

Single Phase

ESS STORAGE SYSTEM

PRODUCT MODEL

INVERTER

- QN-INV-SPH3.6K
- QN-INV-SPB5K
- QN-INV-SPH5K

+

BATTERY

QN-BAT-10.1P

Q-SUN ESS

HIGH PERFORMANCE

- 200% PV over management;
- 200% backup overload capacity, 60A battery current;
- Max. efficiency 97.3%, Battery efficiency 97%;
- Load monitoring accuracy 10W, Battery discharging threshold 10W.



HIGH RELIABILITY

- UPS level redundant protection against backup load breakdown;
- Three-level firmware and two-level hardware battery protection;
- Multiple temperature monitoring, delicate thermal management;
- Max. 6 Inverters in parallel to increase power availability.



HIGH INTELLIGENCE

- Internal EMS optimizes home energy supply automatically;
- PV production forecast;
- Built-in electric power service, FCAS, VPP, etc;
- Online monitoring, online diagnosis, online service.

PARAMETERS

INVERTER MODEL	QN-INV-SPH3.6K	QN-INV-SPB5K	QN-INV-SPH5K
PV INPUT			
Max. PV Input Power	7.36kW		10kW
Max. PV Input Voltage	580V		580V
MPPT Range	100~550V		100~550V
Max. Input Current	15A / 15A		15A / 15A
Max. Short Circuit Current	18.75A / 18.75A		18.75A / 18.75A
MPPT Trackers	2		2
Strings Per MPPT Tracker	1 / 1		1 / 1
AC PORT			
Rated Grid Output Power	3.68kVA	5kVA / 4.6kVA(DE)	5kVA / 4.6kVA(DE)
Max. Grid Input Power	7.36kVA	10kVA	10kVA
Rated Grid / Bscup Voltage		230Vac	
Rated Grid / backup Frequency		50/60Hz	
Surge Backup Power	7.36kVA / 7.36kW	10kVA / 10kW	10kVA / 10kW
Rated Backup Power	3.68kVA	5kVA	5kVA
THDi		<3%	
THDv		<3% (Linear Load) / <5% (Non-linear Load)	
DCV		<100mV	
Crest Ratio		3 : 1	
Transfer Time		<10ms	
EFFICIENCY			
Max. Efficiency	97.3%		97.3%
Max. Round Trip Efficiency	90%	90%	90%
GENERAL DATA			
Operating Temperature Range		-20°C~60°C	
Topology		Transformerless	
Dimensions (W*H*D)		590×405×205mm	
Weight	19.5kg	18kg	19.5kg
Load Monitoring		Meter / CT / Backup box	
External Communication		RS-485 / WIFI / 4G / Ethernet	
Grid Regulation		VDE-AR-N 4105:2018, G98, G99, C10/11:2021, NTS 631, RD647:2020 UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1	
Safety Regulation		IEC/EN 62109-1&2, IEC/EN 62477-1:2012	
BATTERY MODEL			
		QN-BAT-10.1P	
Battery Type		LFP	
Battery Capacity		10.1kWh	
Usable Capacity		9.6kWh	
Depth of Discharge (DoD)		95%	
Nominal Battery Voltage		96V	
Operating Voltage Range		90~108V	
Max. Charging Current		52.5A	
Max. Discharging Current		52.5A	
Operating Temperature Range		Charge:0°C<T<50°C / Discharge:-10°C<T<50°C	
Cycle Lifetime		8000	
Parallel / Series		1 ~ 6 in parallel	
Dimensions (W*H*D)		590×750×205mm	
Weight		90kg	
Communication		CAN / RS-485 (Optional)	
Safety Regulation		IEC 62619:2017, IEC 62040:2017	
Transportation		UN38.3	
SYSTEM			
Operating Altitude		≤3000m (>3000m Derating)	
Relative Humidity		0~95% (No Condensing)	
Protection Degree		IP65	
Cooling		Natural Convection	
Noise		<30dB	
Warranty		5 years / 10 years	
EMC		IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4	