



Liquid Cooling MTCB Container Energy Storage System



Compact and Flexible.

The structural design of Mate Solar's MTCB series products is more compact and flexible.



Improve Power Supply Quality

It can help customers cut peaks and valleys, adjust peaks and frequency, reduce dependence on the power grid.



Eco-Friendly

The product is green and environmentally friendly, with low noise, zero pollution and zero emissions.



Maximum Capacity of 645kWh

The system which can meet different power needs in different scenarios such as fixed locations, and noise-sensitive areas.

Product Features

- Suitable for any hybrid renewable energy generation system;
- Reduce dependence on the public power grid and can be used for emergency power supply in areas without electricity;
- Energy storage systems can achieve fast charging and black start of microgrids;
- To make up for the negative impact of the randomness of distributed output power on the security and economic operation of the power grid, it can participate in auxiliary services such as peak regulation, frequency regulation, and voltage regulation of the power grid;
- The container material is made of special weathering steel SPA-H. The design is compact, allowing overall transportation, easy installation and debugging, and low construction cost;
- Reduce noise pollution, less than 80dB at one meter, zero CO₂ and NO_x emissions;
- IP54 outdoor cabinet and optional C4 and above anti-corrosion grade;
- The liquid cooling system ensures higher system efficiency and cell cycling up to 10,000 cycles. The liquid cooling system reduces system energy consumption by 20% and extends battery life by 10%.

Equipment Interface Instruction



Easy to transport

2 forklift holes;
4 top rings;
Can be transported as a whole.



Temperature Control System

Choose Chinese No. 1 brand;
Intelligent operation of liquid cooling system;
Real-time control of system operating temperature;
Refrigerant: 50% ethylene glycol solution.



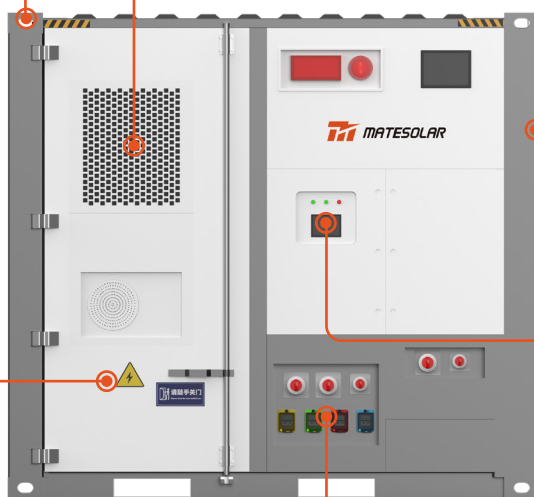
Automatic fire extinguishing system

Gas purity:>99.6%;
Independent backup power supply;
Perfluorohexanone clean fire extinguishing agent;
Various combustible gas detection;
Multiple early warning protection functions, safe and reliable.



LFP Battery

Choose the top 3 battery cell brands in China;
Excellent battery consistency;
≥10000 times@0.5C@DOD90%.



MPMC BMS

Temperature protection;
Short circuit protection;
Insulation protection;
Over load protection;
Over charge protection;
Over discharge protection;
Over and under voltage protection;
Over current protection, etc.



External connection

Plug and play (input/output);
IP67 waterproof rating;
Three-phase 100% unbalanced load;
Strong impact resistance;
Suitable for various complex loads;
External power source:
generator set/mains power.



EMS

LCD screen;
Minimalist UI for easy operation;
No need to enter the device, external operation runs;
One-stop platform monitoring:
Web/Cloud Platform/Remote Control.

Technical Parameters

MODULE	MTCB-H10-100M1P	MTCB-H10-100M2P	MTCB-H10-250M3P	MTCB-H10-300M3P
Battery				
Battery Type	LiFePO4			
Rated Charge/Discharge Performance	≤ 0.5C			
Nominal Voltage [V]	768			832
Operating Voltage Range [V]	672~876			728~949
Cell Rated Capacity [Ah]	280			
Nominal Capacity [kwh]	215	430	645	699
Composition	(1P240S)*1P	(1P240S)*2P	(1P240S)*3P	(1P260S)*3P
AC Output (On Grid)				
Rated Output Power [kw]	100		250	300
Max. Output Current [A]	159		390	477
Rated Grid Voltage [V]	3/N/PE, 230/400			
Rated Grid Frequency [Hz]	50/60			
Power Factor	>0.99			
Power Factor Adjustable Range	0.9 (leading) ~0.9 (lagging)			
DC Component	< 0.5% In			
THDi	<3% (@rated power)			
AC Output (Off Grid)				
Rated Output Power [kw]	100		250	300
Max. Output Current [A]	159		390	477
Rated Output Voltage [V]	3/N/PE, 230/400			
Rated Output Frequency [Hz]	50/60			
Unbalanced Load Capacity	100%			
General Data				
Ingress Protection	IP54			
Battery Cooling Method	Battery compartment (liquid cooling), electrical compartment (air cooling)			
Fire Fighting System	1230 fire fighting system			
Relative Humidity	0~95%, non-condensing			
Temp. Range [°C]	-20~+50			
Altitude [m]	5000m(>2000m derating)			
Communication	CAN, RS485			
Communication Protocol	Modbus, IEC104			
Weight [T]	6.5	8.5	10.8	11
Dimension (W*D*H) [mm]	2991×2438×2896			
Delivery Method	Integral transportation			

* In case of changes in product dimensions and parameters, the latest information from our company shall prevail without prior notice.

Application Scenarios

Electricity Saving

Peak-Load Shifting.



Factory



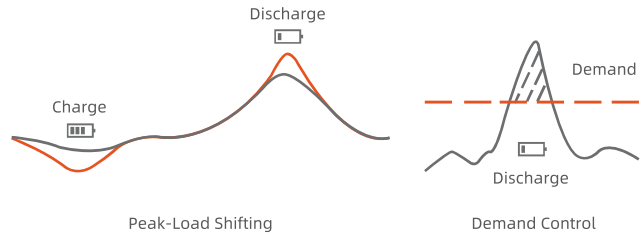
Office Block



Data Center



Charging Station



Power Expansion

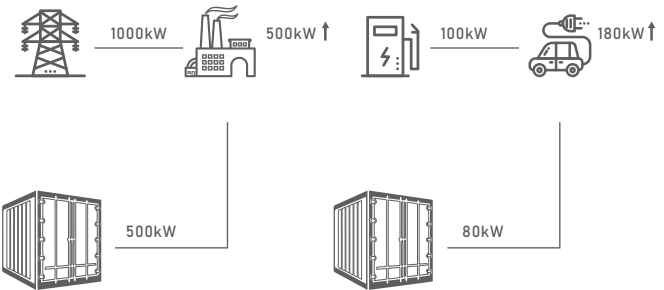
Discharge when the distribution capacity cannot meet the load demand to achieve the effect of virtual capacity expansion.



Factory



Charging Station



Backup Power Supply

Discharge to secure electricity supply in case of grid outage or limit on electricity supply.



Factory



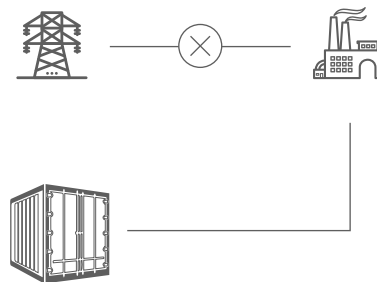
Office Block



Shopping Mall



Hotel



Solar & Energy Microgrid

Can realize electricity saving. Applications such as backup power supply provide stable power in areas that cannot be connected to the grid, such as islands and mountainous areas.



Factory



Charging Station



Remote Area

