

Three-phase C&I On-grid Inverter



X3-GRAND HV

300kW / 320kW / 333kW / 350kW



High Efficiency

- Up to 99.03% efficiency
- 500~1500Vdc MPPT range
- Max. 75A DC input per MPPT, optimized for high-power solar panel



Assured Safety

- 24 hours monitoring
- AFCI support (optional)
- IP66 protection degree
- Effective Anti-PID Protection*
- Optional Type I+II SPD on DC side & Type II SPD on AC side



Intelligent Design

- IV curve scan
- AC terminal temperature detection
- Night-time SVG voltage regulation support



Flexible Adaptability

- 6 MPPTs, 5 strings per MPPT for precise power
- Power line communication (PLC) (Optional)*

* Feature to be upgraded in the future

X3-GRD-300K-HV
X3-GRD-320K-HV
X3-GRD-333K-HV
X3-GRD-350K-HV

PV INPUT				
Max. PV input voltage ^①	1500 V			
Nominal PV input voltage	1080 V			
Operating voltage range	550 ~ 1500 V			
MPPT voltage range ^②	500 ~ 1500 V			
Start-up voltage	550 V			
No. of MPP trackers / Strings per MPP tracker	6 / 5			
Max. input current per MPPT	75 A			
Max. input short circuit current per MPPT	115 A			
AC OUTPUT				
Max. output apparent power	300 kVA	320 kVA	333 kVA	352 kVA
Max. output continuous current	216.6 A	231 A	240.3 A	254 A
Max. short circuit current	418.9 A			
Nominal AC voltage	3 / PE, 800 V			
Nominal 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%			
EFFICIENCY				
Max. efficiency	99.03%			
European efficiency	98.80%			
ENVIRONMENT LIMIT				
Ingress protection	IP66			
Operating ambient temperature range	-30 ~ 60°C			
Max. operating altitude	5000m (derating above 4000m)			
Relative humidity	0 ~ 100% RH (condensing)			
Overvoltage Category	Mains: III, PV: II			
GENERAL				
Dimensions (W × H × D)	1225 × 825.5 × 369.1 mm			
Net weight	130 kg			
Cooling concept	Smart cooling			
Communication interfaces	Modbus RTU/TCP, Sunspec, 2030.5, (Optional: WiFi / LAN / 4G / PLC)			
Topology	Non-isolated			
Certificates and approvals	IEC 61727, IEC 62116, VDE4110, VDE4105, EN50549, NRS097, G99, RD1699, PPDS2020, CEI0-21, CEI0-16, VFR 2019			
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)	Type II (Optional: Type I + II)			
Arc-fault circuit interrupter (AFCI)	Optional			
AC auxiliary power supply (APS)	Built-in			
Anti-PID	External			

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

② Input voltage exceeding the MPPT voltage range may triggers inverter protection

③ The AC frequency range may vary from different country codes