

**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





### ZXTS48100

48V 100Ah | 4.8kWh Battery System



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#### FEATURES

- **Safety**  
High-safety sodium-ion chemistry with multi-level protection from cell to pack.
- **Simple**  
Self-developed BMS and DC/DC technology with high charging efficiency, flexible configuration, easy installation, and support for up to 32 units in parallel.
- **Smart**  
Standard rack design, hybrid use of VRLA or Li-ion Battery, automatic charging and discharging, with SNMP and TCP/IP for remote monitoring.
- **Secure**  
Anti-theft function, with gyroscope and software lock to disable battery output when abnormal movement is detected

Technical Parameter	ZXTS48100
<b>Battery DC</b>	
Cell Type	Sodium-ion Prismatic Cell
Nominal Voltage	3.05V
Rated Capacity	160Ah
Cell Configuration	1P10S
<b>Battery Pack</b>	
Rated Voltage	48V
Rated Capacity	100Ah
Rated Energy	4800Wh
Dimensions (W x D x H)	480 x 550 x 200mm
Weight	46±1Kg
Design Life	15 Years
Ingress Protection	IP20
Installation	Standard 19" Rack
Cooling Method	Natural Cooling
<b>Electrical Parameters</b>	
Float Voltage	54V-57.6V
Discharge Cut-Off Voltage	48V-57V(supporting constant voltage output)
Recommended Charge Current	50A
Maximum Charge Current	100A
Recommended Discharge Current	50A
Maximum Discharge Current	100A
Overload Discharge Current	120A
Maximum DoD	80%DoD
Energy Efficiency	≥93%
Cycle Life	≥8000 cycles @ 70% DOD
End-of-Life Threshold	80% SOH
<b>Battery Operation</b>	
Operating Temperature	-10°C-60°C
Storage Temperature	0°C-60°C
Relative Humidity	0~95% RH, Non-Condensing
Working Altitude	≤3000m
Self-Discharge	≤4% / month @25°C
Shelf Life	6 months

# ZYNAVEX+

## NFPP Residential Series Energy Storage Solution

### ZXRS48160W

48V 160Ah | 7.6kWh Battery System



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## FEATURES



### Longer Life and Safer

Engineered with sodium-ion battery technology for longer service life, safer operation, and integrated fire protection.



### Low Maintenance

Bluetooth-enabled monitoring and BMS configuration.



### Flexible & Expandable

Parallel-ready architecture enables up to 20 units, with total system capacity expandable to 153.6kWh.



### Compliance

Supported by key transport and safety documentation, including Shipping Report, UN38.3, MSDS, and UL1973.

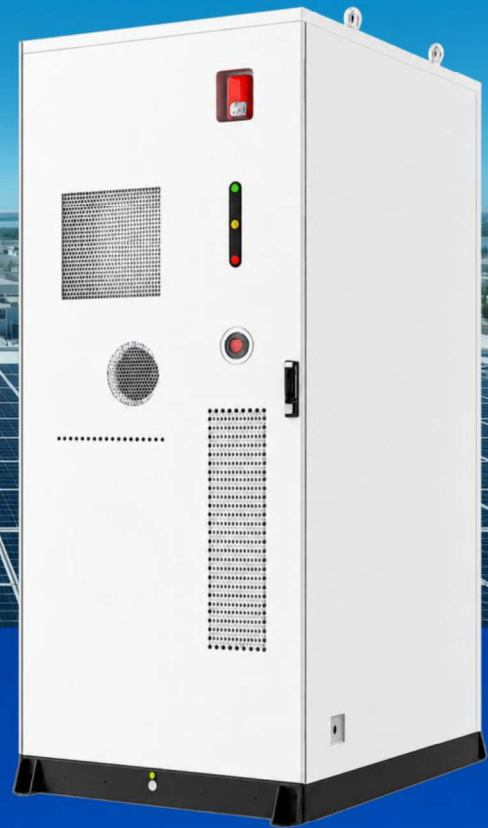
Technical Parameter	ZXRS48160W
<b>Electrical Characteristics</b>	
Nominal Voltage	48V
Rated Capacity	160Ah
Rated Energy	7680Wh
Battery Chemistry	NFPP Sodium-ion
Cycle Life	9,000 cycles @ 80% DOD, 25°C/0.5C
Operating Voltage	32V-55.2V
Communication	CAN / RS485
Scalability	Up to 20 units
Battery Management	Intelligent BMS
Fire Suppression	Built-in aerosol fire extinguishing
<b>Charge &amp; Discharge</b>	
Standard Charging Current	80A
Standard Discharging Current	80A
Max. Continuous Charging Current	200A
Max. Continuous Discharging Current	200A
Conversion Efficiency	≥99% @ 25°C, 0.5C
<b>Environmental</b>	
Working Environment	Indoor or sheltered outdoor installation
Charging Temperature	0~55°C
Discharging Temperature	-40~60°C
Storage Temperature	20°C to 45°C (within 3 months) 25±3°C (over 3 months)
Working Altitude	≤3000m
Cooling Method	Natural Convection
Ingress Protection	IP65
<b>Mechanical</b>	
Dimension (L × W × D)	800 x 500 x 227mm
Weight(approximately)	113 ± 2kg
Installation	Wall-mounted or floor-standing
<b>Smart Monitoring</b>	
<ul style="list-style-type: none"> <li>• Firmware OTA Updates via Built-in Bluetooth</li> <li>• Real-Time Battery Monitoring via Mobile App (Bluetooth)</li> </ul>	
<b>Compliance</b>	
UN38.3, MSDS, UL1973	

