

eFlex MAX 5.4

Lithium Battery Storage



We design the eFlex MAX 5.4 with a goal of building the world most robust lithium battery for all different application scenarios and harsh weather conditions.

- Top-level prismatic automotive Lithium Iron Phosphate (LiFePO₄) cell with the longest cycle life.
- Our patented enclosure design achieves thermal performance four times better than our competitors.
- Our design is IP65 dust- and water-resistant for outdoor installation, following standard installation guidelines.
- Flexible mounting options (wall mount, floor stand, or standard 19-inch industrial server rack mount).

Electrical Specifications	
Nominal Voltage:	51.2V
Nominal Capacity:	105AH
Rated Capacity @ 0.5C (50A):	5.374 kWh
Resistance:	<10 mΩ
Efficiency (at 0.5C):	>98%
Self-Discharge:	<1% / Month
Maximum Allowed Modules in Parallel:	16 (86.4kWh)
Depth of Discharge	Up to 95%
Warranty	10 Years
Cycle Life	8,000 (@ 80% DoD)

Charge Specifications	
Recommended Charge Current:	<55A
Maximum Charge Current:	100A
Recommended Charge Voltage:	55.2V
BMS Charge Voltage Disconnect:	>56V

Discharge Specifications	
Recommended Continuous Discharge Rate:	60A (3KW DC)
Peak Continuous Discharge Rate:	100A (5 KW 60 Min)
Maximum Surge Power Rate:	130A (6.6 KW 5S)
Recommended Low Voltage Disconnect:	48V
Battery Low Voltage Protection:	<45V
Battery recovery Voltage:	45V
Fault Current:	3000A, 5ms

Temperature Specifications	
Discharge Temperature:	-4°F~131°F (-20°C ~ 55°C)
Charge Temperature:	32°F ~ 114°F (0°C ~ 45°C)
Storage Temperature:	20°F ~ 95°F (-6°C ~ 35°C)



Our market leading Digital Processor Battery Management System (BMS) includes:

- High-amperage contactor disconnection
- Monitoring and balancing of individual cell voltage and temperature for maximum reliability and longevity
- Canbus, Modbus, and Wi-Fi communication enabling Internet of Things (IoT) compatibility
- Advanced closed-loop communication with most 48V inverters.

Application Scenarios:



Mechanical Specifications	
Dimensions: (L*W*H)	17.5 x 7.2 x 24.2 inches 446 x 184 x 616 mm
Weight:	112 lbs (51kg)
Terminal Type:	M8
Ring Terminal Size:	3/8ths or larger
Terminal Torque:	7.0 – 7.7 Nm (5.1 – 5.7 ft-lb)
Terminal Cover	1 set, Waterproof
Case Material:	Anodized Aluminum
Enclosure Protection:	IP65
Cell Type Chemistry:	Tier 1 Automotive Prismatic - LiFePO ₄

Compliance Specifications:	
Certifications:	UL1973, UL9540 DC ESS 2023, UL9540A, CAN
Shipping Classification:	UN 38.3, CLASS 9 (Lithium Ion Battery)

Basic Charging Profile	
Bulk + Absorb Charge:	55.2V
Absorb Time:	60 minutes
Float Charge:	54V
Inverter Charging:	2 Stage / No Float
Equalization:	No equalization
Temperature Compensation:	None



Compatible with most inverters on the market: Schneider, Sol-Ark, Midnite Solar, OutBack Power, Morningstar, Phocos, Victron Energy, Growatt.

EMDS 250702

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eFlex MAX 5.4

DC ESS

Battery Specifications



5.4P1



10.8P2



16.2P3



21.6P4

Battery Chemistry & Cell Type

Lithium Iron Phosphate, Tier 1, Grade A Prismatic Cells

Ingress Protect Degree

IP65

Nominal Energy	5.376KWh	10.752KWh	16.128KWh	21.504KWh
Nominal Capacity	105Ah	210Ah	315Ah	420Ah
Max Charge/Discharge (ADC) (kW)	100/100 5.12	200/200 10.24	270/270 13.82	270/270 13.82
Weight	112 lbs (51 kg)	227 lbs (103 kg)	342 lbs (155 kg)	456 lbs (207 kg)

DuraRack

DC ESS

Battery Specifications



10.8P2



16.2P3



21.6P4

Battery Chemistry & Cell Type

Lithium Iron Phosphate, Tier 1, Grade A Prismatic Cells

Ingress Protect Degree

IP54

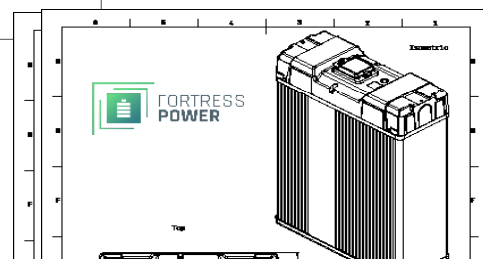
Nominal Energy	10.752KWh	16.128KWh	21.504KWh
Nominal Capacity	210Ah	315Ah	420Ah
Max Charge/Discharge (ADC) (kW)	180/180 9.22	270/270 13.82	270/270 13.82
Weight	368 lbs (167 kg)	481 lbs (218 kg)	

General Data

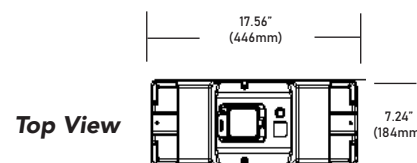
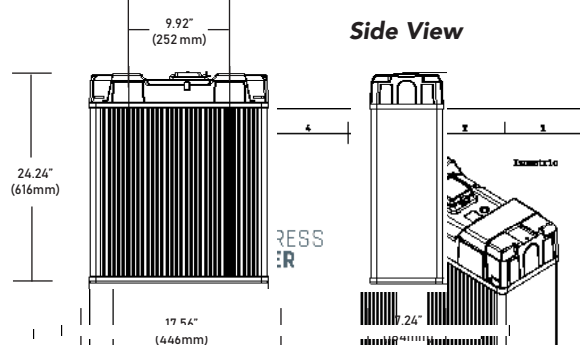
Nominal Voltage	51.2Vdc
Maximum Short-Circuit (A)	3000A, 5ms
Range of Working Temperature	-4°F - 131°F (-20°C - 55 °C)
Bulk/Absorption Charge(V)	55.2V
Re-charge Voltage	51.2V
Cut-off Voltage	<48V
Cycle Life @ EOL 70%	8000 Cycles
Communication	RS485/CAN
Warranty	10 years
Mounting Options	Ground-Mount, Floor Standing, Wall-Hanged(Separate Accesory)

Standard & Certification

Safety Standard	UL1973, ANSI/CAN/UL9540:2023, UL9540A
Listings	CEC, LUMA, oGPE
Transportation	UN38.3



Side View



Top View

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