RAZORBACK DC PRODUCTS

RAZORBACK LITHIUM

Lithium Iron Phosphate (LiFePO4) Battery

LFP12.8-170	12.8V	170Ah	2176Wh

KEY FEATURES

Long Cycle Life	LiFePO4 chemistry provides significantly longer cycle life than traditional SLA batteries.
High Power & Lightweight	Strong power delivery in a lighter package, helping simplify transport and installation.
Intelligent BMS Protection	Integrated battery management system helps keep the battery operating safely and reliably.
Low Self-Discharge	Low self-discharge rate supports longer storage periods.

APPLICATIONS

Caravan, RV & camping • UPS / SLA replacement • Marine & golf cart • Solar & wind systems • PV / solar lighting

TECHNICAL SPECIFICATIONS

ELECTRICAL	
Chemistry	LiFePO4
Nominal Voltage	12.8V
Nominal Capacity	170Ah (C5, 25°C)
Energy	2176Wh
Internal Resistance	≤15 mΩ
Cycle Life	>2000 cycles @ 1C, 100% DOD
Monthly Self-Discharge	<3%
Charge Efficiency	100% @ 0.5C
Discharge Efficiency	96-99% @ 1C
CHARGING	
Charge Voltage	14.6 ± 0.2V
Charge Mode	0.2C to 14.6V, then 14.6V until current reaches 0.02C (CC/CV)
Standard Charger Current	85A
Maximum Charge Current	150A
Charge Cut-off Voltage	15.6 ± 0.2V
DISCHARGING	
Rated Discharge Current	85A
Maximum Discharge Current	150A
Maximum Pulse Current	510A (<3 sec)
Discharge Cut-off Voltage	10V
Charge Temperature	0°C to 45°C @ 60 ± 25% RH
Discharge Temperature	-20°C to 60°C @ 60 ± 25% RH
Storage Temperature	0°C to 40°C @ 60 ± 25% RH
Water / Dust Resistance	IP65
MECHANICAL	
BMS	150A 4S/4P
Case	ABS plastic
Dimensions	330 × 173 × 212 mm
Weight	16 kg (35.20 lb)
Terminal	M8

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PERFORMANCE & OPERATING INFORMATION

Discharge Performance

The original specification includes discharge curves at 25°C for 0.1C, 0.2C, 0.5C and 1C rates, illustrating the typical LiFePO4 voltage plateau and reduced run time as discharge rate increases.

Temperature Performance

Discharge curves are supplied across temperatures from -10°C to 50°C. Available capacity is shown to reduce at lower temperatures.

State of Charge / Charging

The source sheet includes a 0.5C state-of-charge curve and 0.5C charging characteristics showing the CC/CV charging profile up to approximately 14.6V.

Depth of Discharge & Cycle Life

Cycle-life curves are provided at 30%, 50%, 80% and 100% depth of discharge, with lower depth of discharge shown to provide greater cycle life.

Storage / Self-Discharge

Self-discharge curves are supplied at 10°C, 25°C, 30°C, 40°C and 50°C, showing increased capacity loss at higher storage temperatures.

Charging specification: Charge voltage 14.6 ± 0.2V; maximum charge current 150A; charge cut-off voltage 15.6 ± 0.2V. Operate within the temperature and electrical limits stated in this sheet.

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