# ZYNAVEX+

## NFPP C&I Series Energy Storage Solution

### ZXES76

30 kW / 76 kWh Air-Cooled Battery System



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#### FEATURES



##### Safety Technology

A+ sodium-ion cells, multi-level protection, and integrated aerosol fire suppression.



##### Easy to Install and Use

Highly integrated modular design for fast deployment and flexible expansion.



##### More Reliable

Engineered for stable operation with comprehensive electrical and thermal protection.



##### Energy Management System

Supports peak shaving, demand control, self-consumption, and energy arbitrage.

Technical Parameter	ZXES76
<b>DC Parameters</b>	
Cell Specification	3.0V 160Ah
Pack Configuration	1P20S per Pack
String Configuration	1P160S
Number of Racks / Clusters	8 Packs in Series
Rated Energy	76.8kWh
Rated Capacity	160Ah
Nominal Voltage	480V
Operating Voltage	320V - 552V
Charge / Discharge Rate	0.5P / 0.5P
<b>AC Parameters</b>	
Rated Output Power	30kW
Maximum AC Power	33kW
Apparent Power	30kVA
Rated Grid Voltage	400Vac, 3P4W+PE
Rated Grid Frequency	50Hz
Output Harmonic (THDi)	≤3%
Power Factor	0.1 - 1
Power Factor Adjustable Range	0.1 - 1
DC Voltage Range	150 - 750V
Max DC Current	90A
Overload Capacity	110%~120%, 10 min 120%~130%, 1 min 130%~150%, 200ms > 150%, 100ms
<b>System Parameters</b>	
System Type	Smart Air-Cooled Outdoor Cabinet
Battery Chemistry	NFPP Sodium-Ion
Design Life	15 years
Energy Conversion Efficiency	≥88%
Battery Management System (BMS)	Active Balancing 2A
EMS	Included
Fire Suppression System	Aerosol Fire Extinguishing; PACK and Rack Level
Safety & Protection	Multi-Level Fuse Protection; Overcharge; Over-Discharge
Communication	Ethernet / CAN / RS485
Parallel Capability	Up to 10 Units
Cooling Method	Smart Air Cooling
Ingress Protection	IP55
Operation Temperature	-30°C to +60°C
Storage Temperature	-20°C to +45°C
Relative Humidity	15% - 90% RH, Non-Condensing
Working Altitude	≤3000m
Noise	≤75dB
Dimensions (W x D x H)	1050 x 1360 x 2250mm
Total Weight	Approx. 1700kg
Cycle Life	≥8000 cycles @25°C, 0.5P/0.5P
Compliance & Standards	UN38.3, MSDS

# ZYNAVEX+

## NFPP C&I Series Energy Storage Solution





### ZXES115

100 kW / 115 kWh Liquid-Cooled Battery System



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#### FEATURES

-  **High-Voltage Architecture**  
A compact 100 kW / 115 kWh system with a 720 V sodium-ion platform for peak shaving, load shifting and backup support.
-  **Active Thermal Management**  
Integrated liquid cooling maintains stable cell temperature for reliable operation.
-  **Dual-Layer BMS Control**  
Real-time monitoring of battery status and health, alarms and remote communication via CAN/RS485/Ethernet.
-  **Safety & Scalability**  
Multi-level fire protection and multi-cabinet parallel configuration for project expansion.

