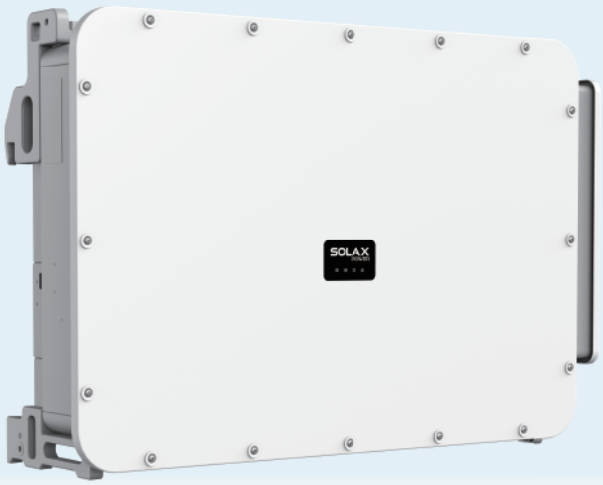
Utility Scale Distributed On-grid Inverter



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

- AC & DC terminal temperature detection
- AFCI support (Optional)
- IP66 ingress protection
- Effective Anti-PID protection (Optional)
- Type II SPD on DC side (Optional Type I + II SPD), Type II SPD on AC side

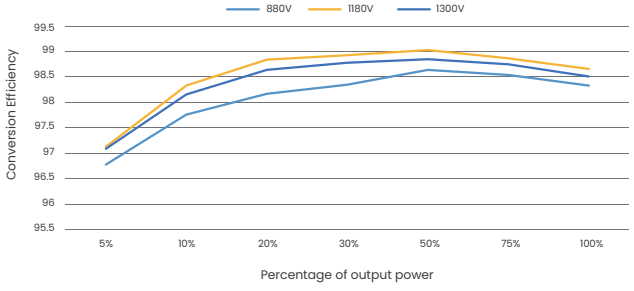
Intelligent Design

- IV curve scan
- 24 hours monitoring
- Night-time SVG voltage regulation support

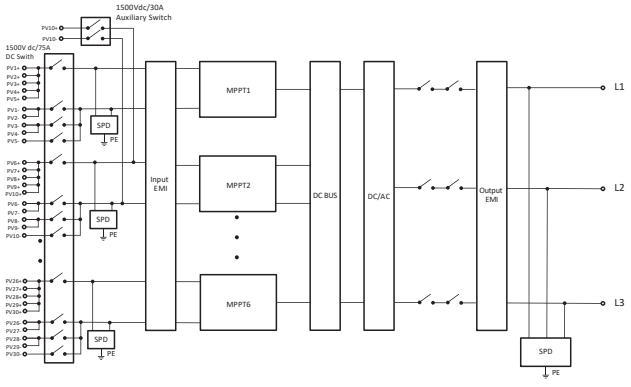
Flexible Adaptability

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

Efficiency Curve



Circuit Diagram



	X3-GRD-300K-HV	X3-GRD-320K-HV	X3-GRD-333K-HV	X3-GRD-350K-HV
PV INPUT				
Max. recommended PV array power	450 kWp	480 kWp	499.5 kWp	525 kWp
Max. PV input voltage①	1500 d.c. V			
Rated PV input voltage	1080 d.c. V			
Operating voltage range②	500 ~ 1500 d.c. V			
Start-up voltage	550 d.c. V			
No. of MPP trackers / strings per MPP tracker	6 / 5			
Max. input current per MPPT	75 d.c. A			
Max. input short circuit current per MPPT	115 d.c. A			
AC INPUT & OUTPUT (ON-GRID)				
Rated output apparent power	300 kVA	320 kVA	333 kVA	350 kVA
Rated output current	216.6 a.c. A	231 a.c. A	240.3 a.c. A	252.6 a.c. A
Max. output apparent power	300 kVA	320 kVA	333 kVA	352 kVA
Max. output continuous current	216.6 a.c. A	231 a.c. A	240.3 a.c. A	254 a.c. A
Rated AC voltage	3W / PE, 800 a.c. V			
Rated AC frequency	50 / 60 Hz			
AC frequency range③	50 ± 5 / 60 ± 5 Hz			
Adjustable power factor range	~ 1 (0.8 lagging to 0.8 leading)			
EFFICIENCY				
Max. efficiency	99.03%			
European efficiency	98.80%			
ENVIRONMENT LIMIT				
Ingress protection	IP66			
Operating temperature range	-30 ~ 60°C			
Max. operating altitude	5000 m			
Relative humidity	4 ~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 air cooling			
Communication interfaces	RS485, PLC, USB, DRM, DI * 1/DO * 1			
Power consumption (night)	15 W			
Topology	Non-isolated			
Certifications	IEC 61727, IEC 62116, VDE4110, VDE4105, EN50549, NRS097, G99, RD1699, PPDS2020, CEI0-21, CEI0-16, VFR 2019			
AC auxiliary power supply (APS)	Built-in			
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, AC overcurrent protection, AC short-circuit protection			
Active anti-islanding method	Frequency shift			
Surge protection	DC: Type II (Optional Type I + II), AC: Type II			
Arc-fault circuit interrupter (AFCI)	Optional			
Anti-PID	Optional			

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 operating voltage range may trigger inverter protection
③ The AC frequency range may vary from different country codes