

# CONTAINERIZED ESS

Model: Na-C20-2396

**OSPOWER**  
Manufacture by Highstar

## 2.3MWh Sodium-Ion Liquid-Cooled Energy Storage System

### High Efficiency and Reliability

- ◆ High-performance sodium-ion batteries with cluster efficiency  $\geq 98\%$  and cycle life  $\geq 8,000$  times.
- ◆ Modular integrated design for high volumetric energy density.
- ◆ Cell temperature difference within PACK  $\leq 3^{\circ}\text{C}$ , extending battery life by 15%+.
- ◆ Three-level BMS/EMS architecture for precise battery management; EMS, PCS, and BMS coordination supports remote monitoring.

### High Safety and Protection

- ◆ Four-layer fire protection system: PACK spraying + cluster-level spraying + electrical cabin gas fire protection + water spraying, standard with perfluorohexanone fire extinguishing for multiple discharges.
- ◆ Flame-retardant materials + Class A rock wool panels with fire alarm linkage.
- ◆ Dual-variable frequency backup liquid cooling units and dehumidifying air conditioners for operation in  $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$ .
- ◆ Three-level liquid cooling pipeline network for efficient heat management and stable cell operation.
- ◆ IP54 protection + C3 anti-corrosion, resistant to water, seismic activity, salt fog, and UV radiation.

### Easy Deployment and Maintenance

- ◆ 20-foot container integrating batteries, liquid cooling, and fire protection for fast transportation; prefabricated cabin installation reduces construction time by 40%.
- ◆ Layered plug-in box and front-wiring design for easy module replacement; self-sealing liquid cooling interfaces prevent leakage.



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## Energy Storage Cabin Of The System

| Model                              | Na-C20-2396                         | Notes                                   |
|------------------------------------|-------------------------------------|-----------------------------------------|
| Battery Cells                      | Na, 3V160Ah                         |                                         |
| Battery Pack                       | 1P52S                               |                                         |
| Battery Cluster                    | 1P416S                              | Pack * 8                                |
| Energy Storage Cabin of the System |                                     |                                         |
| System Capacity                    | 2.396MWh                            | 12 clusters in parallel                 |
| System Nominal Voltage             | 1248V                               |                                         |
| Charge Cut-off Voltage             | 1435.2V                             |                                         |
| Discharge Cut-off Voltage          | 665.6V                              |                                         |
| Continuous Charge/Discharge Rate   | 0.5C / 0.5C                         |                                         |
| Charge Temperature                 | 0℃~55℃                              |                                         |
| Discharge Temperature              | -20℃~60℃                            |                                         |
| Storage Temperature                | -20℃~40℃                            |                                         |
| Energy Efficiency                  | ≥98%                                |                                         |
| Cycle Life                         | ≥8000 次                             |                                         |
| Communication Modes                | CAN, RS485, TCP/IP                  |                                         |
| Heat Dissipation Method            | Liquid Cooling                      |                                         |
| Fire Protection System             | Automatic Fire Extinguishing System | Water-based fire protection as standard |
| Protection Level                   | IP54                                |                                         |
| Anti-Corrosion Level               | C3                                  |                                         |
| Noise                              | 75dB                                |                                         |
| Dimensions (L * W * H)             | 6058*2550*2896mm                    |                                         |
| Weight                             | ≤43t                                |                                         |

Manufacture reserve the right to alter or amend the design,model and specification without prior notice