



Arenq Series



BESS

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PV and Energy Storage System AQ30KW50KWH

AQ30KW50KWH is an all-in-one commercial and industrial PV energy storage system launched by ARENQ, integrating PCS, EMS and battery clusters, featuring seamless on/off-grid switching within 10ms, pre-assembled easy installation, flexible expansion and high protection safety, suitable for solar self-consumption, backup power, diesel generator replacement and VPP scenarios.



Versatile Applications

- Suitable for solar self-consumption, backup power, diesel generator replacement, and VPP scenarios
- Supports seamless on/off-grid switching $\leq 10\text{ms}$



All-in-One Design

- Integrated PCS, EMS, and battery clusters in a clean and compact design
- Footprint of only 1.2 m^2 with a height of 1.4 m



Easy Installation

- Delivered as a pre-assembled cabinet to minimize on-site work
- Only AC input and load connections required
- Easy to transport by forklift, with front and side access doors
- Supports back-to-wall installation for flexible site layout



High Scalability

- Single cabinet supports 23–53.7 kWh capacity range, compatible with 0.5C applications
- Supports up to 6 cabinets in off-grid parallel operation, covering 30–180 kW power range



PV and Energy Storage System

AQ30KW50KWH



Technical Parameter

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(AC380V)/43.3A(AC400V)
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
Transportation Method	Pre-assembled unit transport
Certifications	IEC62619/CE/UN38.3