

Three-phase C&I On-grid Inverter



X3-FORTH

75kW / 80kW / 100kW / 110kW
120kW / 125kW / 136kW / 150kW



High Efficiency

- Up to 99% efficiency
- 32A per MPP tracker
- 180~1000Vdc MPPT voltage range
- 150% PV oversizing, 110% overloading output
- Max. 12 MPPTs, 2 strings per MPP tracker



Assured Safety

- IP66 protection degree
- AFCI support (optional)
- AC terminal temperature detection
- String current monitoring
- 24 hours operation monitoring
- Type II SPD on AC&DC side



Intelligent Design

- Night-time reactive power compensation
- Smart air cooling enhances fan longevity
- Heat dissipation reduces system weight & size by over 5%
- I-V curve diagnosis



Flexible Adaptability

- Built-in export power control function
- Remote setting and upgrading
- Aluminium AC cable connection available

PV INPUT								
Max. recommended PV array power	120 kWp	120 kWp	150 kWp	165 kWp	180 kWp	188 kWp	204 kWp	225 kWp
Max. PV input voltage ^①	1100 V							
Nominal PV input voltage ^②	580 V / 600 V	580 V / 600 V	580 V / 600 V	580 V / 600 V	580 V / 600 V	580 V / 600 V	730 V / 785 V	730 V / 785 V
Operating voltage range	200 ~ 1000 V							
MPPT voltage range ^③	180 ~ 1000 V							
Start-up voltage	200 V							
No. of MPP trackers / Strings per MPP tracker	9 / 2	9 / 2	9 / 2 12 / 2 ^④	9 / 2 12 / 2 ^④	12 / 2	12 / 2	12 / 2	12 / 2
Max. input current per MPPT	32 A							
Max. input short circuit current per MPPT	46 A							
AC OUTPUT								
Rated output power	75 kW	80kW	100kW	110kW	120kW	125kW	136kW	150kW
Rated output current ^②	113.7A/108.7A	121.3A/116A	151.6A/145A	166.7A/159.5A	181.9A/174A	189.4A/181.2A	157.1 A/145.4A	173.2A/160.4A
Max. output apparent power	75 kVA	88kVA	110kVA	121 kVA	132kVA	132kVA	149.6kVA	165kVA
Max. output continuous current ^②	113.7A/108.7A	133.4A/127.6A	166.7A/159.5A	183.4A/175.4A	200A/191.3A	200A/191.3A	172.8A/160A	190.6A/176.5A
Nominal AC voltage	3 / (N) / PE, 220 / 380 V 3 / (N) / PE, 230 / 400 V						3 / PE, 500 / 540 V	
Nominal AC frequency	50 Hz / 60 Hz							
AC frequency range ^⑤	50 ± 5 Hz / 60 ± 5 Hz							
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)							
THDi (rated power)	< 3%							
EFFICIENCY								
Max. efficiency	98.6%						99.0%	
European efficiency	98.3%						98.5%	
ENVIRONMENT LIMIT								
Ingress protection	IP66							
Operating ambient temperature range	-25 ~ 60°C							
Max. operating altitude	4000 m							
Relative humidity	0 ~ 100% RH							
Overvoltage Category	Mains: III, PV: II							
GENERAL								
Dimensions (W × H × D)	985 × 660 × 327.5 mm							
Net weight	83 kg				87 kg			
Cooling concept	Smart cooling							
Communication interfaces	RS485, DRM							
Power consumption (night)	< 10 W							
Topology	Non-isolated							
Certificates and approvals	IEC/EN 62109-1, IEC/EN 62109-2, NB/T 32004, EN 50549, AS4777.2, VDE4105, IEC 61727, IEC 62116, IEC 61683, IEC 60068, EN 50530							
AC auxiliary power supply (APS)	Build-in							
PROTECTION								
Protections	Over / under voltage protection, DC reverse-polarity protection, DC isolation protection, Grid monitoring, DC injection monitoring, Back feed current monitoring, Residual current detection, Over temperature protection, String fault detection, AC overcurrent protection, AC short-circuit protection							
Active anti-islanding method	Frequency shift							
Surge protection (DC / AC)	DC: Type II, AC: Type II							
Arc-fault circuit interrupter (AFCI)	Optional							
Anti-PID	External							

① The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage the inverter

② The two data refer to different grid voltage 220V/230V (75~125kW models) or 500V/540V (136~150kW models)

③ Input voltage exceeding the MPPT voltage range may trigger inverter protection

④ 9/12MPPTs is optional for 100kW and 110kW models

⑤ The AC frequency range may vary from different country codes