

NICKEL-ZINC

# Monobloc Battery

80 Ah

90 Ah



The Power of Good Chemistry™



## Benefits of NiZn Technology

- ✓ **Superior Safety** – UL9540A tested with no thermal runaway and no travel restrictions
- ✓ **Reliable Chemistry** – NiZn chemistry fails conductive allowing weak or depleted cells to continue to discharge
- ✓ **High Rate Applications** – Capable of >10 C discharge and 2 C recharge
- ✓ **Temperature Tolerant** – Wide operating temperature range

## The Power of Good Chemistry™ works when you need it most

Powerful, recyclable, non-flammable, and compact, ZincFive's nickel-zinc Monobloc Batteries are optimal for a variety of stationary and industrial applications, including backup, grid operations support, and EV charger power buffering.



**80 Ah**  
High-Rate

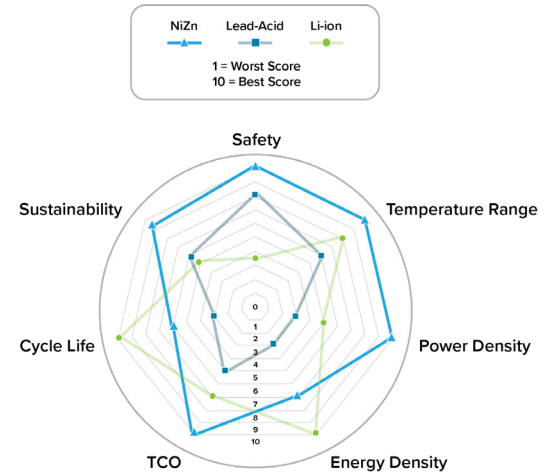


**90 Ah**  
Ultra-High-Rate

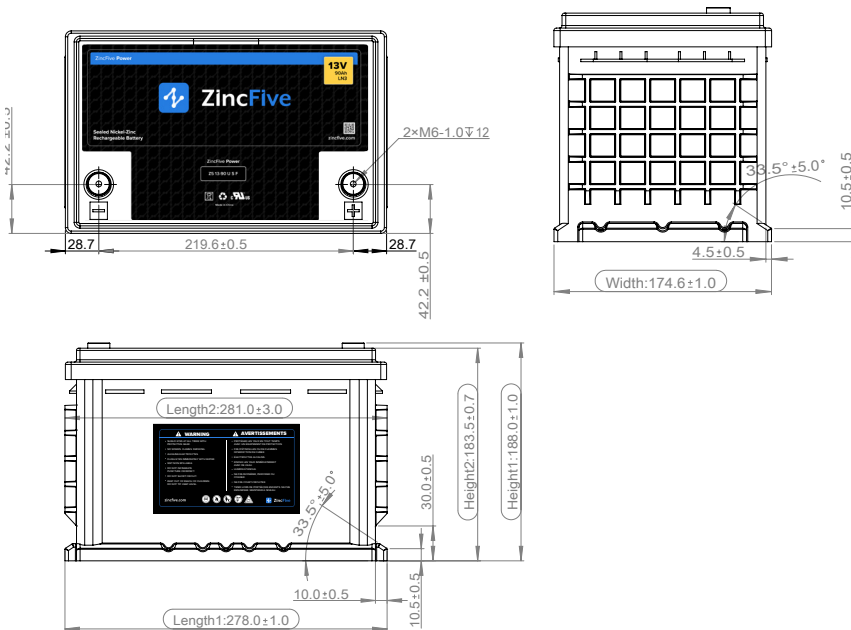


# Specifications

Model	High-Rate Z5 13-80 H S F	Ultra High-Rate Z5 13-90 U S F
<b>Electrical</b>		
Nominal Voltage	13 Vdc	
Number of Cells per Battery	8 cells	
Operating Voltage Range	10 V - 15.2 V	
Nominal Capacity (1C rate)	≥80 Ah	≥90 Ah
Nominal Energy (1C rate)	1.0 kWh	1.2 kWh
Max Continuous Discharge Power (100% to 0% SoC)	8,000 W (>15 °C)	12,000 W (>15 °C)
Short Circuit Current	5,400 A	6,200 A
Cycle Life	500 (100 % DoD) to 250K (1 % DoD)	500 (100 % DoD) to 250K (1 % DoD)
Charge Voltage	CC to 15.2 Vdc; CV until 4.0 A cutoff	CC to 15.2 Vdc; CV until 4.0 A cutoff
Charge Rate	20 A to 160 A	20 A to 180 A
Discharge Rate	40 A to 800 A	40 A to 1200 A
Impedance AC (1kHz)	≤2.5 mΩ	≤2.3 mΩ
<b>Chemistry</b>		
Chemistry	Nickel-Zinc	
Electrolyte	Starved, KOH, Aqueous (no acid)	
Lead Acid Equivalent at 80A Discharge (1C) Rate	Typical 250 Ah (C10)	
<b>Environmental</b>		
Operating Temperature Range	Charge: (0 °C to 50 °C) Discharge: (-20 °C to 45 °C)	
Storage Temperature Range	-20 °C to +50 °C	
Design Life	>15 years at 25 °C	
Transport	No Transportation Restrictions	
<b>Mechanical</b>		
Case Flame Rating	H S F and U S F = V-1	
Terminal	M6 x 1, 10 mm	
Terminal Torque (Initial and annual retorque)	Initial 9.1 N-m +/- 0.9 N-m [81 lbf-in +/- 8.1 lbf-in] Annual retorque should not exceed 9.1 N-m +/- 0.9 N-m [81 lbf-in +/- 8.1 lbf-in] Assuming stainless fasteners and adequate (min 6 mm / 0.24") thread engagement.	
Length (in/mm)	10.94 +/- 0.12 in / 278.0 +/- 3.0 mm	
Width (in/mm)	6.9 +/- 0.12 in / 175 +/- 3.0 mm	
Height (in/mm)	7.4 +/- 0.12 in / 188.0 +/- 3.0 mm	
Weight (lbs/kg)	≤35 / 16	≤40 / 18
<b>Conformance</b>		
Regulatory Approvals	UL1989, CSA C22.2 No. 60950-1, ANSI/CAN/UL1973	
UL 9540A	No thermal runaway exhibited at cell-level test	



All Specifications Valid at 25 °C Unless Otherwise Stated.  
All Specifications Subject to Change



## IPS Immediate Power Solutions

Safe, reliable and sustainable short-duration high-rate power technologies for critical applications