



BATTERY ENERGY STORAGE SYSTEM CONTAINER, BESS CONTAINER

TLS OFFSHORE CONTAINERS / TLS ENERGY



Battery Energy Storage System (BESS) is a containerized solution that is designed to store and manage energy generated from renewable sources such as solar and wind power. BESS containers are a cost-effective and modular way to store energy, and can be easily transported and deployed in various locations.



- One of the key benefits of BESS containers is their ability to provide energy storage at a large scale. These containers can be stacked and combined to increase the overall storage capacity, making them well-suited for large-scale renewable energy projects such as solar and wind farms.
- Additionally, BESS containers can be used to store energy during off-peak hours, and then release it during peak demand periods, helping to balance the grid and reduce the reliance on fossil fuels.
- Another advantage of BESS containers is their flexibility. They can be easily transported and deployed in various locations, making them well-suited for remote or off-grid locations where traditional energy storage solutions may not be feasible.
- Additionally, BESS containers can be easily integrated with other renewable energy technologies such as solar panels and wind turbines, allowing for a comprehensive and efficient energy system.

- BESS containers also have built-in safety features to ensure that the stored energy is protected from various types of hazards, such as fire and extreme weather conditions. This includes features such as fire suppression systems and weatherproofing, ensuring that the stored energy is safe and secure.
- Battery Energy Storage System (BESS) containers are a cost-effective and modular solution for storing and managing energy generated from renewable sources. With their ability to provide energy storage at a large scale, flexibility, and built-in safety features, BESS containers are an ideal solution for organizations looking to implement renewable energy projects and reduce their reliance on fossil fuels.



TLS Offshore Containers /TLS Energy: Leading the Charge in Renewable Energy Storage Solutions

In the rapidly evolving landscape of renewable energy storage, TLS Offshore Containers /TLS Energy stands as a pioneering force. With an expansive factory covering approximately 300,000 square meters and employing around 1,000 skilled workers, we are well-equipped to meet the diverse needs of our global clientele. Our specialized integrated assembly and test workshop alone spans over 4,100 square meters and is staffed by more than 70 professional technicians. It is this robust infrastructure that allows us to excel in delivering tailor-made Battery Energy Storage System (BESS) containers.



Why Choose TLS Offshore Containers /TLS Energy?

With these diverse offerings, we have positioned ourselves as the go-to choice for customized energy storage solutions. Whether you need a basic foundation or a complete, ready-to-deploy system, TLS Offshore Containers International has you covered. We are wholly committed to innovation and flexibility, striving to meet the ever-changing needs of the renewable energy storage sector.

BESS container product / service TLS offers

1.Container Enclosure Body with Battery Rack

Our first offering serves as the cornerstone of customizable energy storage solutions. It consists of a fundamental container enclosure body, pre-equipped with a battery rack. This foundational setup gives our clients the freedom to integrate additional components as they see fit, enabling a truly customized energy storage system.



2.Semi-Integrated BESS Container Solution

For clients looking for a more comprehensive package, our second offering—the Semi-Integrated BESS Container—stands as an ideal choice. This solution comes pre-fitted with a battery rack and includes essential auxiliary components such as:

- A fire suppression system
- HVAC
- A battery cooling system
- A lighting system
- An earthing system



While this offering delivers a more complete package, it still retains the flexibility for further customization, letting clients adapt the container to their specific requirements.

3.Total BESS Container Solution

Our third and most all-encompassing offering is the Total BESS Container Solution. This turnkey package is specifically tailored to meet the client's individual needs for either off-grid or on-grid applications. It offers a ready-to-deploy solution, making it an ideal choice for those seeking a comprehensive energy storage solution without the hassle of additional modifications.





3.727MWH BATTERY CAPACITY WITH LIQUID COOLING MODE IN 20FT CONTAINER



FIRE SUPPRESSION SYSTEM



EXPLOSION-PROOF SYSTEM



THERMAL MANAGEMENT SYSTEM



UN38.3

ADVANTAGE

Long Life Span

- Thermal deviation $\leq 3^{\circ}\text{C}$
- Free to install & scalable

Easy Maintenance

- Hyper-cloud data analysis
- Automatic remote monitoring

Items	Features
IP rated	IP55
Corrosion	C5
Seismic grade	IEEE693
Crane compatible	Crane compatible structure on top or bottom

High Energy Density

- Max energy density $\geq 252.3 \text{ kWh/m}^2$
- Low aux. power consumption (modular & fan-free design)

