

Three Phase

ESS STORAGE SYSTEM

PRODUCT MODEL

INVERTER

- QN-INV-TPH4K
- QN-INV-TPH5K
- QN-INV-TPH6K

+

BATTERY

QN-BAT-4.8S / QN-BAT-9.6P



HIGH PERFORMANCE

- 200% PV over management;
- 200% backup overload capacity, 50A battery current;
- Max. efficiency 98%, Battery efficiency 96%;
- 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-TPH4K	QN-INV-TPH5K	QN-INV-TPH6K
PV INPUT			
Max. PV Input Power	8kW	10kW	12kW
Max. PV Input Voltage		1100V	
MPPT Range		140~950V	
Max. Input Current		16A / 16A / 16A	
Max. Short Circuit Current		24A / 24A / 24A	
MPPT Trackers		3	
Strings Per MPPT Tracker		1 / 1 / 1	
AC PORT			
Rated Grid Output Power	4kVA	5kVA	6kVA
Max. Grid Input Power	8kVA	10kVA	12kVA
Rated Grid / Backup Voltage		220/380Vac, 230/400Vac, 3/N/PE	
Rated Grid / backup Frequency		50/60Hz	
Surge Backup Power	8kVA / 8kW	10kVA / 10kW	12kVA / 12kW
Rated Backup Power	4kVA	5kVA	6kVA
THDi		<3%	
THDv		<3% (Linear Load) / <5% (Non-linear Load)	
DCV		<100mV	
Crest Ratio		3 : 1	
Transfer Time		<10ms	
EFFICIENCY			
Max. Efficiency	98%	98%	98.2%
Max. Round Trip Efficiency		96%	
GENERAL DATA			
Operating Temperature Range		-20°C~60°C	
Topology		Transformerless	
Dimensions (W*H*D)		590×416×205mm	
Weight		25kg	
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-4.8S		QN-BAT-9.6P
Battery Type		LFP	
Battery Capacity	4.8kWh		9.6kWh
Usable Capacity	4.6kWh		9.1kWh
Depth of Discharge (DoD)		95%	
Nominal Battery Voltage		96V	
Operating Voltage Range		90~108V	
Max. Charging Current		50A	
Max. Discharging Current		50A	
Operating Temperature Range		Charge:0°C<T<50°C / Discharge:-10°C<T<50°C	
Cycle Lifetime		8000	
Series/Parallel	1~6 in series		1~6 in parallel
Dimensions (W*H*D)	590×430×205mm		590×730×205mm
Weight	53.4kg		86kg
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	