

# 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  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$  for harsh and outdoor environments.



### Smart BMS

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

# ZXSN1109

## Sodium-Nickel Chloride Battery System



Oil & Gas



Data Center



Telecom



Utility



Industrial



Safe



Scalable



Smart



Long Life

### General Data

Nominal Energy	10	kWh
Nominal Capacity	92	Ah
Ambient Condition <sup>1</sup>	-40 to 65	°C
Humidity	<95% RH (no condensation)	RH
Altitude	<3,000	m
Warm-up Time <sup>2</sup>	≤16 (from 25°C)	hours
Max Internal Heater Power	450	W
Avg Heater Power Consumption, CDC <sup>1</sup>	<10	W
Avg Heater Power Consumption, Float	<120	W
End of Discharge Voltage <sup>2</sup>	88	VDC
Dimensions <sup>3</sup> (H×D×W)	353×556×506	mm
Weight	117±2	kg
Design Life	20	yrs
Battery Certification	UL9540A, CE, UL1973, IEC62984	

### Operating Parameters

Continuous Load Range	0.9 to 2.7	kW
Continuous Discharge Current	8 - 24	A
Max Discharge Current (1h)	60	A
Max Discharge Current (1min)	120	A
Max Cycles Between Return to Top of Charge (TOC) <sup>5</sup>	40	Cycles

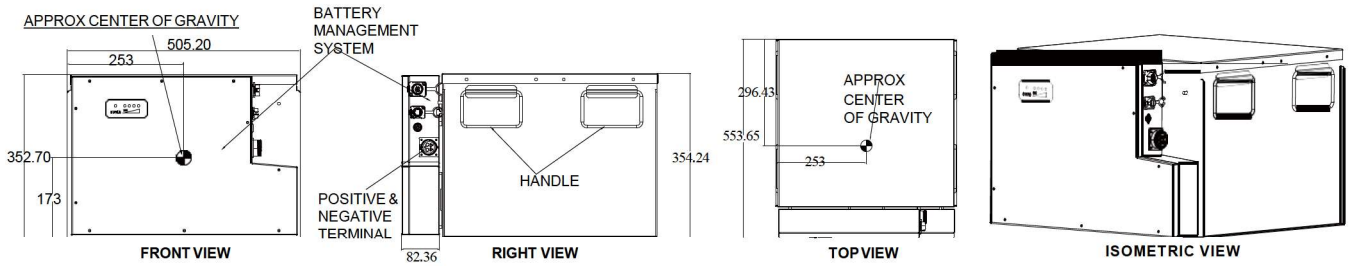
### Basic Parameters

Usable Energy <sup>4</sup>	9	kWh
Usable Capacity <sup>4</sup>	82	Ah
Max Recharge Current	16	A
Recharge Voltage Range	120 - 160	VDC
Open Circuit Voltage	113.5	VDC

### Interfaces & Protection

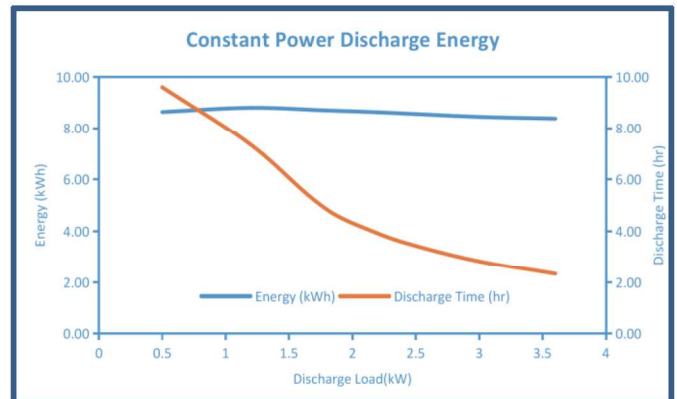
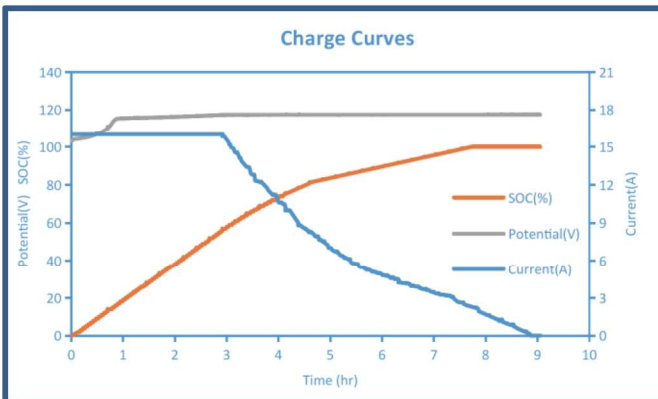
Battery Terminals	Quick Plug
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP55

## 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)	2.6	3.1	3.7	4.5	6	7

	Load (W)						
	900	1,200	1,800	2,200	2,500	3,000	3,600
Energy (kWh)	8.64	8.8	8.7	8.63	8.56	8.45	8.38
Discharge Time (hr)	9.60	7.33	4.83	3.92	3.43	2.83	2.33

## 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. When continuously charged and discharged at rated load.
2. Exact voltage is load-dependent. Overload discharge limits may vary by model and operating condition.
3. Dimensions are nominal.
4. C/10 rate at beginning of life.
5. Battery does not need to be taken offline to return to top of charge.

# ZYNAVEX+

## General Disclaimer

This document is provided for reference only. Product specifications, performance data, images, and configurations may vary according to operating conditions, application requirements, and continuous product improvement. This document does not constitute any offer, warranty, or commitment. Zynavex Sdn. Bhd. reserves the right to modify product information without prior notice.

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