

KAIXENTEC

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CITADEL SERIES

All-in-One PV and Energy Storage System

CITADEL 50KWh-30KW-A-HPCS



Versatile Power Applications

- Designed for on-site solar usage, backup power, diesel generator replacement, and virtual power plant integration.
- Seamless on/off-grid switching with response time ≤ 10 ms.

Compact All-in-One System

- Integrated PCS, EMS, and battery clusters in a streamlined, space-saving design.
- Minimal footprint of 1.2 m^2 and a total height of only 1.4 m.

Quick and Simple Installation

- Delivered as a fully pre-assembled cabinet to reduce on-site work.
- Requires only AC input and load connection.
- Forklift-friendly design with front and side access; supports back-to-wall placement.

Expandable Capacity Range

- Each cabinet supports 23–53.7 kWh, suitable for 0.5C load profiles.
- Scalable up to 6 cabinets in off-grid parallel mode, covering 30–180 kW power output.

Citadel Series Technical Parameters

MODEL	CITADEL 50KWH-30KW-A-HPCS
BATTERY	
Rated Energy	53.7kWh
Usable Energy	≥50kWh
Battery Nominal Voltage	537V DC
Battery Operating Voltage Range	470.4~613.2V
Battery Nominal Capacity	100Ah
AC INPUT & OUTPUT (ON-GRID)	
Rated Output Power	30kW
Rated Output Current	45.6A(AC380V)/43.3A(AC400V)
Maximum Output Power	33kW
Maximum Output Current	45.6A(AC380V)/43.3A(AC400V)
Rated AC Voltage	400/380V AC
Rated Frequency	50/60Hz
System / Grid Connection Type	3L+N+PE
AC OUTPUT (BACK-UP)	
Back-up Rated Output Power	30kW
Back-up Rated Output Current	45.6A(AC 380V)/43.3A(AC 400V)
Back-up Rated AC Voltage	400/380V AC
Rated Frequency	50/60Hz
On/Off-grid Switching Time	≤10 ms
PV INPUT	
Max. PV Input Power	60kW
MPPT Voltage Range	150-850V
Max. Input Current per MPPT Tracker	40A
Number of MPPT Trackers	3
PV Strings per MPPT Tracker	2/2/2
OTHERS	
Ingress Protection Rating (IP)	IP55
Application Environment	Outdoor
Operating Temperature	-20~55°C(>45°C derating)
Operating Humidity	0~95% RH, non-condensing
Cooling Method	Air cooling
Altitude	≤3000m, (>2000m derating)
Corrosion Protection Level	C4
Noise Level	<75dB
Dimensions	1020W*1200D*1400H
Weight	≈1000kg
Fire Protection	Aerosol