

# **Energy Storage Solution**

# Li-ion Battery / BSO-CS

### **Features**

- DC voltage up to 1200Vdc
- Max. installed capacity up to 220kWh per cabinet
- Scalable and flexible configuration
- IP55 stainless enclosure with corrosion resistant painting
- Built-in battery management system, HVAC, and automatic fire suppression system
- Certification: cell level UN38.3, IEC 62619, UL1973; module level - UN38.3, IEC 62619, UL1973







### **Enhancing Reliability and Stability in Energy Management**

Delta's Li-battery storage system features high-voltage output for enhancing the efficiency of energy management. With its scalable, fireproof and anti-corrosion capabilities, Delta's battery system can meet project requirements of small to large scale and is suitable for various environmental conditions, making it an ideal solution for grid ancillary services and C&I applications while ensuring reliability and safety.



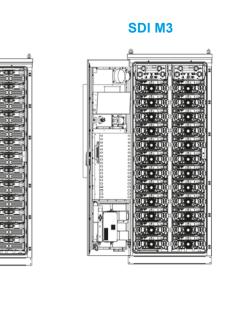
### **Flexible Capacity Configuration**

- DC switch and Aux. power cabinet is optional in cabinet level
- DC switch and Aux. power cabinet will be integrated with outdoor battery cabinets to be completely battery energy storage system.



### **Component in a Battery Cabinet**

Item	Content	
Battery Solution	Energy type: SDI M3, SDI E3	SDI E3
Structure	IP55/3R     Connection interface: DC power, auxiliary power, communication     Anti-corrosion level: C5	
Safety	Flood detection     Thermal and smoke sensors     Automatic fire suppression system	
Optional	<ul> <li>DC combiner cabinet with main DC switch</li> <li>Auxiliary power/ control cabinet</li> <li>Access control system</li> <li>Heater and dehumidifier</li> <li>Aseismatic structure for GR63 Zone-4</li> </ul>	



# **Specifications**

# Discharging time ~ 60mins

Battery Cabinet			
Battery Chemistry	SDI M3 NCM		
C-Rate	1C		
Discharging Time	~ 60 Minutes		
Model Name	EBSO-CSM311S1PP01	EBSO-CSM311S2PS01	EBSO-CSM312S2PS01
Configuration	1P242S	242S2P	264S2P
Installed Capacity (max.)	89kWh	178kWh	194.4kWh
DC Voltage Range	774 - 1004Vdc	774 - 1004Vdc	844 - 1095Vdc
Operating Temperature	-20°C to 45°C		
Altitude	< 2000m		
Humidity	0-95% non-condensing		
Corrosion Resistance	Stainless 304 Enclosure with corrosion resistant painting		
Accessories	<ul> <li>HVAC</li> <li>Rack controller</li> <li>Flood detector</li> <li>Automatic fire suspension system</li> <li>Smoke / temperature detector</li> <li>Stainless enclosure with IP55/ NEMA 3R</li> <li>Aseismatic stricture for GR63 Zone4</li> </ul>		with IP55/ NEMA 3R
Gross Weight	1166 kg / 2571 lbs	1782 kg / 3929 lbs	1864 kg / 4100 lbs
Dimension (L x D x H)	998.8 x 944.2 x 2461 mm (exclude HVAC), 394 x 372 x969 inches (exclude HVAC) 998.8 x 1213.9 x 2461 mm (include HVAC), 394 x 478 x 969 inches (include HVAC)		

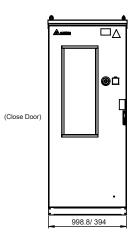
# Discharging time ~ 120mins

Battery Cabinet			
Chemistry	SDI E3 NCM		
C-Rate	0.5C		
Discharging Time	~ 120 mins		
Model Name	EBSO-CSE320S1PS01	EBSO-CSE325S1PS01	
Configuration	240S2P	300S2P	
Installed Capacity (max.)	176kWh	220kWh	
DC Voltage Range	768 - 996Vdc	960 - 1245Vdc	
Operating Temperature	-20°C to 45°C		
Altitude	< 2000m		
Humidity	0-95% non-condensing		
Corrosion Resistance	Stainless 304 Enclosure with corrosion resistant painting		
Accessories	<ul><li>HVAC</li><li>Rack controller</li><li>Flood detector</li><li>Automatic fire suspension system</li></ul>	Smoke / temperature detector     Stainless enclosure with IP55/ NEMA 3R     Aseismic stricture for GR63 Zone4	
Gross Weight	1690 kg / 3726 lbs	1975 kg / 4354 lbs	
Dimension (L x D x H)	998.8 x 944.6 x 2461 mm (exclude HVAC), 394x 372 x 969 inches (exclude HVAC) 998.8 x 1213.9 x 2461 mm (include HVAC), 394 x 478 x 969 inches (include HVAC)		



# **Specifications**

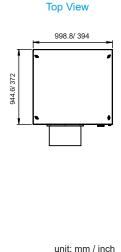
Front View



Side View
1213.9/ 478

1213.9/ 478

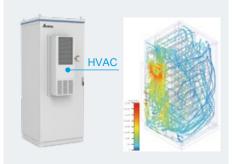
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## **Safety Design**

#### **Thermal Management**

- Thermal management at the individual cabinet level
- Equip with a HVAC system in each cabinet to optimize the efficiency of cooling and uniformity of temperature with airflow guides



#### **Anti-Fire Propagation**

- Alarm mechanism: smoke and thermal detectors
- Fire insulation mechanism to prevent fire propagation
- Automatic fire suppression system



#### Protection

- Sensors : flood, smoke, temperature
- Shockproof design GR63 Zone-4



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