



RB170

Voltage: 12.8V | Capacity: 170 Ah | Energy: 2176 Wh

LITHIUM IRON PHOSPHATE BATTERY LIFePO4

ELECTRICAL SPECIFICATIONS		
Nominal Voltage	12.8 V	
Nominal Capacity	170 Ah	
Capacity @ 25A	408 min	
Resistance	≤55 mΩ @ 50% SOC	
Efficiency	99%	
Self Discharge	<3% per Month	
Maximum Modules in Series	1 (Single Use)	

DISCHARGE SPECIFICATIONS		
Maximum Continous Discharge Current	200 A	
Peak Discharge Current	250 A (≤5 s)	
BMS Discharge Current Cut-Off	480 A (±50 A) (6 ±3 ms)	
Recommended Low Voltage Disconnect	11 V	
BMS Discharge Voltage Cut-Off	8 V (2.0 ±0.1 vpc) (100 ±50 ms)	
Reconnect Voltage	10 V (2.5 ±0.1 vpc)	
Short Circuit Protection	400-800 µs	

TEMPERATURE SPECIFICATIONS		
Discharge Temperature	-4 to 140 °F (-20 to 60 °C)	
Charge Temperature*	-4 to 113 °F (-20 to 45 °C)	
Storage Temperature	23 to 95 °F (-5 to 35 °C)	
BMS High Temperature Cut-Off	149 °F (65 °C)	
Reconnect Temperature	122 °F (50 °C)	

*Refer to charge currents below 32°F (0°C)

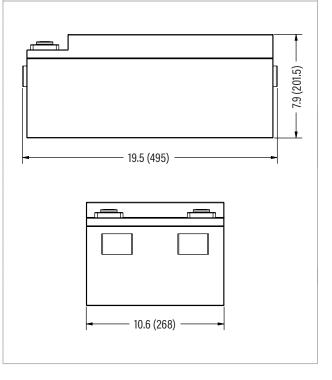
MECHANICAL SPECIFICATIONS		
Dimensions (L x W x H)	19.5 x 10.6 x 7.9" 495 x 268 x 201.5 mm	
Weight	66.1 lbs (30 kg)	
Terminal Type	M8 x 1.25 x 12mm	
Terminal Torque	80 - 100 in-lbs (9 - 11 N-m)	
Case Material	Steel Case	
Enclosure Protection	IP66	
Cell Type - Chemistry	Cylindrical - LiFePO ₄	

CHARGE SPECIFICATIONS

Recommended Charge Current	8.5 A - 50 A
Maximum Charge Current	100 A
Charge Current 14 to 32 °F (-10 to 0 °C)	≤0.1 C
Charge Current -4 to 14 °F (-20 to -10 °C)	≤0.05 C
Recommended Charge Voltage	14.2 V - 14.6 V
BMS Charge Voltage Cut-Off	15.2 V (3.8 ±0.05 vpc) (1 ±0.5 s)
Reconnect Voltage	14.4 V (3.6 ±0.025 vpc)
Balancing Voltage	14.4 V (3.6 ±0.025 vpc)

COMPLIANCE SPECIFICATIONS	
Certifications	UN38.3 & CE (battery) UL1642 (File# MH64523) (cells) IEC62133 (cells)
Shipping Classification	UN 3480, CLASS 9

DIMENSIONAL SPECIFICATIONS







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PERFORMANCE CHARACTERISTICS DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS RATES DISCHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES DISCHARGE 1C 25.C (77°F) 14.5 145 14.0 14.0 13.5 13.5 13.0 13.0 12.5 12.5 Voltage (V) 12.0 Voltage (V) 12.0 11.5 11.5 11.0 11.0 10.5 10.5 10.0 10.0 - 60°C (140°F) 25°C (77°F) 45°C (113°F) 10°C (50°F) 9.5 9.5 9.0 9.0 8.5 8.5 -20°C (-4°F) -2C 8.0 8.0 20% 40% 60% 80% 100% 120% 0% 20% 60% 80% 100% 120% 0% 40% Capacity Capacity CHARGE VOLTAGE CHARACTERISTICS at VARIOUS TEMPERATURES CHARGE VOLTAGE and STATE OF CHARGE (SOC) CHARGE 0.2C CHARGE 0.2C @ 25°C (77°F) 15.0 15.0 140% 14.5 14.0 130% 120% 14.5 14.0 13.5 110% 13.5 13.0 12.5 13.0 100% 12.5 90% Voltage (V) SOC Voltage (V) 12.0 12.0 80% 11.5 11.0 11.5 11.0 70% 60% 10.5 10.5 50% 10.0 9.5 10.0 40% 30% 9.5 −45°C (113°F) −25°C (77°F) − 5°C (41°F) 9.0 9.0 20% —Voltage —State of Charge 8.5 8.5 10% 8.0 8.0 0% 0% 20% 40% 60% 80% 100% 120% 0 50 100 150 200 250 300 350 State of Charge Time (Minutes) CYCLE LIFE vs. DEPTH OF DISCHARGE (DOD) CAPACITY of RELION LIFePO4 vs. LEAD ACID DISCHARGE 0.5C/CHARGE 0.5C @ 25°C (77°F) at VARIOUS RATES OF DISCHARGE 100% 140 130 95% 120 90% 110 85% 100 Remaining Capacity 80% Capacity (Ah) 90 75% 80 70 70% 60 -RELION LIFePO4 - GROUP 31 65% 50 -FLA - GROUP 31 60% _ -50% DOD 40 -AGM - GROUP 31 -80% DOD 55% 30 -GEL - GROUP 31 -100% DOD 50% 20 6000 Cycles 0 10000 12000 14000 0 10 80 2000 4000 8000 20 30 40 Rate (A) 50 60 70 FOR THE PLANET UN38.3 C€ 23

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