

Natron Energy - BluePack Critical Power Battery - Specifications Rev 1.4

Part Number: ZZ-0007-00

7/24/2023

Performance		
Run Time, Load	1 min	34 kW
	1.7 min	25 kW
	3 min	17.4 kW
	4 min	14.1 kW
	5 min	12.5 kW
Energy, 1 hour (1C rate)	1235 Wh	
Energy Efficiency (1C-1C)	>97%	
Coulombic Efficiency (1C-1C)	>99%	
Cycle life (80% energy utilization)	>50,000	
Energy Density	19.6 Wh/L	
1-Minute Peak Power Density	509 W/L	
2-Minute Nominal Power Density	318 W/L	
Self Discharge Rate	0.7% SOC/day	
Temperature Rise-1st 25kW discharge	10°C	
Temperature Rise-1st 100A recharge	-4°C	
Specific Energy	16.5 Wh/kg	
1-Minute Peak Specific Power	453 W/kg	

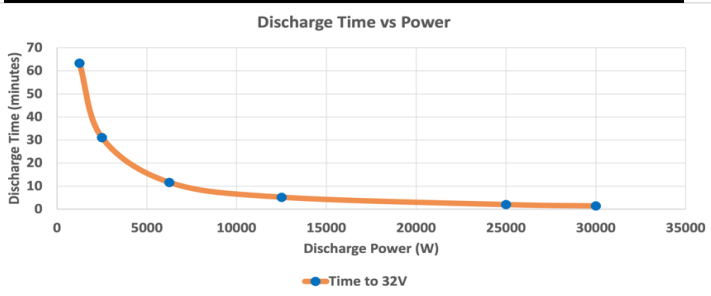
Electrical	
Nominal Voltage	48 Vdc
Recommended Float Voltage	58 to 59 Vdc
Operating Range	38 to 59 Vdc
Survival Voltage Range	0 to 80 Vdc
Maximum Discharge Current	800 Amps
Maximum Charge Current	800 Amps
Nominal Charge Current	100 Amps
50% SOC Voltage	50 Vdc
Cutoff Voltage	38 Vdc
Nominal Capacity, 1 hour	26 Ah
Charge Capabilities (25°C)	
0-99% Recharge Time (100A)	<14 min
Maximum Charge Voltage	58.5 Vdc
Maximum Inrush Current (1s)	1500 Amps
Series Operation	380Vdc to 590Vdc (10 pack string)
Parallel Operation (per 14 rack system)	Up to 4.5 MW*

Monitoring and Communications	
Battery Voltage, Charge, Power, Temperature	
Supported Communication Protocols	Modbus TCP/IP

Mechanical	
Exterior Dimensions (H X W X D)	246 x 269 x 951mm
	9.7 x 10.6 x 37.4 in
Mass	75kg/165lbs
Connections	Front Terminal Lugs McMaster Carr 6926K217 or equivalent
Orientation	Horizontal or Vertical (lugs facing up)

Thermal	
Operating Temperature Range	0 to +45°C 32 to +113°F
Nominal Temperature Range	10 to 20°C 50 to 68°F
Rated Transportation	
Temperature Range	-20 to +45°C -4 to +113°F
Humidity (Non-condensing)	10-90% Rh

