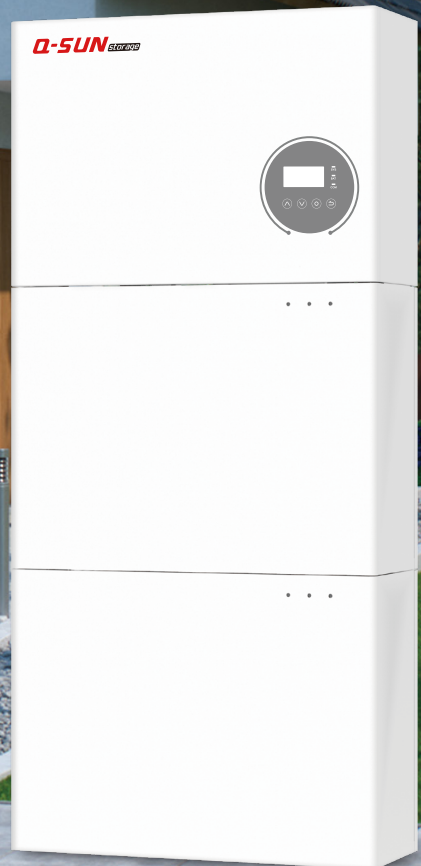


# Three Phase

## ESS STORAGE SYSTEM



### PRODUCT MODEL

#### INVERTER

- QN-INV-TPH8K
- QN-INV-TPH10K
- QN-INV-TPH12K

+

#### BATTERY

QN-BAT-4.8S



### 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-TPH8K	QN-INV-TPH10K	QN-INV-TPH12K
<b>PV INPUT</b>			
Max. PV Input Power	16kW	20kW	22.5kW
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	
<b>AC PORT</b>			
Rated Grid Output Power	8kVA	10kVA	12kVA
Max. Grid Input Power	16kVA	20kVA	22.5kVA
Rated Grid / Bsckup Voltage		220/380Vac, 230/400Vac, 3/N/PE	
Rated Grid / backup Frequency		50/60Hz	
Surge Backup Power	16kVA / 16kW	20kVA / 20kW	24kVA / 24kW
Rated Backup Power	8kVA	10kVA	12kVA
THDi		<3%	
THDv		<3% (Linear Load) / <5% (Non-linear Load)	
DCV		<100mV	
Crest Ratio		3 : 1	
Transfer Time		<10ms	
<b>EFFICIENCY</b>			
Max. Efficiency		98.4%	
Max. Round Trip Efficiency		96%	
<b>GENERAL DATA</b>			
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	
<b>BATTERY MODEL</b>			
<b>QN-BAT-4.8S</b>			
Battery Type		LFP	
Battery Capacity		4.8kWh	
Usable Capacity		4.6kWh	
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	
Dimensions (W*H*D)		590×430×205mm	
Weight		53.4kg	
Communication		CAN / RS-485 (Optional)	
Safety Regulation		IEC 62619:2017, IEC 62040:2017	
Transportation		UN38.3	
<b>SYSTEM</b>			
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	