

# **CATALOG**

# AEC USA CRITICAL POWER





# LITHIUM SYSTEM S<sup>3</sup>





Power capacity: 40Ah - 50Ah - 100Ah







#### **LITHIUM-ION BATTERY SYSTEM**

"Carbon Peaking • Carbon Neutrality" has become a global priority for all countries and industries, and the concept of green energy saving has also been widely recognized by the people. Thanks to the new infrastructure and 'dual carbon' goals, the lithium-ion battery industry has developed geometrically at an astonishing pace. Lithium-ion iron phosphate walks in the forefront for its safety and stability, and has constantly carried out security upgrades.

By following the nuclear-grade safety design concept and leveraging its over 30 years of professional experience in the power field, Allis Electric deeply applied power electronics to the lithium-ion battery technology and released lithium-ion battery solution with high safety and reliability - AEC S<sup>3</sup> Smart Backup Lithium-ion Battery System Solution.

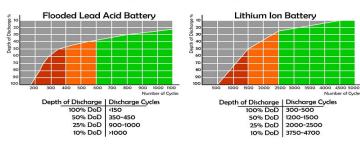
#### ADVANCED LITHIUM-ION TECHNOLOGY

- Life cycles: Li-ion batteries have a cycle longer life than lead-acid batteries, i.e can be downloaded and reloaded for a greater number of times before losing their capacity.
- **Self-discharge**: Li-ion batteries have a self-discharge lower than lead-acid batteries, which meaning they lose less energy when not in use.
- Working voltage: Li-ion batteries have a higher working voltage than all batteries lead, which means they can deliver more energy for each unit of volume.
- Working temperature: lithium ion batteries they can work in a wider range of temperatures compared to lead-acid batteries.

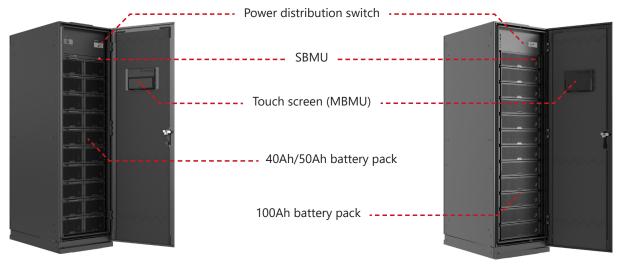


L6 Smart Backup Lithium-ion Battery System Solution





### PRODUCT STRUCTURE S3



40Ah/50Ah lithium-ion battery system cabinet

100Ah lithium-ion battery system cabinet

**AEC S<sup>3</sup> Smart Backup Lithium-ion Battery System Solution** 

#### **MAIN FEATURES**

The S<sup>3</sup> smart backup lithium-ion battery system solution adopts the modular parallel design, Safe, smart and simple, which can compatible with the full range of AEC UPS, with power ranging from 60kW to 1200kW.

#### Safe and reliable

#### Electrical and physical double isolation

- Reduces the fault scope to an effective space without diffusion
- Port zero voltage, no risk of short circuit shock

#### Two-level fire linkage

- Module fire protection
- Can quickly, accurately and effectively detect and extinguish the fire source will extinguish the fire in the initial stage.

Concerted operation with modular parallels

#### Failure module exit automatically

• Modular parallel design, failure module exit automatically, will not affect the system. Other modules can work normally.



Module-level expansion with fine granularity

#### **Smart and Intelligent technology**

#### Module design, plug and play

• 5mins maintenance, reduce the OPEX cost

#### Flexible for expansion

- Module design, can expand the capacity of modules or cabinets.
- Reduce the CAPEX cost

#### **Smart battery test**

• Parallel design, the battery can test the capacity Separately. No need to cut off the power supply, improve the reliability

#### Easy and simple to operate

#### Intelligent current equalization

- Can be used with new and old batteries
- Can be used with lithium-ion batteries from different suppliers

#### Intelligent voltage equalization

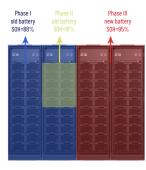
- Intelligent voltage equalization module, no barrel effect
- Prolong the backup time, improve battery utilization

#### Fault recording, early warning

• Fault recording, early warning, accurate and quick fault location, reduce the OPEX cost

#### **Adaptive SOC management**

- Intelligent charge and discharge management, avoid over charge and over discharge
- Detects the battery internal temperature. Improve the safety and reduce the OPEX cost

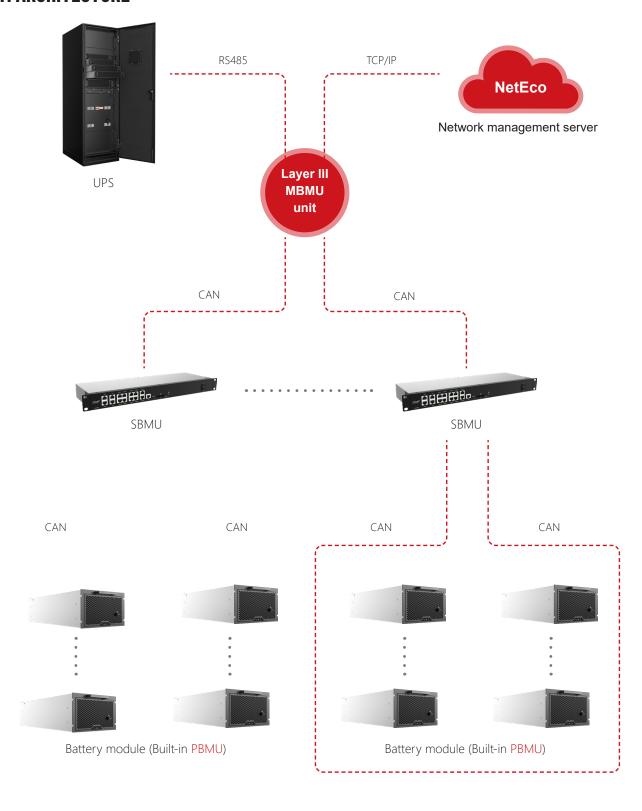


More flexible mixing of old and new batteries

# THREE-LAYER BMS ARCHITECTURE S<sup>3</sup>

The adopted three-layer BMS architecture (PBMU/SBMU/MBMU) ensures the reliability of lithium-ion battery system from cell, module and system layers.

## **SYSTEM ARCHITECTURE**



# AEC GROUP Offices in the world





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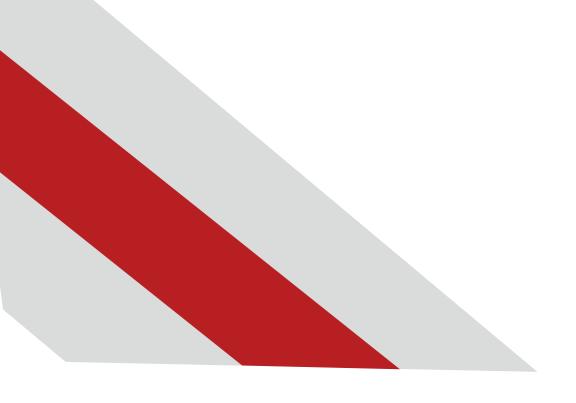


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