

**ZYNAVEX+**

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# Sodium Battery Products & Solutions

NFPP Sodium-Ion · Sodium-Nickel Chloride

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Telecom · Residential · Commercial & Industrial · Utility · Critical Power

2026 PRODUCT CATALOGUE

# 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.

# 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 <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>3</sup>	<10	W
Avg Heater Power Consumption, Float	<140	W
End of Discharge Voltage <sup>4</sup>	40 to 45.6	VDC
Dimensions <sup>3</sup> (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 <sup>4</sup>	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) <sup>7</sup>	40	Cycles

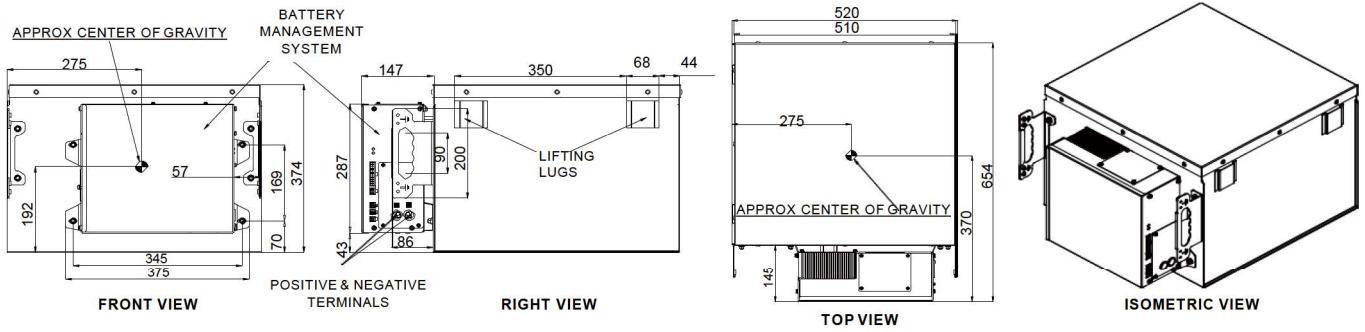
### Power Availability/Backup

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

### Interfaces & Protection

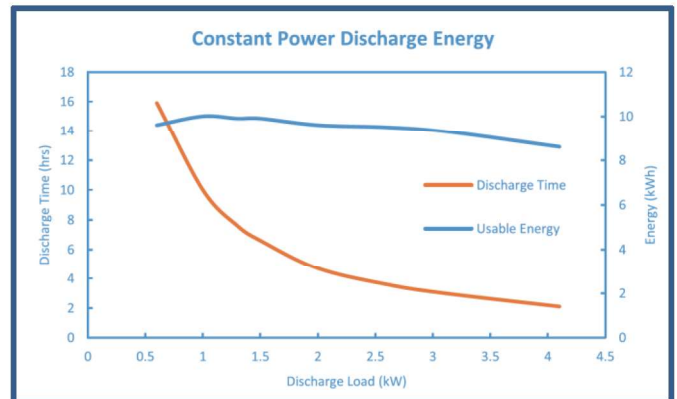
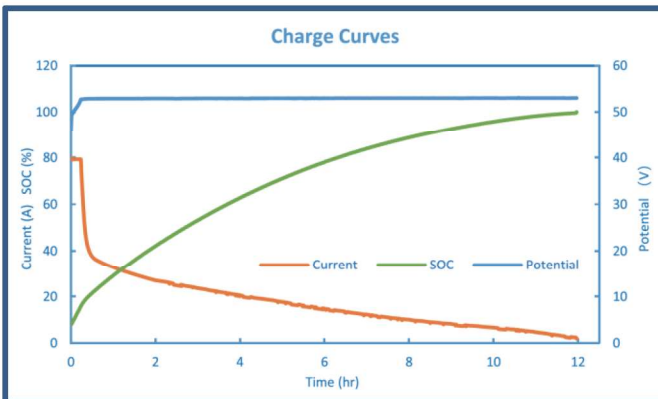
Battery Terminals	2-Pole M6 Ring
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP20