Discharge Performance Curve



Discharge Performance Data

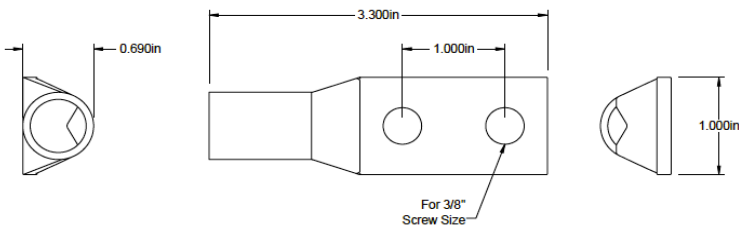
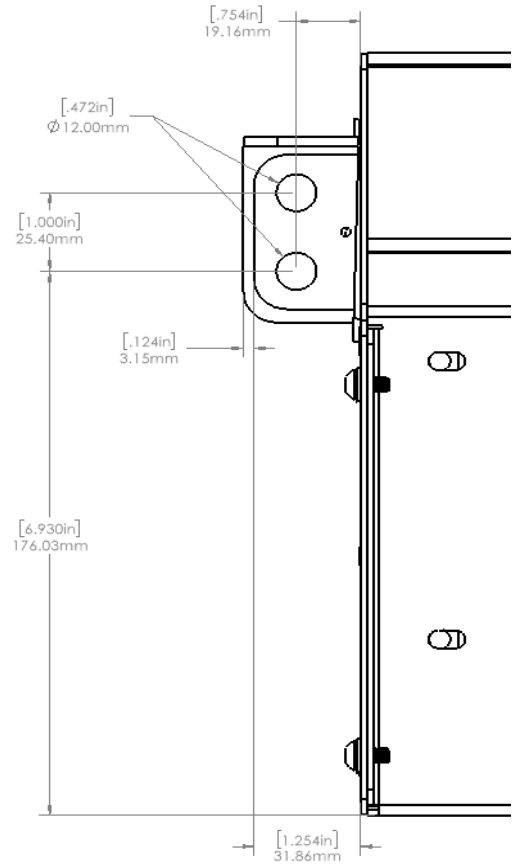
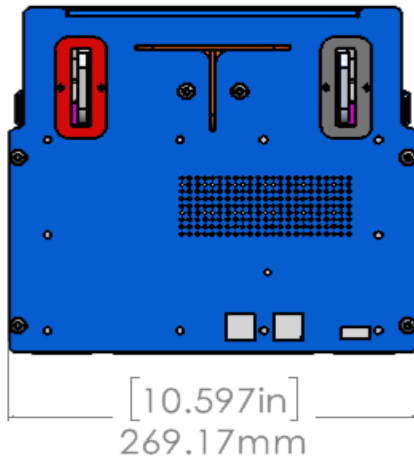
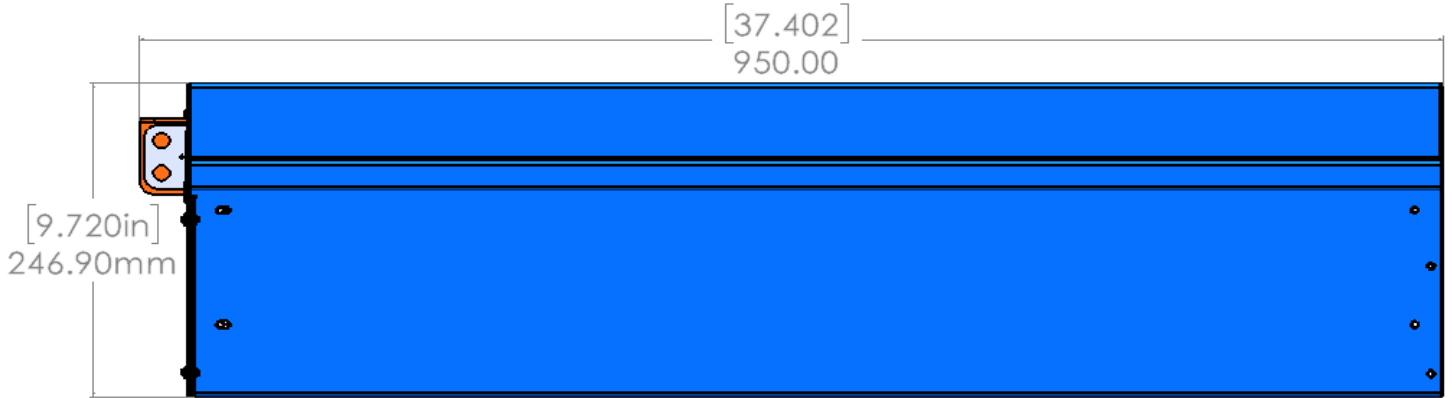
Power (W)	Time to 38v	Time to 32v	Delta T to 38v in C	Delta T to 32v in C
1250	62.6	63.4	1.4	1.5
2500	30.7	31.1	12.6	1.7
6250	11.4	11.7	2.4	2.7
12500	5.0	5.2	5.3	6.0
25000	1.7	2.0	10.8	14.6
30000	1.2	1.5	11.4	15.9
40000	0.8	1.0	12.0	17.1



Natron Energy - BluePack Critical Power Battery - Mechanical Specs Rev 1.4

Part Number: ZZ-0007-00

7/24/2023



Terminal (customer supplied)