BN-Series
Off-Grid Inverter

BN series off grid inverter (1KW-6KW)

The BN series off-grid PV inverter combines the traditional off-grid uninterrupted power functions with solar power generation control technologies, providing flexible and reliable system solutions for households and industry purposes.

- Efficient

- Multiple charging voltage grades to adapt to more battery types, to maximize battery performance.
- Multiple working modes are selectable for different working priority (Grid / battery / energy saving mode).
- Electricity bypass quick charging function.
- MPPT charging technology

- Smart

User-friendly multiple communication interface (RS485, RS232, CAN, GPRS, WiFi) are optional to be compatible with more monitoring device: mobile, computer, internet/remote operation.

- Reliable

- Over-load and short-circuit protection.
- Capable of providing the continuous power to linear load or non-linear loads such as lighting, computers, fridges, air-conditioners, fans and other household appliances and industrial devices.
- Insured by well-known international property insurance company (AIG) for Products/Completed Operations Liability Insurance.
- Capable of starting inductive loads such as pumps and HVAC

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Model	BN3024-C	BN6048-C
Line Mode		
AC input voltage (V)	220/230/240	
AC output voltage range (V)	155-272 (± 2%)	
Rated frequency (Hz)	50Hz/60Hz (auto detection)	
Frequency range (Hz)	47+0.3Hz - 55+0.3Hz FOR 50Hz; (57+0.3Hz -- 65+0.3Hz FOR 60Hz)	
Over-load/Short-circuit protection	Circuit breaker	
Efficiency	>95%	
Transfer time (ms)	(AC to DC or DC to AC) 10ms(typical)	
Bypass relay current (A)	30	40
Inverter mode		
Output voltage waveform	Sine wave	
Rated output power (Va)/(W)	3000/3000	6000/6000
Power factor	1	
Rated output voltage (V)	220/230/240(± 10%)	
Rated output frequency (Hz)	50Hz ± 0.3Hz/60Hz ± 0.3Hz	
Efficiency	>88%	
Over-load protection	(110%<load<125%) ± 10%: Fault(shutdown output) after 15min;	
	(125%<load<150%) ± 10%: Fault(shutdown output) after 60s;	
	load>150% ± 10%: Fault(shutdown output) after 20s	
Peak power (10s) (VA)	11000	18000
Capable of starting eletric motor (HP)	2	5
Output short-circuit protection	Current limit (Fault after 10s)	
Output breaker current (A)	30	40
DC input voltage (V)/ Min. DC Start Voltage (V)	24/22	48/44
DC input voltage (V)	20.0 ~ 32.0, ± 2.4Vdc: 24VDC mode 24VDC mode: low alarm: 21V; shut down: 20V; high fault: 32 high recovery: 31V	40.0 ~ 64.0, ± 4.8Vdc: 48VDC mode 48VDC mode: low alarm: 42V; shut down: 40V; high fault: 64V high recovery: 62V
Main operating mode	0-6 level: electricity first; 7-9 level battery first	
Charger (grid)		
Charge current (A)	50	
Charge current regulation (A)	± 5	
Battery voltage range (V)	24VDC mode: 20 -31.4	40 - 62.8
Charge short-circuit protection	Circuit breaker	
Breaker current (A)	30	40
Over charge protection	Bat. V ≥ 31.4 is 24VDC mode every 1s & fault after 60s	Bat. V ≥ 62.8 is 48VDC mode every 1s & fault after 60s
Charger (solar)		
MPPT voltage range (V)	18-78	50-145
Max. PV input voltage (V)	100	200
Max. PV open circuit voltage (V)	80	145
Rated charge current (A)	45	60
Max. full load charging efficiency	98%	
Battery short-circuit protection	Fuse	
Solar panel wiring protection	Anti reverse connecting protection	
Others		
Dimension (H x W x D mm)	460 x 264 x 180	555 x 264 x 180
Weight (kg)	26	34.3
Degree of protection	IP20	
Operating temerature range	- 15°C to 40°C (-25°C - 60°C for storage)	
Relative humidity	5% to 95%	
Communication interface	RS485/GPRS/WIFI	
Safety certificates / EMC category	CE(EN62040-1, EN62040-2)/C2	
Factory warranty	1 year	