

# Mobile Energy Storage Power Supply Vehicle

TCSS-125-225

TCSS-500-723

TCSS-1000-2089



## Product Overview

The Mobile Energy Storage Power Vehicle utilizes a truck chassis as its carrier, employing lithium iron phosphate batteries as energy storage units. It integrates a secure and reliable BMS system, energy storage inverters, and an energy management system. Designed for multi-terrain adaptability, its modular integrated architecture enables dual-mode operation (grid-connected/off-grid) with seamless switching, along with online monitoring and analysis capabilities. This meets on-site requirements for emergency power supply, power protection, and uninterrupted power delivery. It effectively overcomes the drawbacks of traditional power vehicles, such as high noise levels, environmental pollution, and poor reliability.

### High Quality, Low Cost

Quality assurance with 10ms seamless switching, delivering 85% savings in power generation costs compared to diesel engines.

### Rapid Switching & Stable Power Supply

STS ultra-fast switching (<10ms) ensures uninterrupted power reliability.

### Redundant Auxiliary Power Design

Ensures continuous fire suppression and monitoring system operation with zero interruption protection.

### Quiet & Eco-Friendly Generation

Say goodbye to the diesel generators and enjoy quiet, clean power, with zero emissions during power generation.

### Safety and Reliability

Perfluorohexane module-level active fire suppression with isolated battery and electrical compartments enhances protection ratings.

### Intelligent Temperature Control System

Provides a smart, reliable operating environment to extend battery lifespan.

### Multiple Recharging Methods

Supports grid, generator, and charging station recharging.

### Multi-Functional Utility

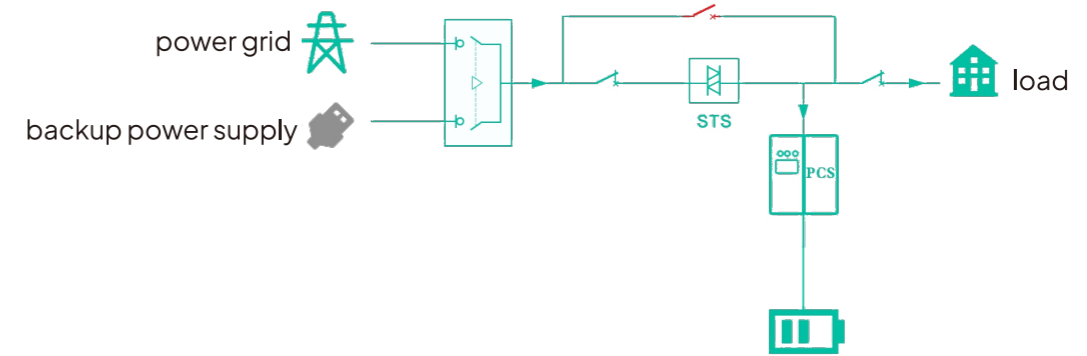
Supports emergency power backup, off-grid supply, EV rescue, dynamic capacity expansion, and peak-valley arbitrage applications.

Model	TCSS-125-225	TCSS-500-723	TCSS-1000-2089
<b>DC side</b>			
Individual cell capacity		314Ah	
Cycle life		6000	
Battery voltage range	680V ~ 817Vdc	696V ~ 864Vdc	754V ~ 936Vdc
Maximum charging current	157A	391A	1201A
Maximum discharging current	201A	790A	1459A
Battery capacity	225kWh	723kWh	2089kWh
<b>AC side</b>			
Rated output power	112kW	300kW	1000kW
Rated discharging power	125kW	500kW	1000kW
Rated voltage		400Vac (-15% ~ +10%)	
Grid frequency		50±5Hz / 60±5Hz	
THDI		≤3% (Rated Power)	
AC System Wiring Type		3L/N/PE	
Power Factor Range		0.99 (Lagging) ~ 0.99 (Leading)	
<b>Load Side</b>			
Rated Output Power	125kW	500kW	1000kW
Maximum Output Power	137kW	550kW	1100kW
Rated Output Current	180A	722A	1443A
Maximum Output Current	198A	794A	1588A
Rated Voltage		400Vac	
Voltage Range		400VAC ± 10%	
Rated Frequency		50Hz / 60Hz	
THDU		≤3% (Resistive Load)	
Isolation Method		Non-isolated / Transformer	
Output System		3L/N/PE	
Overload Capacity	110% overload (10 min) 120% overload (1 min)	110% overload (10 min) 120% overload (1 min)	110% overload (10 min) 120% overload (1 min)
<b>Other parameters</b>			
Design life		10 years or 6,000 cycles (80%)	
Battery cooling method	Air-cooled	Air-cooled	liquid-cooled