### 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.

# 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 <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	600	W
Avg Heater Power Consumption, CDC <sup>3</sup>	<10	W
Avg Heater Power Consumption, Float	<140	W
End of Discharge Voltage <sup>4</sup>	43.3 to 47.8	VDC
Dimensions <sup>3</sup> (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 <sup>4</sup>	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) <sup>7</sup>	40	Cycles

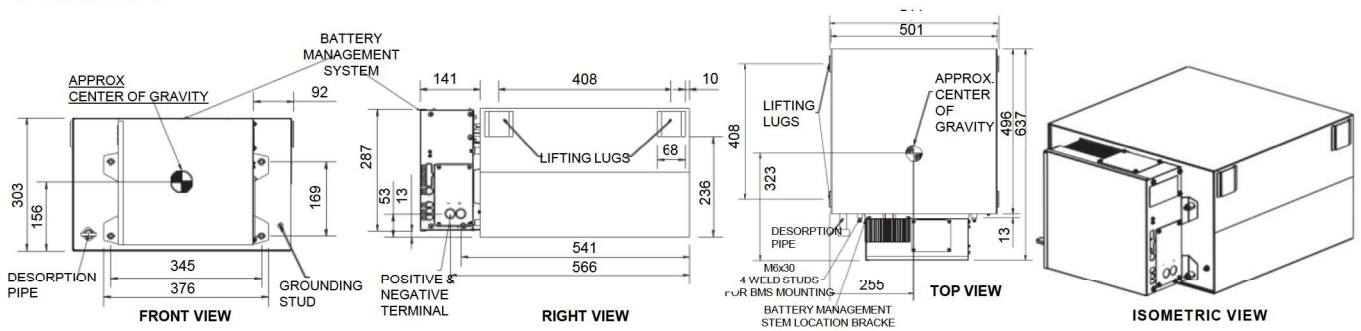
### Power Availability/Backup

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

### Interfaces & Protection

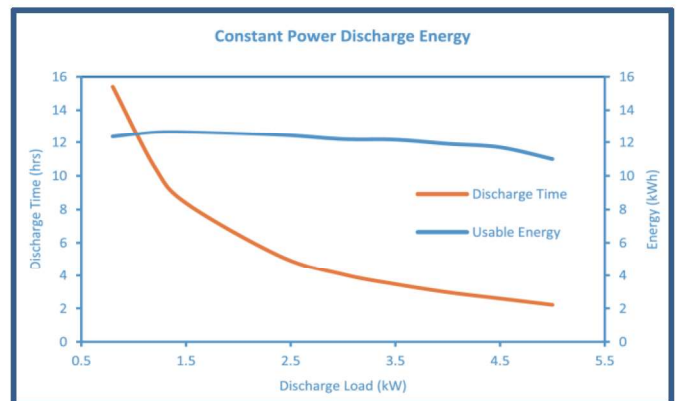
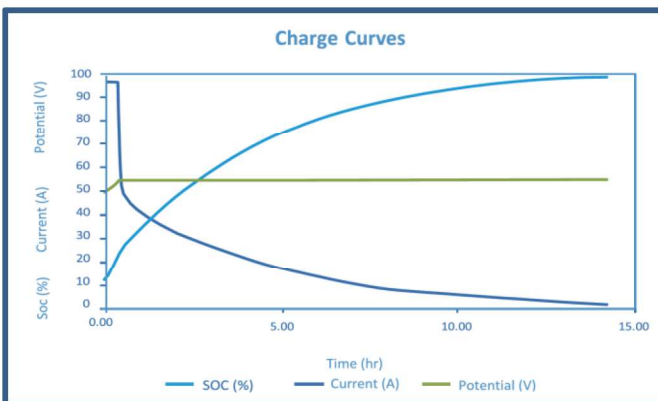
Battery Terminals	2-Pole M6 Ring
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP20