Technical Parameter	ZXES115
<b>DC Parameters</b>	
Cell Specification	3.0V 160Ah
Pack Configuration	1P48S per Pack
String Configuration	1P240S
Number of Racks / Clusters	5 Packs in Series
Rated Energy	115.20kWh
Rated Capacity	160Ah
Nominal Voltage	720V
Operating Voltage	360 - 912V
Charge / Discharge Rate	≤1P / 1P
<b>AC Parameters</b>	
Rated Output Power	100kW
Maximum AC Power	110kW
Apparent Power	100kVA
Rated Grid Voltage	400Vac, 3P+N+PE
Rated Grid Frequency	50/60Hz
Output Harmonic (THDi)	≤3%
Power Factor	-0.99 - +0.99
Power Factor Adjustable Range	-0.99 - +0.99
DC Voltage Range	630 - 950V
Max DC Current	190A
Overload Capacity	1.1 times long-term 1.2 times 1min
<b>System Parameters</b>	
System Type	Liquid-Cooled Outdoor Cabinet
Battery Chemistry	NFPP Sodium-Ion
Design Life	10 years
Energy Conversion Efficiency	≥91%
Battery Management System (BMS)	Two-level BMS: Cell-Level + Cabinet-Level
EMS	Included
Fire Suppression System	PACK-Level Detection + Space-Level Perfluorohexanone
Safety & Protection	Overvoltage / Overcurrent; Undervoltage / Undercurrent; Short Circuit; Power Limiting
Communication	Ethernet / RS485
Parallel Capability	Up to 4 Units + 1 Combiner
Cooling Method	Liquid Cooling
Ingress Protection	IP55
Operation Temperature	-25°C to +55°C
Storage Temperature	-20°C to +40°C
Relative Humidity	0 - 95% RH, Non-Condensing
Working Altitude	≤2000m, Derating Above 2000m
Noise	≤75dB
Dimensions (W x D x H)	1400 x 1350 x 2100mm
Total Weight	Approx. 2350kg
Cycle Life	≥8000 cycles @25°C, 0.5P/0.5P
Compliance & Standards	UN38.3, MSDS; IEC62619, UL1973, UL9540

# ZYNAVEX+

## NFPP C&I Series Energy Storage Solution

### ZXES200

160 kW / 200 kWh Liquid-Cooled Battery System



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### FEATURES



#### High-Voltage Architecture

160 kW / 200 kWh high-voltage system for 1500 V DC platforms.



#### Liquid-Cooled Thermal Control

High-capacity liquid cooling maintains stable cell temperature.



#### Advanced BMS with cabinet-Level EMS

Real-time cell monitoring, alarms and communications for system integration.



#### High Conversion Efficiency

Optimized DC-AC conversion for peak-shaving, backup and PV-coupled use.

