / 20	
Max. short-circuit current (per MPPT) [A]	25 / 25 / 25		25 / 25 / 25 / 25	
MPPT operating voltage range [V]②	40 - 560			
Start output voltage [V]	50			
No. of MPP trackers / Strings per MPP tracker	3 / 1		4 / 1	
OUTPUT / INPUT AC				
Rated grid voltage (AC voltage range) [V]	220 / 230 / 240			
Rated grid frequency [Hz]	50 / 60			
Norminal AC outpout power[W]	4999	6000	8000	9999
Max. apparent AC output power [VA]	4999	6000	8000	9999
Max. AC output current [A]	21.8	26.1	34.8	43.5
Max. apparent AC input power [VA]	14500			
Max. AC input current [A]	63			
Displacement power factor	0.8 leading to 0.8 lagging			
Total harmonic distortion (THDi, rated power) [%]	< 2			
EPS (OFF-GRID OR BACK-UP) OUTPUT				
Off-grid Nominal voltage [V]; Frequency [Hz]	230; 50 / 60			
Off-grid rated power [VA]	5000	6000	8000	10000
Off-grid rated current [A]	21.8	26.1	34.8	43.5
Off-grid peak power	2 times of Off-grid rated power, 10s			
Total harmonic distortion (THDv, linear load) [%]	< 2			
Switch time [ms]	< 6			
BATTERY				
Battery voltage range [V]	80 - 480			
Max.charge / discharge current [A]	50 (25 / 25)			
V2G / V2H				
Operating voltage range [V]	300 - 400			
Operating current [A]	30			
Communication interface	CAN			
EFFICIENCY				
Max. MPPT efficiency [%]	99.9			
Max. efficiency [%]	97.6			
Max. Battery charge/discharge efficiency [%]	97.0			
PROTECTION				
Anti-Islanding protection	Yes			
DC reverse polarity protection	Yes			
Insulation monitoring	Yes			
Residual current monitoring	Yes			
AC overcurrent protection	Yes			
AC short-circuit protection	Yes			
AC overvoltage protection	Yes			
Over-heat protection	Yes			
Surge protection	Type II, DC and AC			
Battery reverse charging from grid	Yes			
AFCI	Optional			
GENERAL DATA				
IP class	IP66			
Operating temperature range [°C]	-35 ~ +60 (derate @ 45°C)			
Humidity [%]	4 ~ 100 (condensing)			
Altitude [m]	< 3000			
Typical Noise emission [dB]	< 35			
Cooling concept	Nature convection			
Topology	Transformerless			
Communication	CT, Meter (optional), External control RS485, Pocket WiFi + LAN (Optional: Pocket Wifi 3.0/Pocket Wifi 4G), DRM, USB Upgrade			
Dimensions (W × H × D) [mm]	590 × 400 × 180			
Net weight [kg]	28 ± 2			
STANDARD				
Safety	EN / IEC62109 -1 / -2			
EMC	EN61000-6 -1 / 2 / 3 / 4; EN61000-3 -2 / 3 / 11 / 12			
Certification	AS / NZS 4777, G99, EN 50549-10, BR140, IEC61727,IEC 61683, RD1699, NRS 097-2 -1, PEA / MEA, VFR2019			

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 operating voltage range may triggers inverter protection

**V1.0. Information may be subject to modify without notice.*