## 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.

# 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

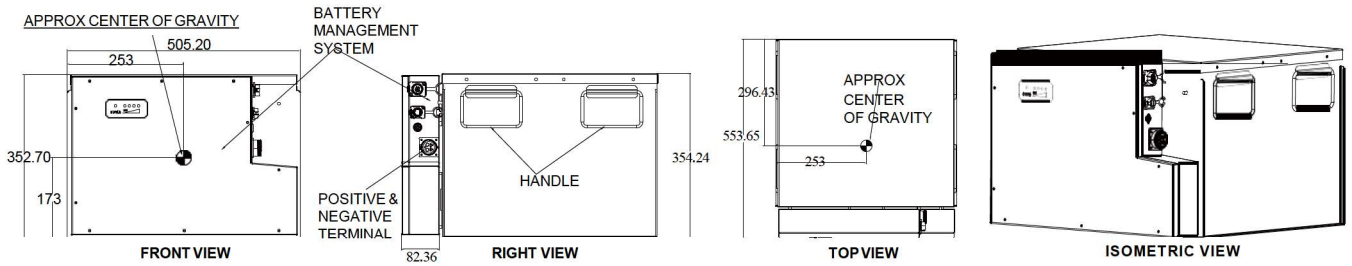
### Basic Parameters

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

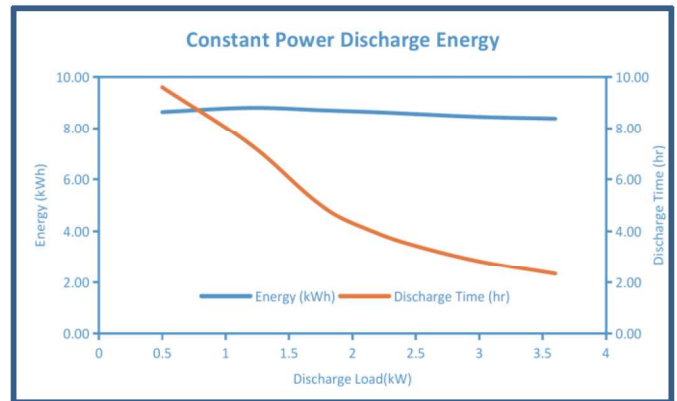
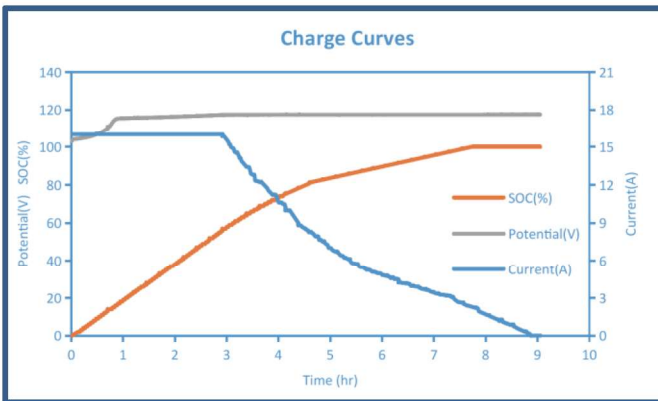
Battery Terminals	Quick Plug
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP55

## 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.

# ZXSN12510

## Sodium-Nickel Chloride Battery System



Oil & Gas



Data Center



Telecom



Utility



Industrial



Safe



Scalable



Smart



Long Life

### General Data

Nominal Energy	11.86	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	510	W
Avg Heater Power Consumption, CDC <sup>1</sup>	<10	W
Avg Heater Power Consumption, Float	<130	W
End of Discharge Voltage <sup>2</sup>	100	VDC
Dimensions <sup>3</sup> (H×D×W)	353×631×506	mm
Weight	127±2	kg
Design Life	20	yrs
Battery Certification	UL9540A, CE, UL1973, IEC62984	

### Operating Parameters

Continuous Load Range	0.9 - 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