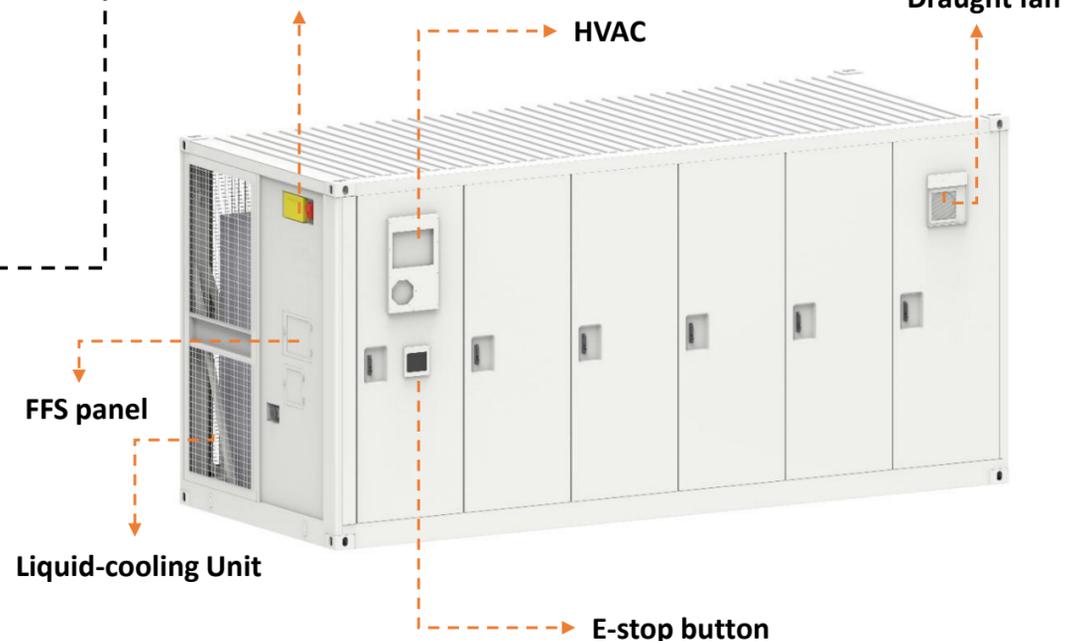
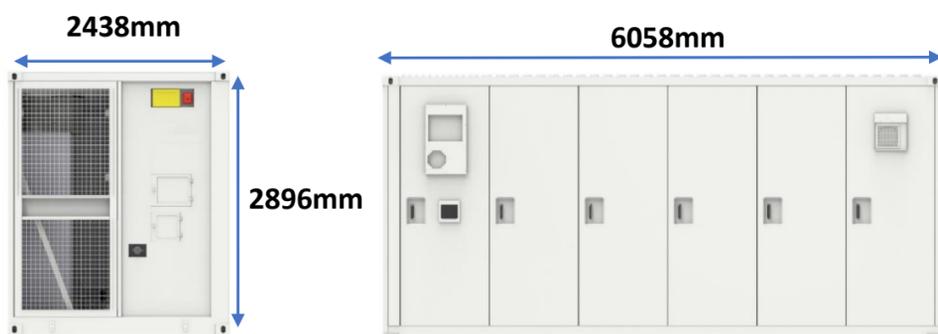
Safe & Reliable

- IP67 battery pack
- Multi-level battery protection
- Double-layer anti-flaming explosion-proof design

