



One Cabinet , One Micro-Grid

STAR Q 50kW/109kWh

PV+Diesel Generator

All-in-One

On/Off-Grid Operation



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STAR Q Product Advantages



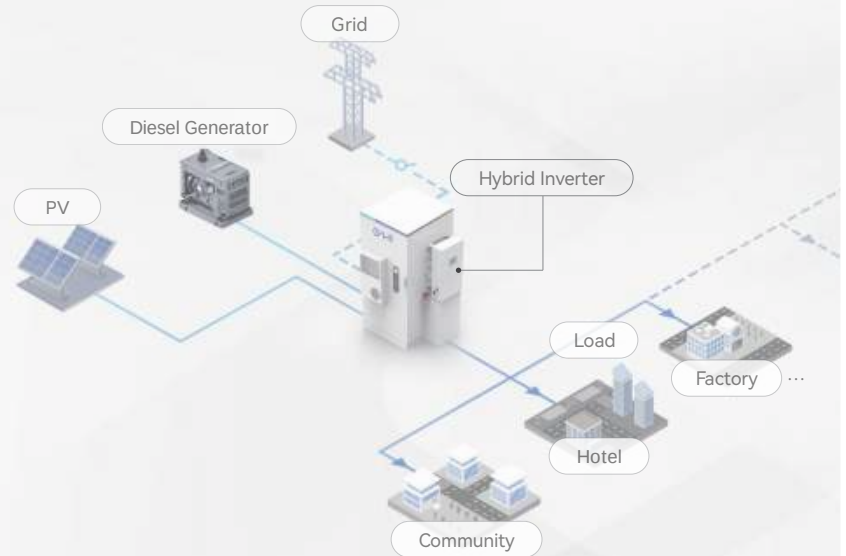
Seamless On/Off-Grid, One Cabinet Forms a Micro-Grid

- Pure off-grid,
Power **10 families** a day

*At 10 kWh/d/family (estimated)

- **Adopt the hybrid inverter**
Supports access of multi-power sources:
Diesel generator, PV, Grid...

- **0.02s On/Off-Grid switch**
Uninterrupted Power, always on



CATL 306Ah LFP Battery Cell | Service Life ≥ 15 years

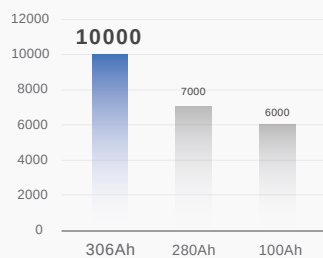
CATL 306Ah LFP



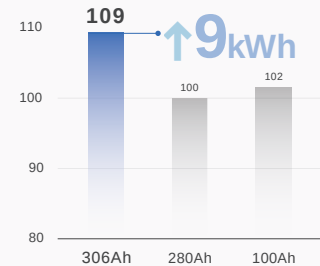
Cycle Life $\geq 10,000$

306Ah: 70%SOH @25°C

Cycle Life

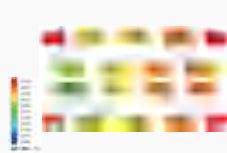
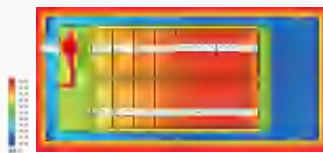


Capacity (kWh)



Patented Self-Cooling Pack, Lifecycle Maintenance-Free

- **Air-fin patent**, even heat spread
- **Fanless**, quieter



- **IP67 Sealed Protection**
Fully isolate condensate water, dust, etc.



STAR Q Product Advantages



Higher Efficiency

CNTE PV+Diesel Generator+ESS Solution

✓ More Concise Architecture

✓ Optimize Power Quality

PCS+DCDC Solution

✗ Complex Architecture

✗ Efficiency Loss

Support **6** AC in Parallel
Up to **10** Cabinets Expandable

All-in-One

Pre-installation/debugging
Ready For Use
Easy Install, Flexible Deployment

Insulation Detection at start up
Leakage Current Detection in operation

Quadruple Protection

Cell

Pack

Rack

System

Fire-fighting accessories:

Aerosol

sensors

Pressure/Explosion relief

Water Firefighting

Before	Over-charge & discharge Short-circuit & over-load protection	BMS monitor cell temp rise via half-sampling BMS monitors over/undervoltage real-time	Real-time current collection Monitoring charge & discharge	Real-time monitoring of smoke and combustible gases
During	Add heat-insulating pads Prevent heat spread	Short-circuit protection	Short-circuit & over-current protection	Leakage current & insulation detection Short-circuit protection

Villages

Islands

Small Factories

Hotels

STAR Q Product Specifications



PRODUCT MODEL	STAR Q
BATTERY SPECIFICATIONS	
Battery Type	LFP
Battery Model	306Ah
Energy Capacity	109kWh
Cycle Life (@25°C, 0.5P)	≥10000
P-rate	≤0.5P
Battery Compartment Ingress Protection	IP67
COMMUNICATION (ON/OFF-GRID)	
Rated output power	50kW
Rated Input Voltage (3/N/PE)	380/400Vac
Rated Frequency	50/60Hz
THDi	< 3%
THDu	< 3%
PV INPUT	
MPPT Voltage Range	150 ~ 850Vdc
Max. Input Power of PV	96kW
MPPT channels/Strings per MPPT channel	4/2
Max. Input Current	40/40/40/40A
GENERAL SPECIFICATIONS	
On/Off-Grid Switching Time	< 20ms
Cooling Method	Air Cooling
Operating Temperature Range	-25 ~ 55 °C (>45°C derating)
Relative Humidity	0 ~ 95% (Non-condensation)
Operating Altitude	≤4000m (>2000m derating)
Ingress Protection	IP55
Dimension (W×D×H)	1270×1340×2094mm
Weight	≈1.4T (With hybrid inverter)
Certifications	EN 50549-1, EN 50549-10, VDE-AR-N 4105, NRS 097-2-1, IEC 61000, IEC 62477, IEC 62619, IEC62109, UN 38.3



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