TECLOMAN

Vega

MW-Level 20ft Liquid-Cooled Commercial & Industrial Energy Storage System

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Tecloman's MW-level 20ft liquid-cooled commercial & industrial energy storage system adopts 315Ah lithium iron phosphate (LFP) battery cells and is transported as a whole in a standard 20ft container. It can be flexibly configured with a maximum power of 1000kW and an energy density of up to 2096kWh to meet diverse customer needs.

The MW-level 20ft liquid-cooled commercial & industrial energy storage system is designed for domestic and international commercial & industrial energy storage applications. It features an integrated 20ft standard container with high-safety fire protection and intelligent temperature control systems. The system is widely applicable in scenarios such as peak shaving and valley filling, emergency backup power, smart microgrids, and renewable energy integration at the distribution transformer level.

Product Introduction

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Compact Structure

Footprint: 14.76m²

315Ah Battery Cell

315Ah energy storage-specific cell with high energy density, high safety, and over 6,000 cycles.

Fire Safety Protection

Reliable integration of intelligent temperature control and fire management enhances system fire safety.

Multi-Scenario Applications

Suitable for renewable energy integration, microgrids, peak regulation, and more.

Multi-Level Fire Protection

Module-level fire protection & cabin-level fire protection & water firefighting interface, combustible gas detection, exhaust ventilation system, water immersion, and automatic pressure relief functions.

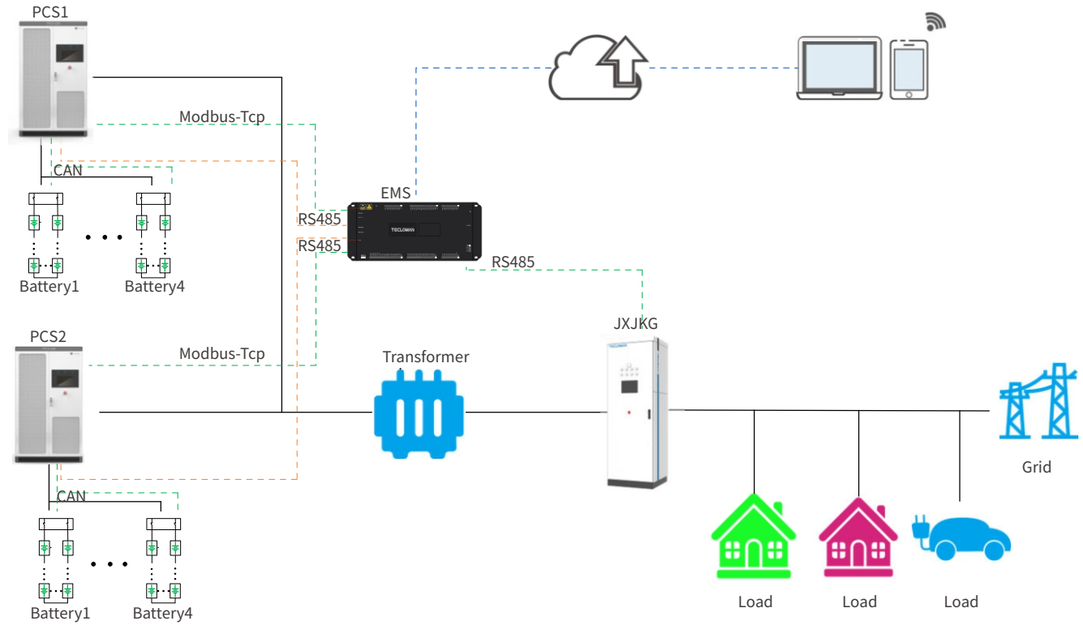
Two-Level Fusing Mechanism

PCS circuit and battery cluster circuit with 4ms DC fusing mechanism.

Product Features

Typical System Topology

Typical Configuration Scheme:



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Typical Application Scenarios:

Peak shaving and valley filling to reduce electricity costs

Charge during off-peak hours and discharge during peak hours to save costs through price differentials.