Sound & light warning

Draught fan

HVAC

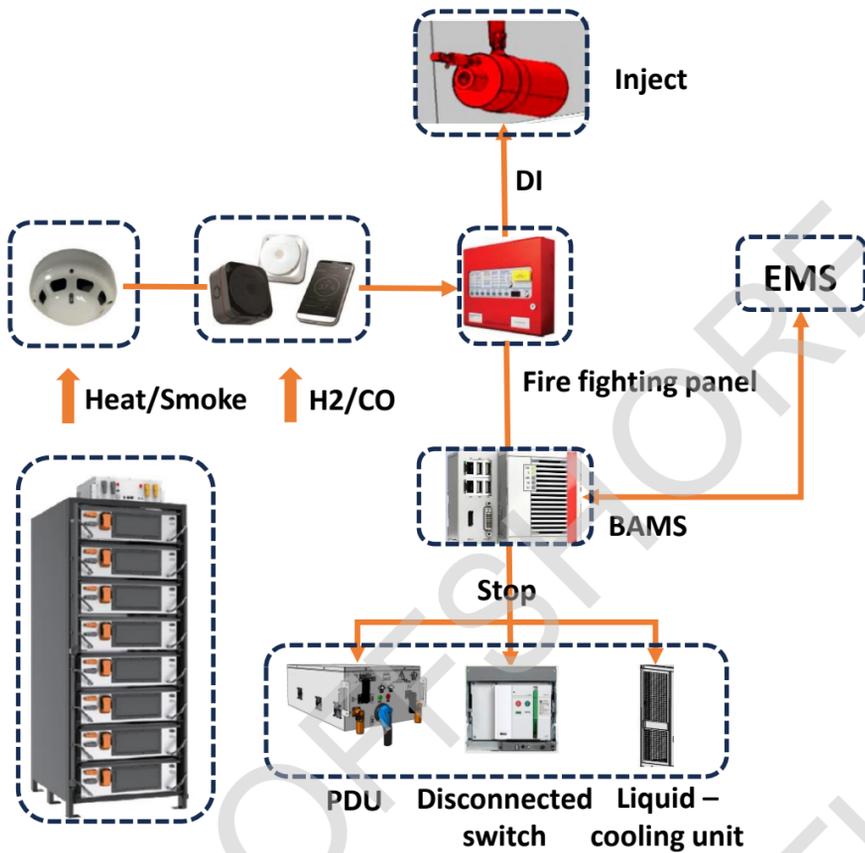




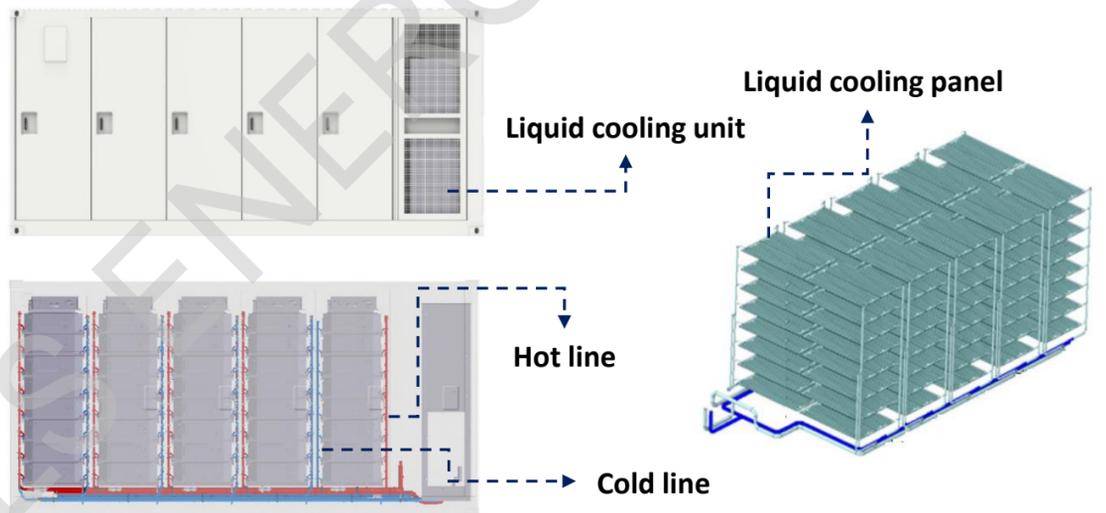
	Items	Unit	Specification
Battery system	Battery type		LFP 280Ah
	Rated energy	MWh	3.73
	Configuration		1P416S 10 Racks
	DC Volt, Max.	V	1500
	DC Volt, Nominal	V	1331
	DC Volt, Min.	V	1164
	Rated Power	MW	1.86
Enclosure	Enclosure Type		20ft container
	Dimension[LxDxH]	mm	6058*2438*2896
	Weight	T	≤39

	items	Unit	Specification
Enclosure	IP rated		IP55
	Operating Amb. Temp.	°C	-30~50
	Operating Batt. Tem.	°C	25±10
	Corrosion		C5
	Operating Altitude	m	≤3000
	Foundation		Piles or Concrete Pad
Protection components	Explosion Prevention		Explosion-proof fan, Deflagration valve, Exhaust venting
	DC Disconnect		Yes
	DC Protection Fuse		Yes
	Insulation Monitoring		Yes
	AC Breakers		Yes
	SPD		Yes
	SMPS		Yes
	MCB		Yes
	UPS		Yes (up to 2 hours)
	Communication	Communication Protocol	
FFS			Yes
FFS	Suppression system		Yes (Aerosol)
	Smoke & Thermal Detector		Yes
	Hom & Strobe		Sound & Light
	Compliance		UL1973, UL9540, UL9540A, IEC62477, EC62619, IEC61000, IEC63056

FIRE SUPPRESSION SYSTEM



THERMAL MANAGEMENT SYSTEM



EXPLOSION-PROOF SYSTEM

1. Active ventilation system

When the system is in the level 2 alarm status, active ventilation system will act to maintain the concentration under threshold value of PPM.

2. Pressure relief valve

When the system pressure is over the threshold value, the pressure relief valve will act passively, until the pressure is lower than safety threshold value.