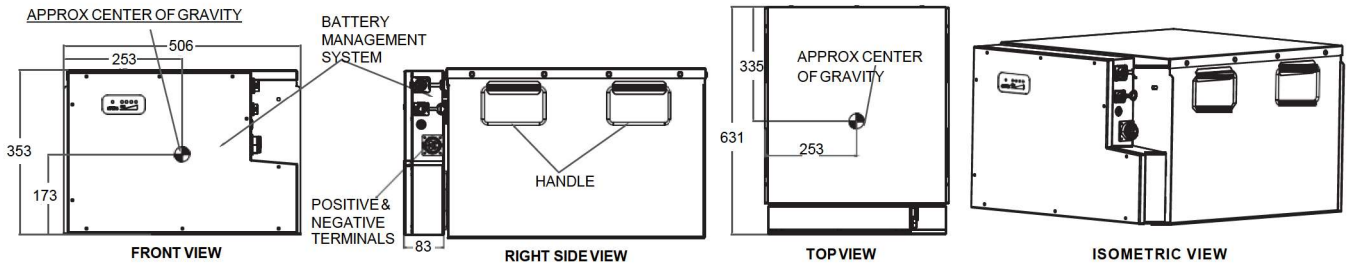
### Basic Parameters

Usable Energy <sup>4</sup>	10	kWh
Usable Capacity <sup>4</sup>	82	Ah
Max Recharge Current	16	A
Recharge Voltage Range	136 - 160	VDC
Open Circuit Voltage	129	VDC

### Interfaces & Protection

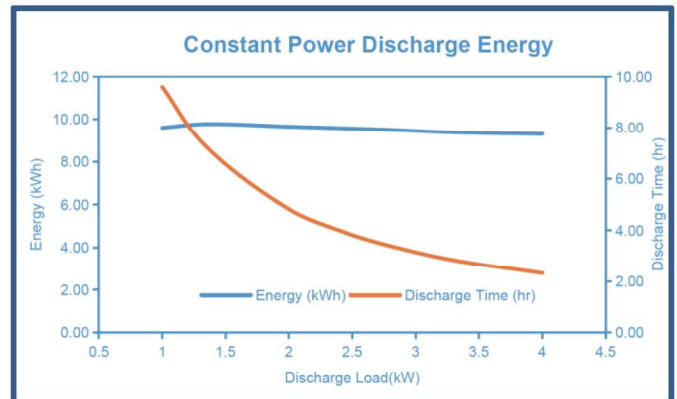
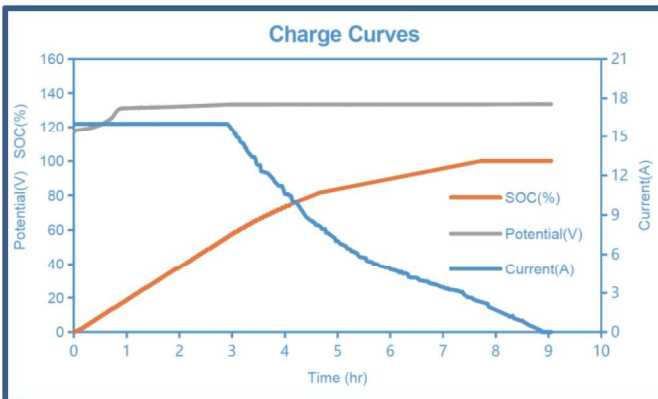
Battery Terminals	Quick Plug
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP55

### 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 0% 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)						
	1,000	1,350	2,000	2,450	2,800	3,300	4,000
Energy (kWh)	9.6	9.77	9.65	9.57	9.5	9.37	9.3
Discharge Time (hr)	9.6	7.23	4.83	3.9	3.39	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.

