

# Natron Energy - BluePack Critical Power Battery - Specifications Rev 1.7

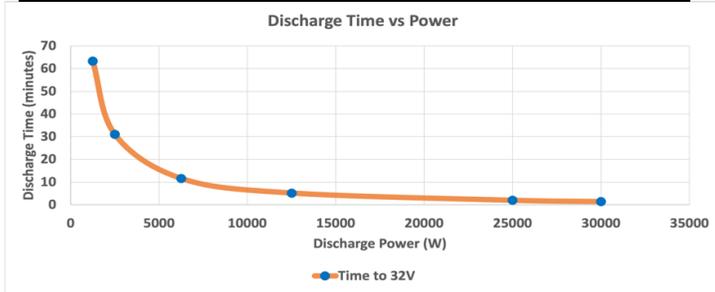
Part Number: ZZ-0007-00

3/20/2024

Performance		
Run Time, Load	1 min	41 kW
	Nominal 2 min	25 kW
	3 min	19.3 kW
	4 min	14.1 kW
	5 min	12.8 kW
Energy, 1 hour (1C rate)	1242 Wh	
Energy Efficiency (1C-1C)	>97%	
Coulombic Efficiency (1C-1C)	>99%	
Cycle life (80% energy utilization)	>50,000	
Energy Density	19.7 Wh/L	
1-Minute Peak Power Density	651 W/L	
2-Minute Nominal Power Density	397 W/L	
Self Discharge Rate	0.7% SOC/day	
Temperature Rise-1st 25kW discharge	12°C	
Temperature Rise-1st 100A recharge	-4.5°C	
Specific Energy	16.6 Wh/kg	
1-Minute Peak Specific Power	547 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	750 Amps
Maximum Charge Current	750 Amps
Nominal Discharge Current	550 Amps
Nominal Charge Current	100 Amps
Float Charge Current	85 mA
50% SOC Voltage	50 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 5.5 MW*

## Discharge Performance Curve



## Discharge Performance Data

Power (W)	Time to 38v (mins)	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	1.6	1.7
6250	11.4	11.7	2.4	2.7
12500	5.1	5.3	5.3	6.0
25000	2.0	2.2	10.8	14.6
30000	1.6	1.8	11.4	15.9
40000	1.1	1.3	12.0	17.1

## 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

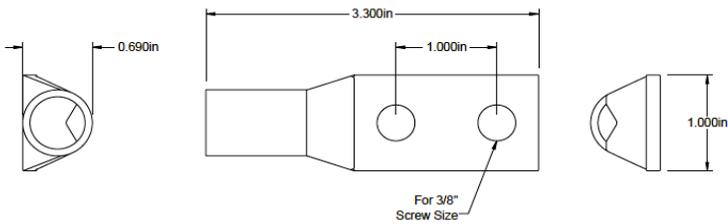
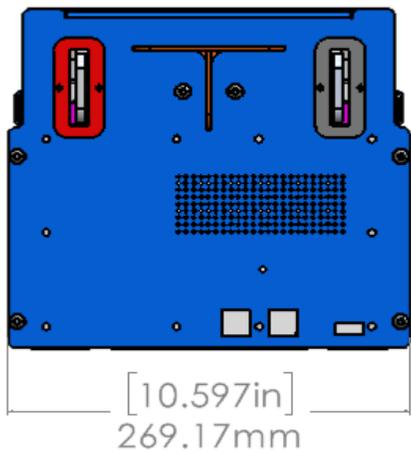
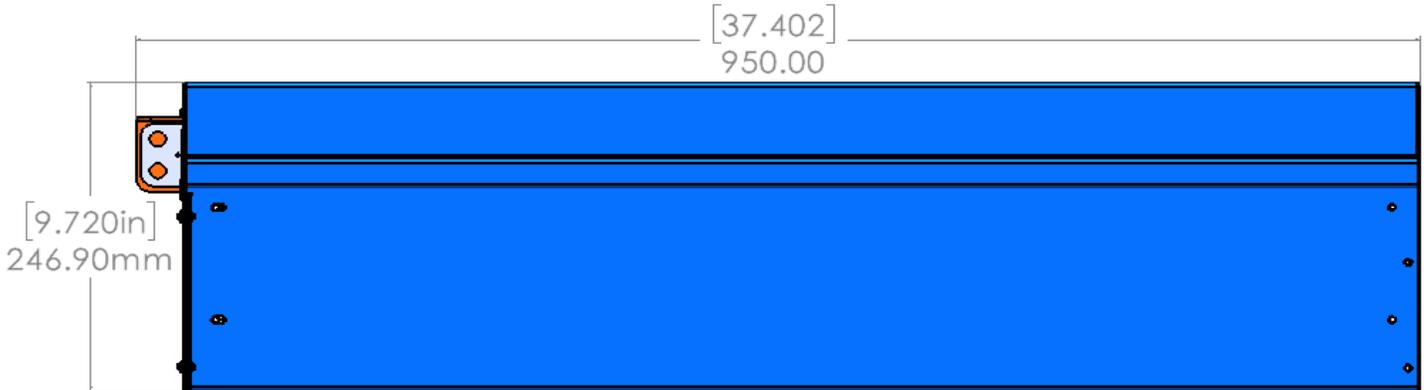
Nominal Operating Range	0 to +45°C   32 to +113°F
Max Current Operating Range	0 to +40°C   32 to +104°F
Safe Operating Range	-20 to +50°C   -4 to +122°F
Rated Transportation Range	-20 to +45°C   -4 to +113°F
Ideal Range	10 to 20°C   50 to 68°F
Humidity (Non-condensing)	10-90% Rh



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Terminal (customer supplied)

