

M SERIES LITHIUM BATTERY

Lithium Battery Module

12VDC 105Ah / 150Ah / 230Ah / 300Ah / 400Ah • 24VDC 150Ah



TBB's M Series lithium iron phosphate battery delivers a high continuous discharge current, making it one of the most capable solutions on the market for powering heavy-duty onboard appliances such as air conditioners, coffee makers, and microwave ovens.

Despite its high discharge capability, the battery maintains a lightweight and compact design. It also supports parallel connection of up to 8 units, offering exceptional versatility for a wide range of applications and flexible installation options.

Equipped with a built-in BMS, the M Series battery provides comprehensive protection against overcharging, over-discharging, and over-temperature conditions by monitoring each cell's status. This ensures enhanced safety and extends the battery's service life.

The integrated heating element automatically warms the battery cells when external charging is detected, enabling reliable charging even in extremely low ambient temperatures.

An elegantly designed monitor displays key battery information such as voltage, current, and SoC. It allows users to remotely disconnect the battery power if needed. In addition, the monitor supports mobile APP control via built-in Bluetooth connectivity, offering convenient access to battery status and functions.

Features

- Long cycle life: >4,000 cycles (0.5C charge/discharge, 80% DoD, @25°C) *1
- Supports max discharge current: 200A for M12-100/M12-150/M24-150, and 300A for M12-230/M12-300/M12-400
- Max 8 batteries can be paralleled
- Built-in BMS with automatic balancing and complete protection
- Built-in high precision shunt for accurate SOC-based charge/discharge timing
- Built-in heating element: automatically warms the battery during low-temperature charging
- Battery BMS idle consumption drops by over 90% (to <0.1mA) from standby mode to shutdown mode
- Intelligent voltage and current control with terminal adaptive charging to ensure the well balancing among cells for optimal cyclife
- Supports CAN and RS485 communication
- Remote control: mobile APP & Bluetooth connectivity

*1: Except M12-400

Model NO.	M12-100		M12-150	M12-230
Electrical				
Cell type	LiFePO4			
Rate capacity (Ah)	105	150	230	
Rated power (kWh)	1.34	1.932	2.94	
Rated voltage (V)	12.8	12.88	12.8	
Charging voltage (V)	14.2			
Recommended charging current (A)	50	75	115	
Maximum charging current (A)	100	150	230	
Continuous discharge current (A)	150	150	230	
Maximum discharge current (A)	200 - 15 minutes	200 - 15 minutes	300	
Cell operating temperature (charging)	2°C ~ 63°C			
Cell operating temperature (discharging)	-30°C ~ 63°C			
Storage temperature range (<1 month)	-20°C ~ 45°C, 20% ~ 80% SOC, < 65% RH	-20°C~-45°C, 20%~50% SOC, <65% RH		
Storage temperature range (<6 months)	-20°C ~ 35°C, 20% ~ 80% SOC, < 65% RH	0°C~35°C, 20%~50% SOC, < 65% RH		
Operating humidity range	10% ~ 90% RH			
Dimensions (mm)	310 x 165 x 187	333 x 175.5 x 224	345mm × 190mm × 245mm 384mm × 194mm × 248mm (terminals/handles included)	
Weight (kg)	10.5	14.7	22.0	
IP protection	IP20			
Certifications	CE, UN38.3, E-Mark			
Shipping class	UN3480			
Cycle life	>4000 (0.5C charge and discharge, 80% DoD, @25°C)	3000 (1C charge and discharge,90% DoD, at 25°C) 4000 (0.5C charge anddischarge, 80% DoD, at 25°C)		
Heating element	YES			
Maximum number of parallel	8			
Display unit (optional)	VS28-LS, DTU-BLE			

Model NO.	M12-300	M12-400	M24-150
Electrical			
Cell type	LiFePO4		
Rate capacity (Ah)	300	400	150
Rated power (kWh)	3.86	5.12	3.84
Rated voltage (V)	12.88	12.8	25.6
Charging voltage (V)	14.2		28.4
Recommended charging current (A)	150	200	75
Maximum charging current (A)	300	300	150
Continuous discharge current (A)	300	200	150
Maximum discharge current (A)	300	300	200
Cell operating temperature (charging)	2°C ~ 63°C	2°C ~ 60°C	2°C ~ 63°C
Cell operating temperature (discharging)	-30°C ~ 63°C	-20°C ~ 60°C	-30°C ~ 63°C
Storage temperature range (<1 month)	-20°C ~ 45°C, 20% ~ 80% SOC, < 65% RH		
Storage temperature range (<6 months)	-20°C ~ 35°C, 20% ~ 80% SOC, < 65% RH		
Operating humidity range	10% ~ 90% RH		
Dimensions (mm)	380 x 230 x 336.5	462 x 237 x 326.5	380 x 230 x 336.5
Weight (kg)	32.2	41.5	32.2
IP protection	IP20		
Certifications	CE, UN38.3, E-mark	CE, UN38.3, E-mark, UL	CE, UN38.3, E-mark
Shipping class	UN3480		
Cycle life	>4000 (0.5C charge and discharge, 80% DoD, @25°C)	>3000 (0.5C charge and discharge, 100% DoD, @25°C)	>4000 (0.5C charge and discharge, 80% DoD, @25°C)
Heating element	YES		
Maximum number of parallel	8		
Display unit (optional)	VS28-LS	VS28-LS, DTU-BLE	