

Sodium-Nickel Chloride Battery E4810



Utilities Oil&Gas Rails Telecom Renewables

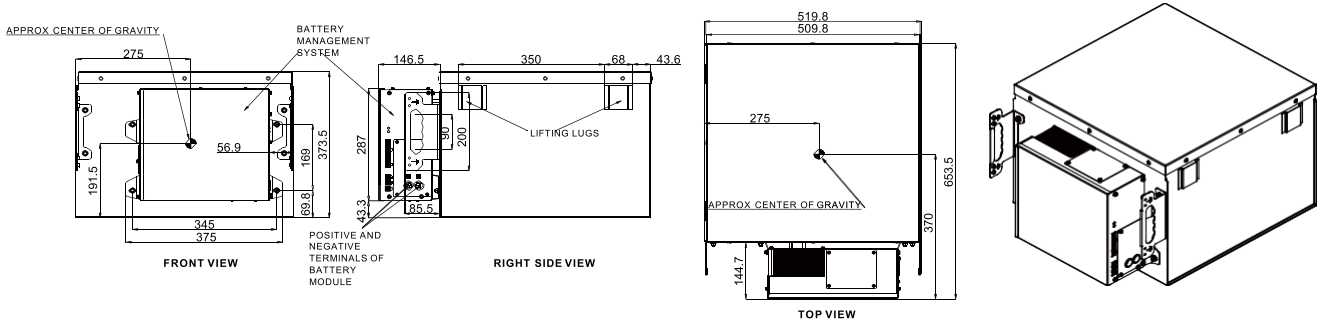
General Data		
Nominal Energy	11.8	kWh
Nominal Capacity	230	Ah
Ambient Condition ¹	-40 to 65	°C
Humidity	<95% (no condensation)	RH
Altitude	<3,000	m
Warm-up Time ²	≤16 (from 25°C)	hours
Max Internal Heater Power	450	W
Avg Heater Power Consumption, CDC ³	<10	W
Avg Heater Power Consumption, Float	<140	W
End of Discharge Voltage ⁴	40 to 45.6	VDC
Dimensions ³ (HxDxW)	374x654x520	mm
Weight	122±2	kg
Design Life	15	yrs
Battery Certification	UL9540A, CE, UL1973(Pending)	

Power Availability/Backup		
Usable Energy ⁵	10	kWh
Usable Capacity ²	200	Ah
Equalizing Charge	53.1	VDC
Float Charge	52.9	VDC
Open Circuit Voltage	51.6	VDC
Discharge Load Range ⁶	0.6 to 4.1	kW
Max Recharge Current	80	A

Charge Discharge Cycling		
Recharge	53.1	VDC
Charge Start ⁴	41.2 to 45.3	VDC
Cycling Long Range	0.6 to 3.1	kW
Max Recharge Current	80	A
Max Cycles Between Return to Top of Charge (TOC) ⁷	40	Cycles

Interconnects	
Battery Terminals	Two Pole M6 Ring Terminal
Ground Connection	Standard Single M6
Communication	RS485, CAN, DI/DO
Communication (Optional)	MODBUS
Ingress Protection (IP)	IP20

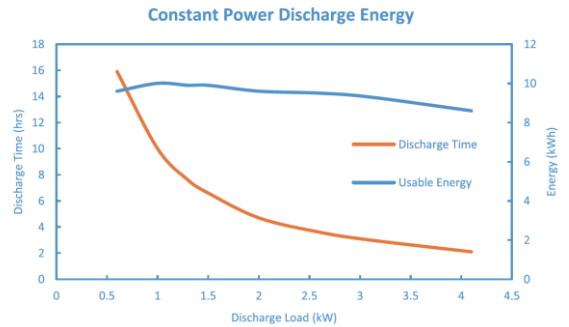
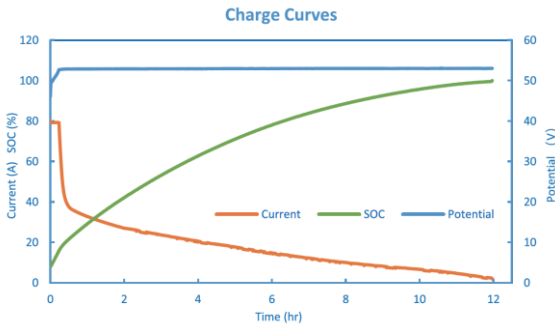
Dimension



*Specifications may change without notice as part of continuous improvement.
*Images are illustrative; actual product/configuration may vary.

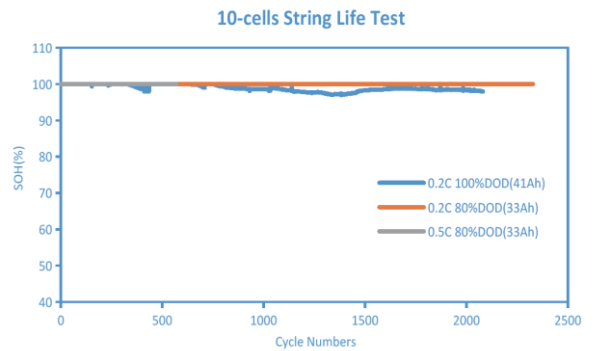
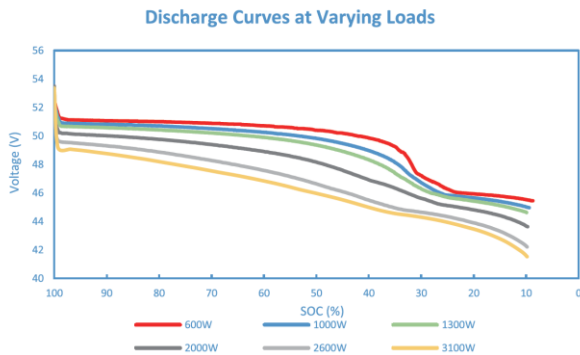
Performance Characteristics

The performance data presented below is based on testing done at labs at 25°C and applies to ambient temperatures from -40°C to 65°C at beginning of life (BOL). Actual performance may vary. Discharge curves apply after 24-hour charge cycle.



	From 13% State of Charge to...					
	50%	60%	70%	80%	90%	95%
Charge Time (hr)	2.7	3.7	4.8	6.3	8.3	9.8

	Load (W)							
	600	1,000	1,300	1,500	2,000	2,600	3,100	4,100
Energy (kWh)	9.6	10.0	9.9	9.9	9.6	9.5	9.3	8.6
Discharge Time (hr)	15.9	10.0	7.6	6.6	4.7	3.6	3.0	2.1



Cycle Life Projection – At Varying Loads

The performance data presented on 10-cells String Life Test chart is the lab testing results at ambient temperature (25°C). Basing the testing results, the predicted cycle life at 0.5C 80%DOD is > 6000 cycles with > 80%SOH.

***Notes:**

- Ambient conditions apply to BMS electronics:
 - 5°C to 55°C no performance impact.
 - 40°C to 5°C and 55°C to 60°C reduced performance.
 - 60°C to 65°C non-destructive with ability to automatically reconnect.
- After warm-up, battery is ready to charge or discharge.
- When continuously charged and discharged at rated load.
- Exact voltage is load-dependent.

***Notes:**

- C/10 rate at beginning of life.
- Discharge above 2kW must be preceded by 24-hour charge.
- Battery does not need to be taken offline to return to top of charge.