

M SERIES LITHIUM BATTERY

Lithium Battery Module ▼

12VDC 105Ah / 200Ah / 300Ah / 400Ah
48VDC 105Ah



TBB's M series lithium iron phosphate battery comes with high continuous discharge current, which makes it as one of the best in the market to well handle heavy duty appliance for on-board application such as air-conditioner, coffee maker, microwave oven etc.

Heavy discharge current whilst still in light weight and compact size, plus supports parallel connection up to 8pcs, M series lithium battery is versatile for almost all implementation and flexible on installation.

With built-in BMS against overcharging, over discharging, over temperature by monitoring current/voltage of each cell etc., to provide overall protection to battery and prolong battery service life.

With built-in heating element, it will automatically heat the lithium battery cells when external charging resources detected, to ensure the charging even in extreme low ambient temperature.

An elegant design monitor with information of battery voltage, current, SoC etc, which allows user to fully understand his/her battery status, as well as allows user to cut-off power from battery remotely. Furthermore, the monitor also supports mobile APP with its built-in Bluetooth connectivity.



Features

- Long cycle life: over 3000 cycles at 100% DoD @25°C (M12-300: over 4000 cycles at 80% DoD)
- Supports max discharge current 150A for M12-100/M12-100H/M48-105, and 300A for M12-200/M12-300/M12-400
- Supports parallel connection up to 8pcs
- Built-in BMS with automatic balancing and complete protection
- Built-in high precision($\pm 0.1A$) shunt for SOC calculation
- Built-in heater element to support battery be charged at temperature $-30^{\circ}C$
- Special designed BMS to reduce idle power by 90% ($<0.1mA$) upon battery turns off
- Predebugged BMS software compatible with TBB power system to assure designed lifespan of lithium battery
- Supports CAN and RS485 communication
- Supports remote battery switch



Model NO.	M12-100	M12-100/H	M12-200	M12-300	M12-400
Electrical					
Cell type	LiFePO4				
Rate capacity (Ah)	105		200	400	400
Rated power (kWh)	1.34		2.56	5.12	5.12
Rated voltage (V)	12.8				
Charging voltage (V)	14.2				
Recommended charging current (A)	50		/	150	/
Maximum charging current (A)	100		200	300	200
Continuous discharge current (A)	100		200	300	200
Maximum discharge current (A)	150 - 30 minutes		300 - 10 minutes	300	300 - 10 minutes
Cell operating temperature (charging)	2℃ ~ 60℃				
Cell operating temperature (discharging)	-30℃ ~ 60℃			-30℃ ~ 63℃	-20℃ ~ 60℃
Storage temperature range (<1 month)	-20℃ ~ 45℃, 20% ~ 80% SOC, < 65% RH				
Storage temperature range (<6 months)	-20℃ ~ 35℃, 20% ~ 80% SOC, < 65% RH				
Operating humidity range	10% ~ 90% RH				
Dimensions (mm)	310 x 165 x 187		380 x 230 x 328	462 x 237 x 326.5	462 x 237 x 326.5
Weight (kg)	11.0		25.5	42.5	42.5
IP protection	IP20				
Certifications	UL, FCC, UN38.3	CE, UKCA, UN38.3, E-MARK	UKCA, CE, UN38.3	CE, UN38.3, E-MARK	UKCA, CE, UL, UN38.3, E-MARK
Shipping class	UN3480				
Cycle life	>3000(0.5C charge and discharge, DOD 100%,@25 ℃)			>4000(0.5C charge and discharge,80%-DoD,@25 ℃)	>3000(0.5C charge and discharge, DOD 100%,@25 ℃)
Heating element	YES				
Maximum number of parallel	8				
Display unit (optional)	VS28-LS, DTU-BLE			VS28-LS	VS28-LS, DTU-BLE



Model NO.	M48-105
Electrical	
Cell type	LiFePO4
Rate capacity (Ah)	105
Rated power (kWh)	5.04
Rated voltage (V)	48
Charging voltage (V)	53.25
Recommended charging current (A)	52.5
Maximum charging current (A)	100
Continuous discharge current (A)	100
Maximum discharge current (A)	150
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
Storage temperature range (<6 months)	-20°C ~ 35°C, 20% ~ 80% SOC, < 65% RH
Operating humidity range	10% ~ 90% RH
Dimensions (mm)	455 x 200 x 300
Weight (kg)	39.2
IP protection	IP20
Certifications	CE, UN38.3, UKCA, E-MARK
Shipping class	UN3480
Cycle life	>3000(0.5C charge and discharge, DOD 100%,@25 °C)
Heating element	YES
Maximum number of parallel	8
Display unit(optional)	VS28, VS28-LS