

ZYNAVEX+

Sodium-Nickel Chloride Energy Storage Solution

ZXSN Series

Sodium-Nickel Chloride Battery Solution



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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 $+65^{\circ}\text{C}$ for harsh and outdoor environments.



Smart BMS

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

ZXSN4815

Sodium-Nickel Chloride Battery System



Oil & Gas



Data Center



Telecom



Utility



Industrial



Safe



Scalable



Smart



Long Life

General Data

Nominal Energy	15	kWh
Nominal Capacity	276	Ah
Ambient Condition ¹	-40 to 65	°C
Humidity	<95% RH (no condensation)	RH
Altitude	<3,000	m
Warm-up Time ²	≤16 (from 25°C)	hours
Max Internal Heater Power	600	W
Avg Heater Power Consumption, CDC ³	<10	W
Avg Heater Power Consumption, Float	<140	W
End of Discharge Voltage ⁴	43.3 to 47.8	VDC
Dimensions ³ (H×D×W)	303×637×511	mm
Weight	145±2	kg
Design Life	15	yrs
Battery Certification	UL9540A, CE, UL1973	

Charge Discharge Cycling

Recharge	55.8	VDC
Charge Start ⁴	44 to 47.8	VDC
Cycling Load Range	0.8 - 4	kW
Max Recharge Current	100	A
Max Cycles Between Return to Top of Charge (TOC) ⁷	40	Cycles

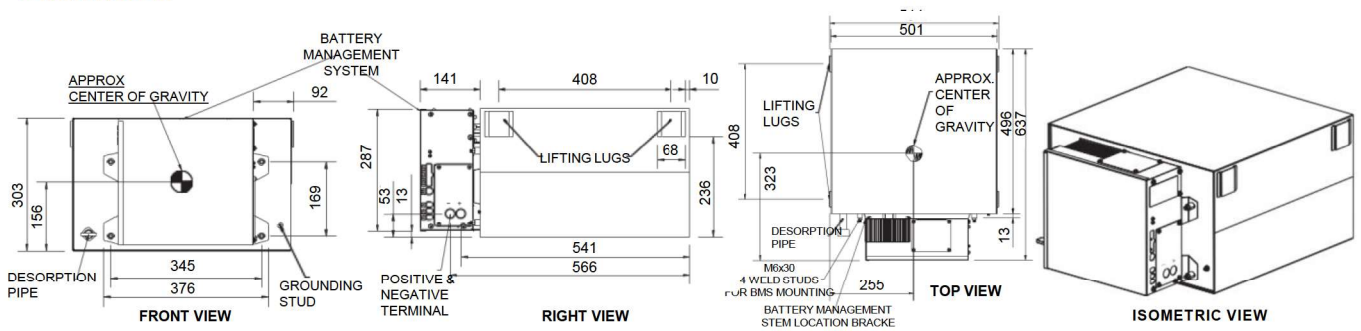
Power Availability/Backup

Usable Energy ⁵	13	kWh
Usable Capacity ⁵	250	Ah
Equalizing Charge	55.8	VDC
Float Charge	55.5	VDC
Open Circuit Voltage	54.2	VDC
Discharge Load Range ⁶	0.8 - 5	kW
Max Recharge Current	100	A

Interfaces & Protection

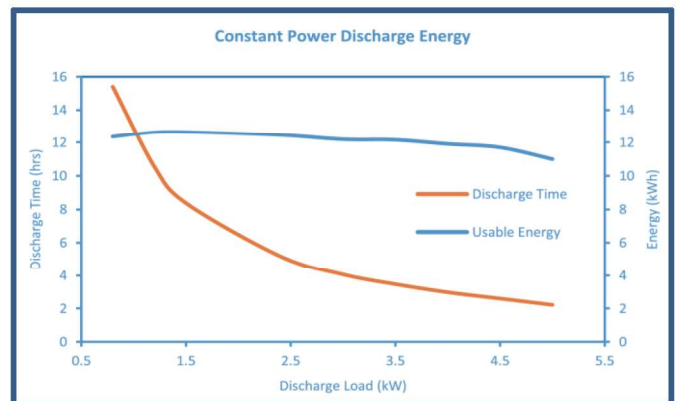
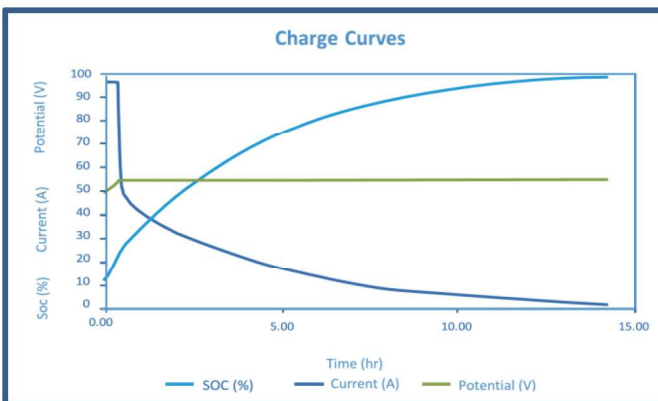
Battery Terminals	2-Pole M6 Ring
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP20

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)	2.1	3.0	4.2	5.7	8.2	10.2

	Load (W)						
	800	1,200	1,500	2,400	3,000	3,500	4,000
Energy (kWh)	12.4	13.0	12.7	12.5	12.2	12.2	11.9
Discharge Time (hr)	15.4	10.8	8.4	5.2	4.1	3.5	3.0

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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