Demand-side response for additional revenue

Participate in grid response or markets to earn subsidies or profits.

Dynamic Capacity Expansion

Expand transformer capacity to mitigate short-term overload and losses caused by load fluctuations.

Promote Renewable Energy Integration

Pair with distributed energy to store surplus electricity, increase green energy self-use, and reduce carbon emissions.

Application Scenarios

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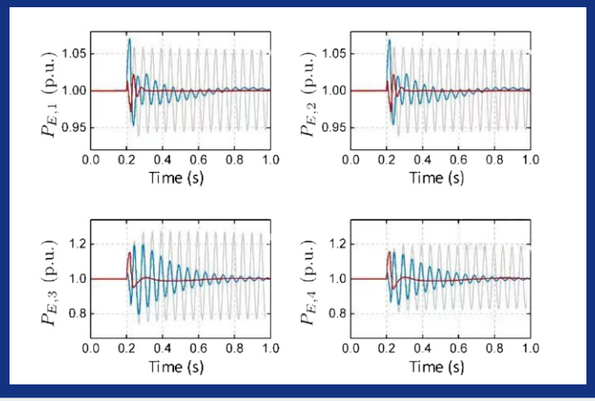
Advantage One

Split-system design
Electrical cabin and battery cabin are isolated to maximize system safety.

Advantage Two

Rapid demand-side response, bidirectional interaction, and enhanced grid stability.



Product Advantages

Advantage Three

Based on highly integrated and modular design, the system can achieve seamless scaling from MW-level to tens of MW-level by paralleling standard containers. This innovative 'building blocks' approach makes large-scale energy storage deployment simpler and faster than ever.

Advantage Four

Safe operation and maintenance
Multi-dimensional fire protection, remote real-time monitoring.

version

APP/Mini Program

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Model	TESS-1000-2096
AC (On-Grid)	
Rated Power*	1000kW
Rated Voltage	400V
Rated Current	1444A
AC Wiring	3L/N/PE
Voltage Range	400Vac (-15% ~ +10%)
Rated Frequency	50Hz/60Hz
THDI	＜3%(@Rated Power)
Power Factor	＞0.99
Power Factor Range	±1
Overload Capacity	110% overload (10 min), 120% overload (1 min)
AC (Off-Grid)	
Rated Power	1000kW
Rated Voltage	400V
Rated Current	1444A
Rated Frequency	50Hz/60Hz
THDU	＜3% (Resistive load)
DC (Battery)	
Cell Type	LFP 3.2V/315Ah
Configuration	260S8P
Battery Capacity	2096kWh
Charging and Discharging rate	⩽0.5P
Rated Voltage of Battery Rack	832V
Voltage Range	728 ~ 949V
General	
Noise Level	＜75dB (A) @1m

Product Parameters

Model	TESS-1000-2096
Protection level	IP54
Anti-corrosion Degree	C3
Operating Temperature	-25°C ~ +55°C
Fire Protection	Aerosol
Cooling Method	Liquid-cooled air conditioning+
Relative Humidity	0~95%(non-condensing)
Altitude	<2000m(derated above 2000m)
Dimensions (W×D×H))	6058×2438×2896 mm
Weight	27000kg
Certification	EN 62477-1、EN 61000-6-4、EN 61000-6-2、EN50549-1、C10/11、EN50549-2、Rfg:2016 NC Rfg:2018、PTPiREE: 2021、EU 2023/1542 Article 6+10+12+14、UL1973、UL9540A:2025、ST/SG/AC.10/11/Rev.8/Section 38.3
Communication	
Display	Toucg Screen
Communication Interfaces	RS485、LAN
Communication Protocol	Modbus

*Note: The maximum battery output power shall not exceed 0.5P.
The rated power of a single PCS can be selected from 630 kW, 500 kW, 400 kW, or 250 kW.