OFF-GRID SOLAR INVERTER

10 kVA ~ 120 kVA (3:3)
PF 0.9

This Off-Grid solar system is available in 10 kVA ~ 120 kVA models with DSP digital control technology, it is combined with pulse-width modulation (SVPWM), disturbance MPPT control and multi-level control technology to enable the system to track the maximum power of solar panels fast. Its secure power supply feature provides good quality power with regulated voltage and frequency to the loads, and it is featured with energy storage and staggering power consumption as well. It is an ideal inverter for medium-sized or large-scale residential, commercial and industrial PV applications which are off the grid, such as village, farm, factory, office building and islands etc.

FEATURES

- High-speed DSP digital control
- Full-bridge invertert control technology, providing secure power supply in the event of three phase 100% unbalanced loads
- Multi-string PV connected
- Inbuilt AC rectifier and MPPT control modules, configured battery parameters by operating interface, self-regulation for charging voltage and current
- Hot-swap MPPT modules for easy maintenance and power expansion
- Auto access MPP tracking states, be most probable to use PV energy in priority
- Intelligent AC and PV complementation power supply function to extend the battery life.
- Using multicore control technology and auto MPP trackers, auto-start AC rectifier enable PV and AC source to supply power to the loads at the same time in the event of insufficient PV, which reduces battery discharge times and extends the battery life
- Intelligent staggering power consumption function
- Standard RS232, RS485 and optional SNMP communication port
- Multiple remote control: startup, shutdown, abnormal clearance, EPO, battery test and remote alarm port
- Staggering energy storage and power generation

SPECIFICATIONS

MODEL	10 kVA	20 kVA	30 kVA	40 kVA	60 kVA	80 kVA	100 kVA	120 kVA
Rated power	9 kW	18 kW	27 kW	36 kW	54 kW	72 kW	90 kW	108 kW
Rated current	15 A	30 A	45 A	60 A	91 A	120 A	152 A	182 A
Output power factor	0.9							
Rated input voltage	380 Vac ± 20%							
Rated output voltage	380 Vac ± 1%							
Battery voltage	360 Vdc							
Number of battery	12 Vdc × 30 pcs / 2 Vdc × 180 pcs							
Operating mode	AC and PV complementation							
PV INPUT								
Max. voltage (Voc)	750 Vdc							
Optimum operating voltage (Vmp)	450 ~ 550 Vdc							
Max. conversion efficiency	⩾ 98%							
Floating charge voltage (25℃)	414 Vdc ± 1%							
Equalizing charge voltage (25℃)	428 Vdc ± 1%							
MPPT Max. current	60 A		120 A		180 A	240 A	300 A	360 A
Max. PV power	25 kW		2 × 25 kW		3 × 25 kW	4 × 25 kW	5 × 25 kW	6 × 25 kW
Number of PV input	1 + 1 (reserved)		2 + 1 (reserved)		3 + 1 (reserved)	4 + 2 (reserved)	5 + 3 (reserved)	6 + 2 (reserved)
MPPT modules	1 + 1 (reserved)		2 + 1 (reserved)		3 + 1 (reserved)	4 + 2 (reserved)	5 + 3 (reserved)	6 + 2 (reserved)
AC RECTIFIER								
Input voltage range	380 Vac ± 20% three-phase							
Rated frequency	50 Hz / 60 Hz ± 5 Hz (settable)							
Power factor	0.8							
Floating charge voltage (25℃)	410 Vdc ± 1%							
Equalizing charge voltage (25℃)	415 Vdc ± 1%							
Max. charging current	12 A	25 A	38 A	50 A	75 A	167 A	208 A	250 A
INVERTER								
Inverter voltage	380 Vac three-phase + N + PE							
Phase voltage	220 / 230 / 240 Vac (settable)							
Output voltage precision	± 1%							
Transient voltage range	± 5%							
Transient recovery time	20 ms							
Rated frequency	50 Hz / 60 Hz ± 1 Hz (settable)							
Frequency tracking range	50 Hz / 60 Hz ± 3 Hz							
Peak factor	3 : 1							
Waveform	Sinusoidal							
Waveform distortion	⩽ 3% (linear load)							
Voltage unbalance	± 3% (100% unbalanced load)							
Overload	⩾ 105% ~ 110% for 1 h, ⩾ 110% ~ 125% for 10 min, ⩾ 125% ~ 150% for 1 min, ⩾ 150% shut down in 10 s, ⩾ 200% shut down immediately							
Short circuit	Current-limiting, shut down immediately until the user start up							
Max. efficiency	⩾ 90%	⩾ 91%	⩾ 92%		⩾ 93%			
BYPASS								
Rated voltage	380 Vac three-phase + N + PE							
Voltage range	± 20%							
Rated frequency	50 Hz / 60 Hz ± 5 Hz							
Max. current	19 A	38 A	57 A	76 A	114 A	152 A	190 A	228 A
BATTERIES MANAGEMENT								
EOD voltage settings	1.58 Vdc ~ 1.83 Vdc (settable), 1.75 Vdc (default)							
Staggering DOD (Depth of Discharge) settings	1.85 Vdc ~ 2.1 Vdc (settable), 1.89 Vdc (default)							
Charging current settings	Factory default 0.15 C_{10}; 0.07 ~ 0.3 C_{10} (settable)							
Battery management	Auto-transfer between equalizing charge and floating charge; Auto- temperature compensation of batteries							
TRANSFER TIME								
Inverter – Bypass	0 ms							
Bypass – Inverter	0 ms							
COMMUNICATIONS								
Remote control	Inverter startup, shutdown, abnormal clearance, EPO, battery self-test							
Communication interface	RS232, RS485, SNMP (optional)							
Dry contacts output	Bypass input abnormal, rectifier input abnormal, system fault, system alarm, low battery, output overload, fan fault, generator ON / OFF							
OTHERS								
Operating temperature	0℃ ~ 40℃							
Max. relative humidity	90% (non-condensing)							
Max. altitude	1000 m at rated power (derating 1% for each additional 100 m); Max. 4000 m							
Noise level at 1 m	⩽ 65 dB (varies with loads and temperature)							
IP rating	IP20							
Dimensions (W × D × H) (mm)	450 × 840 × 1100		600 × 700 × 1750			960 × 800 × 1700		
Packaged dimensions (W × D × H) (mm)	530 × 920 × 1140		690 × 790 × 1850			1040 × 890 × 1750		
Weight (kg)	230	245	380	430	515	760	800	860

● All specifications subject to change without notice.