Three-phase C&I On-grid Inverter

X3-MEGA G2

40kW / 50kW / 60kW

High Efficiency

- Up to 98.4% efficiency
- 32A per MPP tracker
- 180~1000Vdc MPPT voltage range
- 150% PV oversizing, 110% overloading output

Assured Safety

- IP66 protection degree
- Type II SPD on AC&DC side (Optional)
- String current monitoring
- 24 hours operation monitoring

Intelligent Design

- Night-time reactive power compensation
- Smart air cooling enhances fan longevity
- Heat dissipation reduces system weight & size by over 10%
- I-V Curve diagnosis

Flexible Adaptability

- Built-in export power control function
- Remote setting and upgrading
- Aluminium AC cable connection available
- Max. 6 MPPTs, 2 strings per MPP tracker

	X3-MGA-40K-G2	X3-MGA-50K-G2	X3-MGA-60K-G2
PV INPUT			
Max. recommended PV array power	60 kWp	75 kWp	90 kWp
Max. PV input voltage①	1100 V		
Nominal PV input voltage	600 V		
Operating voltage range	200 ~ 1000 V		
MPPT voltage range②	180 ~ 1000 V		
Start-up voltage	200 V		
No. of MPP trackers / Strings per MPP tracker	4 / 2	5 / 2	6 / 2
Max. input current per MPPT	32 A		
Max. input short circuit current per MPPT	46 A		
AC OUTPUT			
Rated output power	40 kW	50 kW	60 kW
Rated output current③	60.6 A / 58 A	75.8 A / 72.5 A	90.9 A / 87 A
Max. output apparent power	44 kVA	55 kVA	66 kVA
Max. output continuous current③	66.7 A / 63.8 A	83.3 A / 79.7 A	100 A / 95.7 A
Nominal AC voltage	3 / (N) / PE, 220 / 380 V 3 / (N) / PE, 230 / 400 V		
Nominal AC frequency	50 Hz / 60 Hz		
AC frequency range④	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	98.4%		
European efficiency	98.1%		
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)	630 × 521 × 286 mm		
Net weight	44.0 kg	44.5 kg	45.5 kg
Cooling concept	Smart cooling		
Communication interfaces	RS485, DRM, Meter		
Power consumption (night)	< 2 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)	Optional		
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, AC overcurrent 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 Input voltage exceeding the MPPT voltage range may trigger inverter protection
③ The two data refer to different grid voltage 220V/230V (75~125kW models) or 500V/540V (136~150kW models)
④ The AC frequency range may vary from different country codes

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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

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	X3-FTH-75K	X3-FTH-80K	X3-FTH-100K	X3-FTH-110K	X3-FTH-120K	X3-FTH-125K	X3-FTH-136K-MV	X3-FTH-150K-MV
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 voltage①	1100 V							
Nominal PV input voltage②	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 range③	180 ~ 1000 V							
Start-up voltage	200 V							
No. of MPP trackers / Strings per MPP tracker	9 / 2	9 / 2	9 / 2 12 / 2④	9 / 2 12 / 2④	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	80 kW	100 kW	110 kW	120 kW	125 kW	136 kW	150 kW
Rated output current②	113.7 A / 108.7 A	121.3 A / 116 A	151.6 A / 145 A	166.7 A / 159.5 A	181.9 A / 174 A	189.4 A / 181.2 A	157.1 A / 145.4 A	173.2 A / 160.4 A
Max. output apparent power	75 kVA	88 kVA	110 kVA	121 kVA	132 kVA	132 kVA	149.6 kVA	165 kVA
Max. output continuous current②	113.7 A / 108.7 A	133.4 A / 127.6 A	166.7 A / 159.5 A	183.4 A / 175.4 A	200 A / 191.3 A	200 A / 191.3 A	172.8 A / 160 A	190.6 A / 176.5 A
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 range⑤	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

Three-phase C&I On-grid Inverter

X3-FORTH PLUS

120kW / 125kW / 136kW / 150kW

High Efficiency

- Up to 99% efficiency
- 150% PV oversizing
- 180~1000V, up to 65A per MPPT
- Maintains full power up to 50°C, with operation range from -25°C to +60°C

Assured Safety

- IP66 protection degree
- AFCI support (optional)
- Remote settings and upgrades
- 24-hour monitoring
- Automatic tripping DC switch
- Type II SPD on AC&DC side (Optional)

Intelligent Design

- Fan self-cleaning function for easier maintenance
- Night-time SVG voltage regulation support
- AC terminal over temperature detection

Flexible Adaptability

- 6 MPPTs, 4 strings per MPPT for precise power
- Reliable up to 5000m altitude
- Power line communication (PLC) (Optional)*
- Buil-in Anti-PID Protection* (Optional)

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	X3-FTH-120K-P	X3-FTH-125K-P	X3-FTH-136K-P	X3-FTH-150K-P
PV INPUT				
Max. recommended PV array power	180.0 kWp	187.5 kWp	204 kWp	225 kWp
Max. PV input voltage①	1100 V			
Nominal PV input voltage	580 V / 600 V			
Operating voltage range	200 ~ 1000 V			
MPPT voltage range②	180 ~ 1000 V			
Start-up voltage	200 V			
No. of MPP trackers / Strings per MPP tracker	6 / 4			
Max. input current per MPPT	65 A			
Max. input short circuit current per MPPT	82 A			
AC OUTPUT				
Rated output power	120 kW	125 kW	136 kW	150 kW
Rated output current	181.8 A / 174 A	189.4 A / 181.2 A	206.6 A / 196.3 A	227.3 A / 217.4 A
Max. output apparent power	132 kVA	137.5 kVA	150 kVA	165 kVA
Max. output continuous current	200.6 A @ 380 V	209 A @ 380 V	228 A @ 380 V	250.7 A @ 380 V
Max. short circuit current	500 A			
Nominal AC voltage	3 / (N) / PE, 220 / 380 V, 230 / 400 V			
Nominal AC frequency	50 Hz / 60 Hz			
AC frequency range③	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%			
European efficiency	98.2%			
ENVIRONMENT LIMIT				
Ingress protection	IP66			
Operating ambient temperature range	-25 ~ 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)	1082 × 724 × 373 mm			
Net weight	99.8 kg			
Cooling concept	Smart cooling			
Communication interfaces	RS485, Optional: PLC, Pocket WiFi / LAN / 4G			
Power consumption (night)	< 10 W			
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)	DC: Type II (Optional Type I + II), AC: Type II			
Arc-fault circuit interrupter (AFCI)	Optional			
AC auxiliary power supply (APS)	Built-in			
Anti-PID	Optional			

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 MPPT voltage range may triggers inverter protection
③The AC frequency range may vary from different country codes

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. 32A 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 voltage①	1500 V			
Nominal PV input voltage	1080 V			
Operating voltage range	550 ~ 1500 V			
MPPT voltage range②	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 range③	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

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