

SolBank 3.0

ENERGY STORAGE SYSTEM S-5016-2H-EU|S-5016-4H-EU

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: IEC 62619, IEC 63056, IEC 62477-1, IEC 62933-5-2, IEC 61000-6-2, UL 9540A, NFPA 855, NFPA69, and optional NFPA68, 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, quarantee 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





General			
Product Model	CSI-SolBank-S-5016-2h-EU		
	CSI-SolBank-S-5016-4h-EU		
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 Range	1164.8 V ~ 1497.6 V		

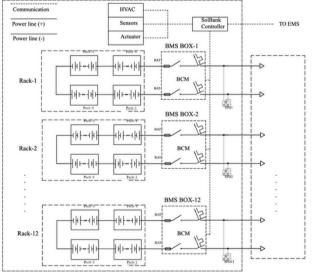
Performance				
Charging/Discharging Mode		0.5 P	/ 0.5 P	0.25 P / 0.25
Rated DC Power		2400	kW	1200 kW
Initial Storage Capacity		4800	kWh	4800 kWh
Duration @Rated DC Power		2hrs		4hrs
Round Trip Efficiency (RTE)		93%		94%
Auxiliary Load (Standby/Peak)		1.5 k\ kVA		1.5 kVA / 22 kVA
Max. Short Circuit 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 2000 m to 4000 m)		
Noise Sound Pressure Level (LPA) at 1 meter distance		≤75 dB(A)		
Auxiliary Systems				
Auxiliary Power Interface AC 400V / 50 Hz, 3P5W				
Thermal Management System System		art liquid cooling/heating		

External Communication Ethernet connection, Modbus

TCP/IP protocol

Mechanical		
Enclosure	20ft. high-cube container	
Dimensions (L*W*H)	6058*2438*2896 mm (238.50*95.98*114.02 in)	
Weight (Battery Included)	43,000 kg (94,800 lbs)	
Enclosure Ingress Rating	IP55 / NEMA 3R	
Painting/Coating	RAL9003 / C4 Coating	
Seismic Parameter	Zone 4	
Safety		

Safety		
Fire Detection and Alarm	Fire alarm panel, heat and smoke detection, alarm bell and strobe	
Explosion Prevention	Combustible gas detector with active ventilation	
Uninterrupted Power Reserve	Container level UPS for 2-hr control system backup; dedicated fire safety UPS for 24-hr fire alarm backup	
Emergency Stop/Automatic Shut-off	Local and Remote	
Fire Suppression Options	Aerosol-based suppression system. Dry pipe sprinkler system.	



System

Interface

- Notes

 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.

Due to ongoing innovation, improvements, and product enhancements, the technical specifications in this document are subject to change and are not guaranteed. Canadian Solar reserves the right to update or change its products or this technical data without prior notice and customers should not rely upon these or any technical specifications which are not made part of a definitive binding agreement.