

Three-phase Hybrid Inverter



X3-AELIO

36 kW / 37.5 kW / 60kW



Flexible Configuration

- Parallel operation: supports up to 10 parallel systems*.
- Battery options: three battery choices available.
- PV oversizing: supports up to 200% PV oversizing.
- Integrated hardware design, compatible with multiple voltages



Safe and Reliable

- Three-Phase unbalance: Inverter supports 100% three-phase unbalance.
- Long-Term overload: inverter supports 110% long-term overload.
- Seamless switching: inverter supports 10ms on-grid/off-grid switching.



Intelligent and Convenient

- Remote monitoring: supports web/app remote data viewing and remote OTA updates.
- Versatile operating modes: supports various operating modes to meet different application scenarios such as self-consumption, peak shaving, and demand management.
- Generator control: work seamlessly with generator to save fuel and back up.

*Only applicable to AELIO 60kW.

X3-AELIO-36K		X3-AELIO-37.5K		X3-AELIO-60K	
PV INPUT					
Max. recommended PV array power	72kWp	75kWp	120kWp		
Max. PV input voltage ^①	700V	700V	1000V		
Rated PV input voltage	400V	400V	650V		
MPPT voltage range ^②	160-650V	160-650V	160-950V		
Start-up voltage	180 V				
No. of MPP trackers / Strings per MPP tracker	6/2				
Max. input current per MPPT	40 A				
Max. input short circuit current per MPPT	50 A				
AC INPUT & OUTPUT (ON-GRID)					
Rated output power	36kW	37.5kW	60 kW		
Rated output current	100A@120/208	98.5A@127/220 94.7A@132/230	91.0A@220/380 87.0A@230/400		
Max. output apparent power	36kVA	37.5kVA	66kVA		
Max. output continuous current	100A@120/208	98.5A@127/220 94.7A@132/230	100.0A@220/380 95.7A@230/400		
Rated AC voltage	3/N/PE,120V/208V	3/N/PE,127V/220V,132V/230V	3/N/PE,220V/380V,230V/400V		
Rated 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	LFP				
Battery voltage range	160-460V	160-460V	180-820V		
Max. charge / discharge current	160 A (80 A × 2)				
EPS (OFF-GRID) OUTPUT					
Rated EPS output voltage, frequency	3/N/PE,120V/208V,50 Hz/60 Hz	3/N/PE,127V/220V,132V/230V,50 Hz/60 Hz	3/N/PE,220V/380V,230V/400V,50 Hz/60 Hz		
Rated EPS output power	36kW	37.5kW	60kW		
Max EPS output power	36kVA,long term	37.5kVA,long term	90kVA,10s		
Switchover time	< 10 ms				
EFFICIENCY					
Max. efficiency	98.0%				
European efficiency	97.2%				
ENVIRONMENT LIMIT					
Ingress protection	IP66				
Operating temperature range	-35 ~ 60°C (derating +45°C)				
Max. operating altitude	3000 m				
Relative humidity	0 ~ 100% RH (condensing)				
Overvoltage category	Mains: III, Battery: II, PV: II				
GENERAL					
Dimensions (W × H × D)	670 × 820× 257 mm				
Net weight	< 105 kg				
Cooling concept	Smart air cooling				
Communication interfaces	RS485-Meter, RS485-Monitor, RS485-Parallel(daisy-chain), CAN-BMS, CAN-Parallel(daisy-chain), USB, DI×2, DO×1, RCR(DI×4), DRM				
Topology	Non-isolated				
Certificates and approvals	CE,VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC 61727, PEA/MEA, NRS-097-2-1, RD1699, TOR,Inmetro				
PROTECTION					
Over / under voltage protection	Yes				
DC isolation protection	Yes				
DC reverse-polarity protection	Yes				
Grid monitoring	Yes				
DC injection monitoring	Yes				
Back feed current monitoring	Yes				
Residual current detection	Yes				
Over temperature protection	Yes				
Active anti-islanding method	Frequency shift				
Surge protection (DC / AC)	DDC: Type II, AC: Type II				
Arc-fault circuit interrupter (AFCI)	Yes				
AC auxiliary power supply (APS)	Built-in				

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter
②Input voltage exceeding the MPPT voltage range may triggers inverter protection
③The AC frequency range may vary from different country codes

*Manufactured in China