# ZXSN13011

## Sodium-Nickel Chloride Battery System



Oil & Gas



Data Center



Telecom



Utility



Industrial



Safe



Scalable



Smart



Long Life

### General Data

Nominal Energy	12.34	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	510	W
Avg Heater Power Consumption, CDC <sup>1</sup>	<10	W
Avg Heater Power Consumption, Float	<130	W
End of Discharge Voltage <sup>2</sup>	104	VDC
Dimensions <sup>3</sup> (H×D×W)	353×631×506	mm
Weight	130±2	kg
Design Life	20	yrs
Battery Certification	UL9540A, CE, UL1973, IEC62984	

### Operating Parameters

Continuous Load Range	1 - 3.4	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

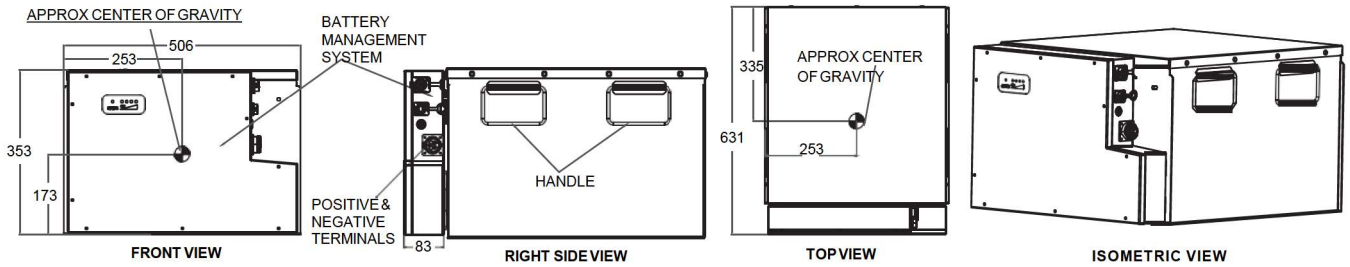
### Basic Parameters

Usable Energy <sup>4</sup>	10.2	kWh
Usable Capacity <sup>4</sup>	82	Ah
Max Recharge Current	16	A
Recharge Voltage Range	141 - 160	VDC
Open Circuit Voltage	134.2	VDC

### Interfaces & Protection

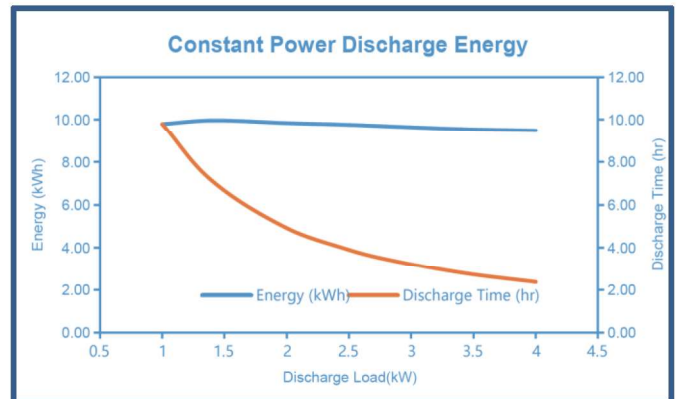
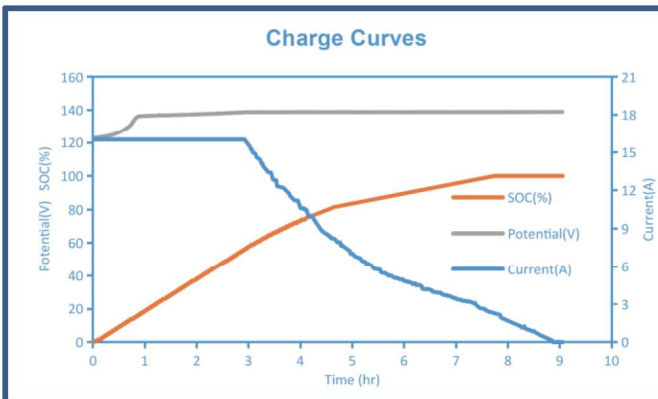
Battery Terminals	Quick Plug
Ground Connection	M6
Communication	RS485, CAN
Ingress Protection	IP55

## 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 0% 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)						
	1,000	1,400	2,000	2,450	2,800	3,300	4,000
Energy (kWh)	9.79	9.97	9.84	9.7	9.69	9.56	9.49
Discharge Time (hr)	9.79	7.12	4.92	3.9	3.46	2.81	2.37

## 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

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