ZYNAVEX+

Sodium-Nickel Chloride Energy Storage Solution

ZXSN Series

Sodium-Nickel Chloride Battery Solution

FEATURES

High Safety & Reliability
Sealed, non-flammable battery technology with zero gas emission and highly stable operation.

Modular
Independent modules with parallel scalability for flexible expansion and high system availability.

Extreme Temperature
Reliable performance from -40°C to +65°C for harsh and outdoor environments.

Smart BMS
Intelligent monitoring and protection for safe, efficient, and dependable battery operation.

ZXSN4810

Sodium-Nickel Chloride Battery System

Oil & Gas | Data Center | Telecom | Utility | Industrial

Safe | Scalable | Smart | Long Life

General Data		
Nominal Energy	11.8	kWh
Nominal Capacity	230	Ah
Ambient Condition[1]	-40 to 65	℃
Humidity	<95% RH (no condensation)	RH
Altitude	<3,000	m
Warm-up Time[2]	≤16 (from 25℃)	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] (H×D×W)	374×654×520	mm
Weight	122±2	kg
Design Life	15	yrs
Battery Certification	UL9540A, CE, UL1973, IEC62984	

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

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

Interfaces & Protection	
Battery Terminals	2-Pole M6 Ring
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP20

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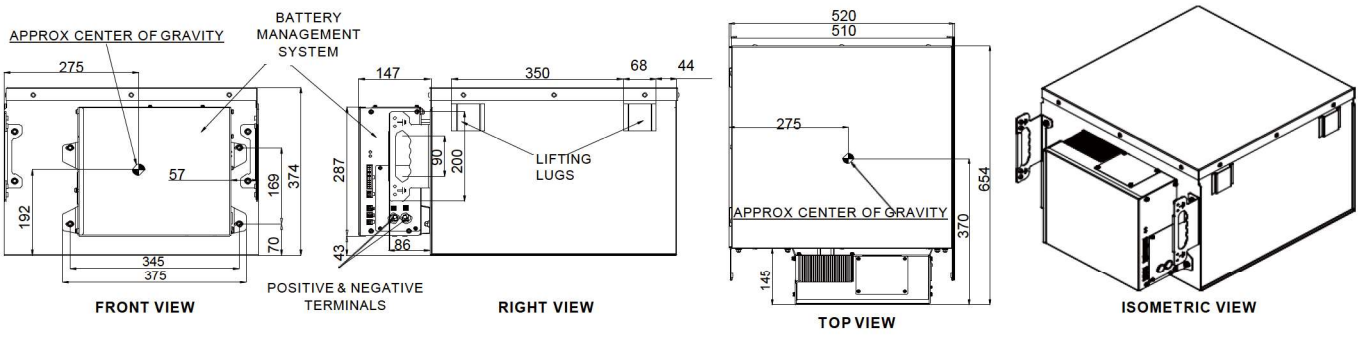
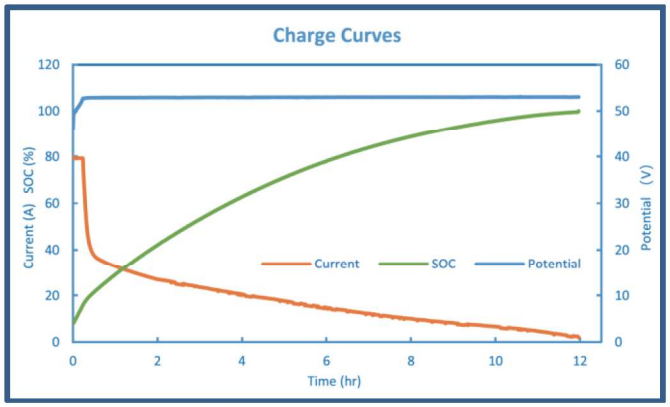
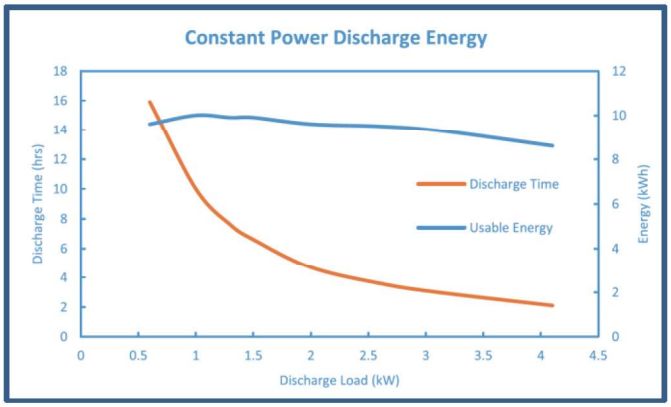
Dimension



Performance Characteristics

The performance data presented below is based on laboratory testing 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 a 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

The cycle life projection is based on laboratory test data at an ambient temperature of 25°C. Based on the test results, the projected cycle life at 0.5C and 80% DOD exceeds 6,000 cycles with SOH above 80%.

*Notes:

1. 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.
2. After warm-up, battery is ready to charge or discharge.
3. When continuously charged and discharged at rated load.
4. Exact voltage is load-dependent.
5. C/10 rate at beginning of life.
6. Discharge above 4kW must be preceded by 24-hour charge.
7. Battery does not need to be taken offline to return to top of charge.

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General Disclaimer

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