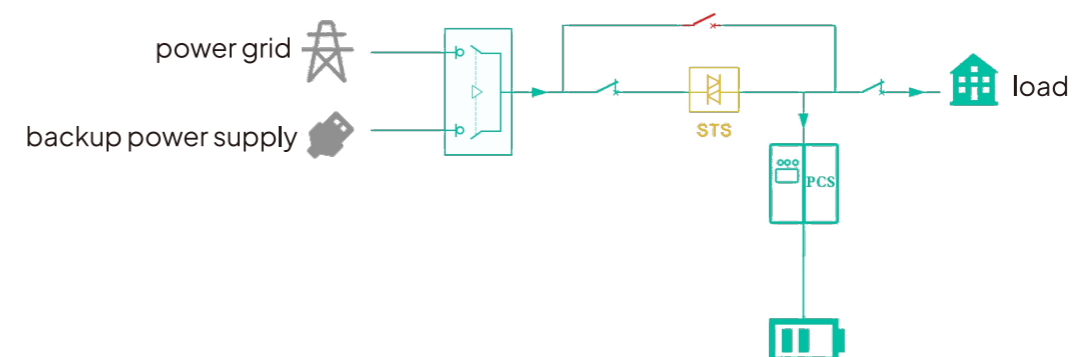


@ Technical Principles

Model	TCSS-125-225	TCSS-500-723	TCSS-1000-2089
Protection rating	IP54		
Noise level	75 dB		
Grid-connected/off-grid switching function	Available		
Grid-connected/off-grid switching time	≤10 ms		
Communication interfaces	RS485/LAN		
Monitoring platform	Available		
<b>Vehicle parameters</b>			
Cab dimensions (LxWxH)	3500 x 2355 x 1950 mm	6800 x 2500 x 2640 mm	9400 x 2520 x 2585 mm
Overall vehicle dimensions	5995 x 2355 x 3100 mm	9100 x 2500 x 3910 mm	12000 x 2520 x 3830 mm
Chassis manufacturer (specifiable)	Iveco (China VI)	Dongfeng (China VI)	Dongfeng (China VI)
Gross Vehicle Weight	6500 kg	25,000 kg	31,000 kg
Maximum Passenger Capacity	3 people	3 persons	2 people
Maximum Speed	110 km/h	110 km/h	89 km/h
Hydraulic Supports	Available		
Soundproofing and Thermal Insulation	Available		
Cables and Cable Reels	Optional		
Cable Reel Cables	50 metres	30 metres	20 metres
Charging Points	Available (Choose either cable or reel)		
Charging Point Power Reception System	Optional		
Positioning System	Available (Beidou/GPS)		
Fire Safety System	Perfluorohexane active fire suppression system		
Ventilation and Cooling System	Electric louvres		
Lighting System	Available		
Body Colour	Engineering yellow (can be specified)		
<b>Environmental Parameters</b>			
Relative Humidity	≤95% RH, non-condensing		
Operating Ambient Temperature	-15°C to 50°C		
Extreme Operating Temperature	-20°C to 55°C		
Optimal Operating Temperature	20°C to 30°C		
Altitude	2000m (derated for use above 2000 m; between 2000 m and 4000 m, derated linearly to 20%) 3000 m (derated for use above 3000 m; 3000 m to 5000 m: linear derating to 30%) 2000 m (derated for use above 2000 m; between 2000 m and 4000 m, derated linearly to 20%)		



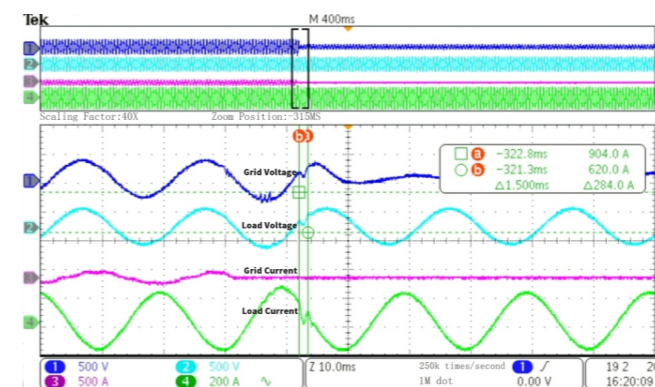
Grid connection and power supply reliability



Switch from grid-connected to off-grid

📄 Transition effects

Switch from grid-connected to off-grid



Switching from off-grid to grid-connected