Technical Parameter	ZXES200
<b>DC Parameters</b>	
Cell Specification	3.0V 160Ah
Pack Configuration	1P52S per Pack
String Configuration	1P416S
Number of Racks / Clusters	8 Packs in Series
Rated Energy	199.68kWh
Rated Capacity	160Ah
Nominal Voltage	1248V
Operating Voltage	748.8 - 1435.2V
Charge / Discharge Rate	≤0.8P / 0.8P
<b>AC Parameters</b>	
Rated Output Power	160kW
Maximum AC Power	176kW
Apparent Power	160kVA
Rated Grid Voltage	400Vac, 3P+N+PE
Rated Grid Frequency	50/60Hz
Output Harmonic (THDi)	≤3%
Power Factor	> 0.99
Power Factor Adjustable Range	-1 - +1
DC Voltage Range	748.8 - 1435.2V
Max DC Current	225A
Overload Capacity	1.1 times long-term 1.2 times 1min
<b>System Parameters</b>	
System Type	Liquid-Cooled Outdoor Cabinet
Battery Chemistry	NFPP Sodium-Ion
Design Life	10 years
Energy Conversion Efficiency	≥91%
Battery Management System (BMS)	Two-level BMS: Cell-Level + Cabinet-Level
EMS	Included
Fire Suppression System	PACK-Level + Cluster-Level Aerosol
Safety & Protection	Overvoltage / Overcurrent; Undervoltage / Undercurrent; Short Circuit; Power Limiting
Communication	Ethernet / RS485
Parallel Capability	Up to 4 Units + 1 Combiner
Cooling Method	Liquid Cooling
Ingress Protection	IP54
Operation Temperature	-30°C to +60°C
Storage Temperature	-20°C to +40°C
Relative Humidity	0 - 95% RH, Non-Condensing
Working Altitude	≤2000m, Derating Above 2000m
Noise	≤75dB
Dimensions (W x D x H)	1375 x 1600 x 2450mm
Total Weight	Approx. 3200kg
Cycle Life	≥8000 cycles @25°C, 0.5P/0.5P
Compliance & Standards	UN38.3, MSDS; IEC62619, UL1973, UL9540

# ZYNAVEX+

## NFPP Utility Series Energy Storage Solution

### ZXES2300

1.25 MW / 2.3 MWh Liquid-Cooled BESS Container



### FEATURES



#### Utility-Scale Sodium-ion BESS

1.25 MW / 2.3 MWh 20-ft container for grid and renewable applications.



#### Three-tier BMS Architecture

Multi-level battery control from cell-level sensing to rack-level supervision, with protection and diagnostics.



#### Container EMS & Liquid Cooling

Integrated control and liquid cooling for safe long-duration operation.



#### Multi-layer Fire Protection

Pack/cluster/electrical-room protection plus water-spray interface.

Technical Parameter	ZXES2300
<b>DC Parameters</b>	
Cell Specification	2.88V 160Ah
Pack Configuration	1P52S per Pack
String Configuration	1P416S
Number of Racks / Clusters	12 Clusters / 96 Packs
Rated Energy	2.3MWh
Rated Capacity	160Ah
Nominal Voltage	1198V
Operating Voltage	665.6 - 1435.2V
Charge / Discharge Rate	0.5P / 0.5P
<b>AC Parameters</b>	
Rated Output Power	1250kW
Maximum AC Power	1375kW
Apparent Power	1250kVA
Rated Grid Voltage	400Vac, 3P3W+PE
Rated Grid Frequency	50/60Hz
Output Harmonic (THDi)	≤3%
Power Factor	> 0.99
Power Factor Adjustable Range	-1 - +1
DC Voltage Range	660 - 1500V
Max DC Current	1403A
Overload Capacity	1.1 times long-term
<b>System Parameters</b>	
System Type	Liquid-Cooled Containerized System
Battery Chemistry	NFPP Sodium-Ion
Design Life	10 years
Energy Conversion Efficiency	≥90%
Battery Management System (BMS)	Three-Level BMS: BMU + BCU + BAMS
EMS	Included
Fire Suppression System	Four-Layer Automatic Fire Suppression System
Safety & Protection	AC/DC Overvoltage, Undervoltage, Overcurrent, Short-Circuit; PACK-Level + Water-Based Fire Protection; Flammable Gas Monitoring
Communication	Ethernet / CAN / RS485
Parallel Capability	Up to 4 Units + 1 Combiner
Cooling Method	Liquid Cooling
Ingress Protection	IP54
Operation Temperature	-20°C to +60°C
Storage Temperature	-20°C to +40°C
Relative Humidity	0 - 95% RH, Non-Condensing
Working Altitude	≤2000m, Derating Above 2000m
Noise	≤75dB
Dimensions (W x D x H)	2550 x 6058 x 2896mm
Total Weight	≤43000kg
Cycle Life	≥8000 cycles @25°C, 0.5P/0.5P
Compliance & Standards	UN38.3, MSDS; UL9540, GB/T 36547, GB 51048

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☎ +60 11-6601 8966  
🌐 [www.zynavex.com](http://www.zynavex.com)  
✉ [support@zynavex.com](mailto:support@zynavex.com)

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