



# EG4® LIFEPOWER 4 48V V2 BATTERY

EG4 Lithium Iron Phosphate battery 51.2V (48V battery) 5.12kWh with 100A internal BMS, composed of (16) UL recognized prismatic 3.2V cells in series which have been tested at >6,000 deep discharge cycles to 80% DoD. Fully charge and discharge this battery daily for over 15 years without issue. Reliable and rigorously tested, with 99% operating efficiency.

**AUTO-ID BMS  
PROTOCOL**

**\*10-YEAR  
WARRANTY**

**E-STOP  
FUNCTIONALITY**

## >6,000 CYCLES

Charge and discharge confidently with batteries built for long-life and durability using 80% DoD (Depth of Discharge).

## 10-YEAR WARRANTY

Have peace of mind knowing the product has a 10-year standard warranty.

## AUTO-ID BMS PROTOCOL

Auto-ID handles two-key functions: protocol detection and ID assignment.

## ENHANCED SAFETY FEATURES

E-Stop functionality offers fail-safe operation in potentially high-risk environments.

Dual On-Board fire arrestors allow for added peace of mind during operations.

## PARALLEL UP TO 32 BATTERIES

For maximum power, the battery protocol Auto ID allows up to ~163.8kWh of storage while preserving BMS communications.

\*For information regarding warranty registration on EG4® Electronics products, please navigate to <https://eg4electronics.com/warranty/> and select the corresponding product to begin the registration process.



## TECHNICAL SPECIFICATIONS

MODULE OPERATING PARAMETERS			
PARAMETER	BMS	RECOMMENDED	
VOLTAGE	51.2V	-	
CAPACITY	100Ah	-	
CHARGING VOLTAGE (BULK/ABSORB)	56.8V	-	
LOW DC CUTOFF/SOC CUTOFF	44.8V	48V ± 0.2V*   20%**	
CHARGING CURRENT	100A (Max. continuous)	50A	
DISCHARGING CURRENT	100A (Max. continuous)	50A	
MAXIMUM CONTINUOUS DISCHARGE RATE	5.12kW	-	
NAMEPLATE ENERGY CAPACITY	5.12kWh	-	
BMS PARAMETERS			
CHARGE	SPEC	DELAY	RECOVERY
CELL VOLTAGE PROTECTION	3.8V	1s	3.45V
MODULE VOLTAGE PROTECTION	60.0V	1s	55.2V
OVER CHARGING CURRENT 1	>102A	10s	-
OVER CHARGING CURRENT 2	≥120A	3s	-
TEMPERATURE PROTECTION	<23°F or >158°F <-5°C or >70°C	1s	<32°F or >140°F >0°C or 60°C
DISCHARGE			
CELL VOLTAGE PROTECTION	2.3V	1s	3.1V
MODULE VOLTAGE PROTECTION	44.8V	1s	48.0V
OVER DISCHARGING CURRENT 1	>102A	10s	60s
OVER DISCHARGING CURRENT 2	>150A	3s	60s
SHORT-CIRCUIT	>300A	<0.1ms	-
TEMPERATURE PROTECTION	<-4°F or >167°F <-20°C or >75°C	1s	>14°F or <149°F >-10°C or <65°C
PCB TEMP PROTECTION	>230°F (>110°C)	1s	<176°F (<80°C)

\*When running the battery in open-loop communications, note that battery SOC% and battery voltage do not directly correlate. Raise or lower this value in 0.2V increments.

\*\*EG4 recommends this value be set no lower than 20% to maintain the recommended 80% depth of discharge.

GENERAL SPECIFICATIONS			
PARAMETER	SPEC	TYPE	CONDITION
CELL BALANCE	120mA	Passive Balance	Cell Voltage Difference >40mV
TEMPERATURE ACCURACY	3%	Cycle Measurement	Measuring Range 40°F – 212°F (-40°C – 100°C)
VOLTAGE ACCURACY	0.5%	Cycle Measurement	For Cells/Module
CURRENT ACCURACY	3%	Cycle Measurement	Measurement Range +/-200A
SOC	5%	-	Integral Calculation
POWER CONSUMPTION (SLEEP & OFF MODE)	<300uA	-	Storage/Transport/ Standby
POWER CONSUMPTION (OPERATING)	<25mA	-	Charging/Discharging
COMMUNICATION PORTS	RS485/CAN	-	Customizable
MAXIMUM MODULES IN SERIES			1
MAXIMUM MODULES IN PARALLEL			32
E-STOP FUNCTION			Yes
DIMENSION (H×W×D)	6.1 in. × 19 in. × 17.4 in. (155 mm × 442 mm × 470 mm)		
WEIGHT	99.6 lbs. (45.2 kg)		
ENVIRONMENTAL PARAMETERS			
CHARGING RANGE	32°F – 122°F (0°C – 50°C)		
DISCHARGING RANGE	-4°F – 131°F (-20°C – 55°C)		
STORAGE RANGE	32°F – 113°F (0°C – 45°C)		
OPERATING ALTITUDE	<16404 ft. (<5000 m)		
INGRESS PROTECTION	IP20		
STANDARDS AND CERTIFICATIONS			
MODULE	UL 1973 ETL Recognized Component Certification UL9540A (Passed) UL9540 (Pending) listed with 18kPV-12LV		

# CHANGELOG

## **Version 1.0**

- Document published