

Preliminary



Energy Storage Solution

Energy Storage System / AiO Box for C&I

- All-in-One solution integrating PCS and battery
- Scalable system supporting various configurations
- Liquid-cooled battery modules ensuring superior temperature uniformity
- 125 kW power conversion capacity at 480 Vac



Commercial
Building



Charging
Station



Campus



Factory



All-in-One Energy Storage System

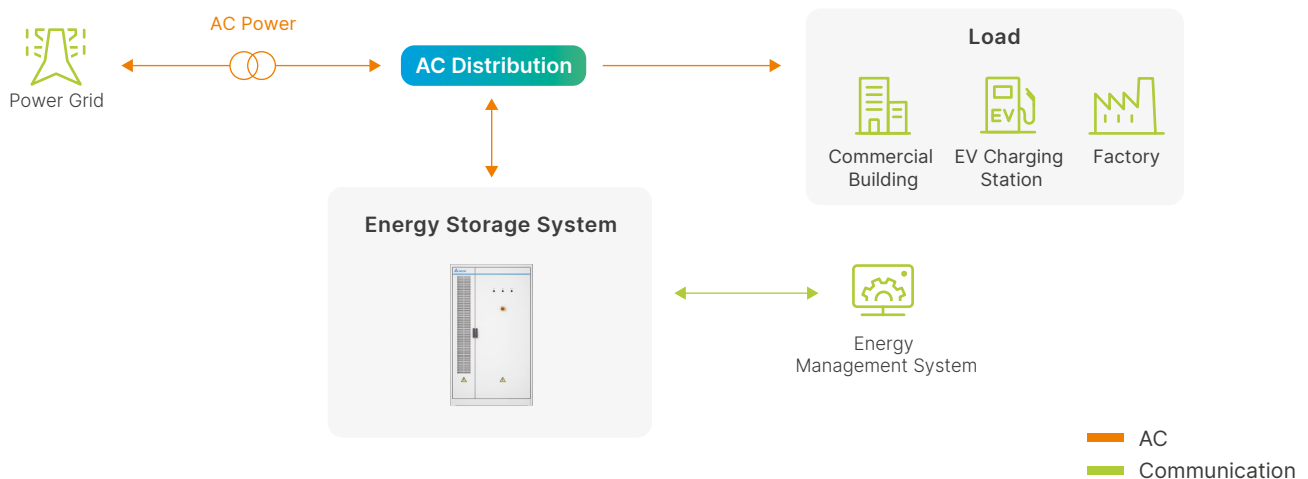
Delta's AiO Box, with a capacity of 125 kW / 279 kWh, is an energy storage system that seamlessly integrates power conditioning system (PCS), advanced battery system with built-in BMS, and cooling system into a compact, all-in-one solution.

Designed for superior power efficiency and space optimization, the AiO Box features liquid-cooled battery modules that maintain optimal temperature uniformity, enhancing performance and extending battery life.

Its robust construction allows it to withstand harsh environmental conditions. This versatile system is scalable and suitable for various configurations, including grid-tied and off-grid scenarios such as power backup, peak shaving, load shifting, PV self-consumption, and PV smoothing.



System Architecture



Feature Highlights



Efficient and Precise Power Control

- Capacity: 125 kW / 279 kWh
- AC voltage: 480 Vac



Flexible System Configuration

- Scalable configuration with multiple units
- Support for 3-phase, 4-wire load without transformer



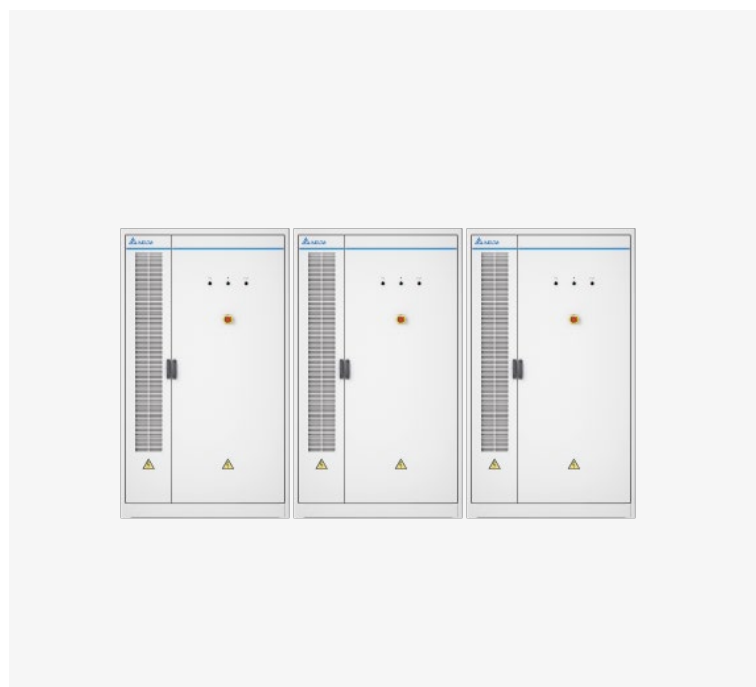
Designed for Energy Storage Applications

- Advanced P/Q, Frequency/Voltage control
- Peak shaving/demand charge management
- Load shifting for time-of-use savings
- Anti-islanding detection, off-grid operation
- Automatic voltage and frequency regulation
- VSG Control algorithm in off-grid scenario



Compact, Liquid-cooled, All-in-One System

- Liquid cooling ensures consistent temperature and longer battery life
- Compact design maximizes space efficiency
- Robust protection for tough environments



Specifications

Model Name		AIOA279K125L-US
System Configuration		
Rated Input Rating		125 kVA / 125 kW
Battery Capacity (BOL)		279.6 kWh
AC Connection		
Rated Grid Voltage		480 Vac (3P-N-PE or 3P-PE)
Rated Grid Frequency		60 Hz
Rated AC Active Power		125 kVA / kW
Rated AC Current		151 A
Current THD		< 3%
DC Current Injection		< 0.5% of rated current
Power Factor		-1 to 1, continuously adjustable
Battery Information		
Type of Battery		LFP
DC Voltage Range (Full load)		873.6~1123.2 Vdc
Rated Discharge / Charge Power		128 kW / 122 kW
Max. Discharge / Charge Current		147 A / 140 A
Prate		0.5P
Standalone Operation		
Rated Output Voltage		480 Vac (3P-N-PE or 3P-PE)
Rated Output Power		125 kVA / kW with linear load; 100 kVA / kW with non-linear loads ($I_{pk} \leq 240$ A)
Rated Output Current		151 A
Overload Capability		110% for 30 mins
Output Voltage THD		< 3% @ rated linear load
Environment		
Maximum Altitude		4,000 m, de-rating > 2,000 m
Operating Temperature		-25 °C to +55 °C, de-rating > 45 °C
Humidity		0 to 95% RH, non-condensing
Cooling		Liquid cooling for Battery / Forced air cooling with speed control for PCS
Enclosure Rating		IP55 / Type 3R
General		
User Interface		LED, Ethernet
Communication		Ethernet, Modbus TCP
Dimensions (W x D x H)		1400 × 1300 × 2400 mm
Protection		DC reverse protection, OVP, UVP, OCP, DC insulation detection
Net Weight		~3,200kg
Certification(in Progress)		Safety: UL1741 Grid code: IEEE1547,UL1741SB Battery:UL1973,UL9540A System:UL9540,NFPA68,NFPA855

* Specifications are subject to change without prior notice.

* Customer shall provide single phase auxiliary power with 4kW for AIO product.



More Information

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