

ENERGY STORAGE SYSTEM

S-5016-2H-NA | S-5016-4H-NA

Capacity: 5.0 MWh

**e-STORAGE**, a subsidiary of **Canadian Solar**, is a world-class energy storage solution provider, specializing in storage system design, manufacturing, and integration of battery energy storage systems for utility-scale applications.

The company offers value-added system consulting and turnkey EPC services, in addition, we provide customers with our proprietary LFP battery solution SolBank.

Together, we are building a brighter, greener future for all.

### SolBank 3.0 Highlights

- Cutting-Edge Technology: SolBank 3.0 features highdensity LFP cells, an active balancing BMS, and an innovative liquid cooling TMS, ensuring optimal safety.
- Compliance and Certifications: SolBank 3.0 adheres to all industry standards: NFPA855, NFPA69, NFPA72, NFPA70E, and optional NFPA68. Certified under UL1973, UL9540, UL9540A, UN38.3/UN3536, ensuring rigorous safety and performance criteria.

## **Key Features**

#### **Enhanced Energy Density**

- Utilizes 314 Ah battery cells and compact integration, increases single container energy density up to 45%
- Reduces land cost by up to 35% in a 100MWh project

## Safety

- IP67-rated pack design
- Up to 20% faster detection of abnormal and automatic protection
- Advanced pack thermal isolation, electrical redundancy protection, and multi-level fire protection, effectively minimize potential issues

# **Intelligent Control**

- Liquid cooling cuts auxiliary consumption up to 30%
- Active balance and string-level management, guarantee high efficiency and availability

## **Compatibility & Installation**

- Supports various PCS topologies
- Turn-key integration and stationery certification, reduce project schedule risks by up to 40%
- Plug-and-play setup for streamlined commissioning

SolBank 3.0 www.csestorage.com

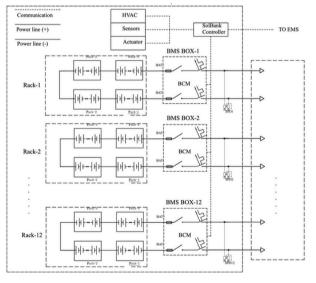




| General                       |                              |  |
|-------------------------------|------------------------------|--|
| Product Model                 | CSI-SolBank-S-5016-2h-NA     |  |
|                               | CSI-SolBank-S-5016-4h-NA     |  |
| Battery Chemistry             | Lithium Iron Phosphate (LFP) |  |
| Pack Configuration            | 1P104S (104 Cells)           |  |
| Rack Configuration            | 1P416S (4 Packs)             |  |
| System Configuration          | 12P416S (12 Racks)           |  |
| Nominal Capacity              | 5016 kWh                     |  |
| Nominal DC Voltage            | 1331.2 V                     |  |
| Operation DC Voltage<br>Range | 1164.8 V ~ 1497.6 V          |  |

| Performance   |                              |  |                       |
|---|------------------------------|--|-----------------------|
| Charging/Discharging Mode                               |                              | 0.5 P / 0.5 I                                | P 0.25 P / 0.25 P     |
| Rated DC Power  |                              | 2400 kW                                      | 1200 kW               |
| Initial Storage Capacity                                |                              | 4800 kWh                                     | 4800 kWh              |
| Duration @Rated DC Power                                |                              | 2hrs   | 4hrs                  |
| Round Trip Efficiency (RTE)                             |                              | 93%  | 94%                   |
| Auxiliary Load<br>(Standby/Peak)                        |                              | 1.5 kVA / 50<br>kVA                          | 0 1.5 kVA / 22<br>kVA |
| Max. Short Circuit Current                              |                              | 10 kA*12                                     | 10 kA*12              |
| Operating Temperature (Ambient)                         |                              | -30 °C to 55 °C (derating from 45°C to 55°C) |                       |
| Relative Humidity                                       |                              | ≤95% (non-condensing)                        |                       |
| Altitude  |                              | < 2000 m (derating from<br>2000 m to 4000 m) |                       |
| Noise Sound Pressure Level<br>(LPA) at 1 meter distance |                              | ≤75 dB(A)                                    |                       |
| Auxiliary Systems                                       |                              |  |                       |
| Auxiliary Power Interface A                             |                              | AC480 V / 60 Hz, 3P5W                        |                       |
| Thermal Management<br>System                            | Smart liquid cooling/heating |  |                       |
| External Communication Ethernet connection,             |                              | nection,                                     |                       |

| Mechanical                              |  |  |
|---|--|--|
| Enclosure                               | 20ft. high-cube container  |  |
| Dimensions (1 *\//*H)                   | 6058*2438*2896 mm<br>(238.50*95.98*114.02 in)  |  |
| Weight (Battery<br>Included)            | 43,000 kg (94,800 lbs)   |  |
| Enclosure Ingress<br>Rating             | IP55 / NEMA 3R   |  |
| Painting/Coating                        | RAL9003 / C4 Coating   |  |
| Seismic Parameter                       | Zone 4   |  |
| Safety                                  |  |  |
| Fire Detection and<br>Alarm             | Fire alarm panel, heat and smoke detection, alarm bell and strobe  |  |
| Explosion Prevention                    | Combustible gas detector with active ventilation   |  |
| Uninterrupted<br>Power Reserve          | Container level UPS for 2-hr<br>control system backup; dedicated<br>fire safety UPS for<br>24-hr fire alarm backup |  |
| Emergency<br>Stop/Automatic<br>Shut-off | Local and Remote   |  |
| Fire Suppression<br>Options             | Aerosol-based suppression system. Dry pipe sprinkler system.   |  |



Interface

- 1. The unit is rated at 1164.8V~1497.6V for optimized product performance, the maximum voltage range for the battery system is 1060.8V~1497.6V.

  2. Rated DC Power is measured at the product DC terminal, the Rated DC Power and Initial Storage Capacity is limited to the use of two SolBank 3.0 units connected in parallel.

  3. Initial Storage Capacity is the usable product capacity at FAT, contact e-STORAGE for capacity at COD per project schedule.

  4. DC RTE is measured during capacity test at Rated DC Power, refer to the product warranty document for the complete procedure.

  5. Options need to be selected to fully meet the 55°C, 95% RH.

Modbus TCP/IP protocol

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