

AESS Air-cooled

90kW Specification



AESS
Battery ESS



Model

300 kWh

Battery Cell Data

Battery Chemistry	Lithium Iron Phosphate (LFP)
Cell Cycle Life	8000 Cycles, 0.5C 25°C, 70% EOL
Cell Specification	3.2V/280Ah

Battery Rack Data

Nominal Voltage	358.4V
Voltage Range	313.6 - 403.2V
DC Energy Capacity	301.05 kWh

DC Battery Specifications

Rated Power	90 kW
Maximum Power	99 kW
Max Charging/Discharging Current	270 A
Battery Switch-off Mode	Relay
Over Voltage Protection	Software Protection
Over Current Protection	Software Protection & DC Fuse

AC Specifications

Rated Power	90 kW
Maximum Apparent Power	99 kVA
Maximum Active Power	99 kW
Grid Connection	3P3W+PE
Rated On-Grid Voltage	480VAC(±15% configurable)
Rated On-Grid Frequency	60 (±2.5 configurable) Hz
Rated Off-Grid Voltage	480VAC(±5% configurable)
Rated Off-Grid Frequency	60 (±5 configurable) Hz
Power Factor	Listed: 0.8~1 leading or lagging Actual: 0.1~1 leading or lagging
Overload Capacity	110%~120%, 10 min 120%~150%, 200 ms
THDi	<3%
Peak Efficiency	97.30%
CEC Measured Efficiency	96.50%

DC/DC for PV Input

Rated Power	135 kW
Maximum PV Input Voltage	830 V
Start-up Voltage	250 V
MPPT Voltage Range	200 - 810 V (430 - 750 V For Full Power)
# of MPPT Inputs	9
Max Input Current of Each MPPT	35 A
Rated Current to Battery	195 A
Maximum Current to Battery	225 A
Protections	PV Reverse Connection Protection, Insulation Impedance Detection, PV Side Switch
	Temperature Protection, DC Arc Detection (Optional), PID Repairment (Optional)
	PV SPD - L2 Lightning, DC Bus SPD - L2 Lightning



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Switch

Grid Type	TN-C-S; TN-S; TT, TN-C
Rated On-Grid Voltage	Three-Phase 380/400/480 VAC
On Grid Frequency	50/60 Hz
Rated Off-Grid Voltage	Single-Phase: 220/230 VAC
	Three-Phase: 380/400/480 VAC
Off-Grid Frequency	50/60 Hz
Maximum Apparent Power	100 kVA
Maximum Output Current	145 A
Switching Time	Active Switching: Seamless
	Passive Switching: 30 ms

General Specifications

Cooling	Forced air cooling for power electronics
	6kW air-conditioner/heater for battery system
Noise	<70 dB
Enclosure	NEMA 3R
Max elevation	3000 m/10000 ft (> 2000 m/6500 ft De-rating)
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)
Humidity	0 - 95% (No condensing)
Size (W×H×D)	2991×2591×2438 mm/117.8×102×96 in
Weight	≤5200 kg
Communication Interface	CAN/RS485/Ethernet
Communication Protocol	Modbus TCP/RTU, IEC104

Other

Fire Fighting System	Smoke detector and heat detector, Fire Suppression via NOVEC 1230 or FM200
Salt spray prevention	Optional salt spray prevention version with special coating and filter
Certifications	UL9540 (On Demand), UL1973, UL9540A

Images are representative and may not match the final product. Specifications are subject to change without notification

