



POATLFeLi-48100F-E

48 Volt 100 AH Lithium Battery



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Applications for:

Mining • Rail • Industrial • Manufacturing • Utilities

Key Features

- Lithium iron Phosphate (LiFePO₄) battery.
- Extensive Modbus communication.
- Exceptional overload protection and logging.
- State of the art, multi-layer short circuit protection and logging. (Very low Bolted Fault Current.)
- Communicates directly with the SC300 (Minimum V2 hardware, 1.18 firmware.)
- Parallel battery bank circulating current control.
- Cycle Life – 5000 cycles to 80% DOD – 3500cycles at 100% DOD.
- Up to 55-degree operating temperature.
- BMS controlled re-charge. Fast, 5-hour full recharge. (With correct charging.)
- 4.8kWH at C1 Discharge Rate or 5.12kWH at C2 Discharge Rate.
- Approximately 1/3 of the weight of the equivalent capacity Lead Acid battery.
- About 1/2 the size of conventional Lead Acid Batteries (EG: In a 42RU Rack up to 10 Batteries can be installed, making it 1000AH Capacity in one rack.)
- Better suited to deep discharging and cyclic applications than lead acid batteries.
- Safety Report with testing results available.
- 5-year Power On Australia Exclusive Warranty

What's in the box

- Lead Sets
- Connect & Site Test Procedures, includes Checking Breaker Sizing
- Batching Details and Latest Firmware

Options

- Circuit Breaker Lockout mechanism.
- Comms Repeater. (Required for communication with over 20 batteries)
- Suitable 19" Racks

Support

We offer a range of design, installation and maintenance services to get the most out of your new equipment. Fast deployment, 24/7 nationwide support.

Authorised DC Integrator



Lithium-Ion Battery Benefits

Safety benefits

- Lithium-Ion Phosphate (LiFePO₄) chemistry is stable and safe.
- Battery Management System (BMS) actively monitors temperature, individual cell, and overall battery performance exclusively using an Eaton SC300

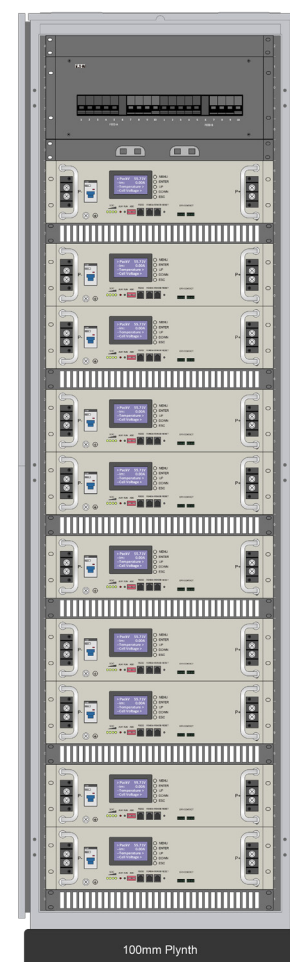
Installation benefits

- Reduced weight.
- Reduced size.
- Fits into standard 19" rack

Performance benefits

- Faster recharge capabilities.
- Greater round trip (Discharge, recharge) efficiency. (Approximately 10 to 15% better than lead acid.)
- Greater cycle life.
- Extensive battery status data. Allows for remote diagnostics.

42RU 52V 50 kWhr, A/B Plane Battery Rack (Rittal 600Wx600Dx2000H)



High KA (50KA) circuit breakers sized to fit the requirements while providing superior fault clearing capabilities.

175A Battery Discharge Testing Points (BMPs)

RH Distribution Side Eaton 48V 100AH LFPO Battery Packs (Supported on 1/2 RU Shelves)

LH Distribution Side Eaton 48V 100AH LFPO Battery Packs (Supported on 1/2 RU Shelves)

100mm Plyth



Power On Australia has over 20 years' experience designing and implementing tailored, long lasting power quality and power management solutions. Servicing a broad range of industries, no project or environment is too difficult for us – from designing, installing and maintaining complex UPS power solutions on remote mining sites to managing critical power backup solutions in major metropolitan hospitals.

Power On Australia is also a trusted provider to the Australian Department of Defence. We have been awarded Defence Industry Security Program (DISP) Membership, a NATO Commercial and Government Entity Ranking and Defence Export Control Accreditation (DCRN), confirming that we operate to the highest level of quality and service.

More information?

Contact the team at Power On Australia on 1300 66 24 35 or sales@poweronaustralia.com.au

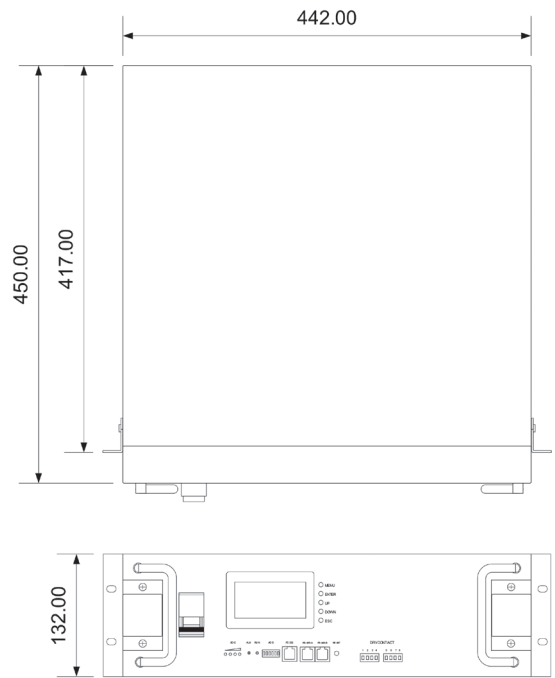
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Specifications

Rated Voltage (Nominal)	51.2V	
Rated Voltage (Peak)	57.6V	
Disconnect Voltage (Typical)	43.2V	
Nominal Capacity	2.70V/cell (C10)	100.0 Ah
Dimensions	Length	450 ±2mm
	Width	442 ±1mm
	Total Height	132.0 ±1mm
Approx. Weight	43.0 kg	
Terminal	Shielded Terminal Block	
Container Material	Lacquer Steel Case (UL94-V0)	
Rated Capacity (25oC)	100.0 Ah	(10hr, 10A, 2.70V/cell)
	100.0 Ah	(5hr, 20.0A, 2.70V/cell)
	99.0 Ah	(3hr, 33.0A, 2.70V/cell)
Max Charge/Discharge Current	Standalone	100A
	Parallel	20A charge (recommended) 100A discharge (max)
Internal Resistance (25oC)	N/A	
Operating Temp. Range	Discharge	-15 ~ +60°C
	Charge	-0 ~ +55°C
	Storage	-20 ~ +60°C
Nominal Operating Temp. Range	25 ±5°C	
Cyclic Use charge voltage	Discuss with Eaton or Eaton partner/integrator.	
Standby Use	Discuss with Eaton or Eaton partner/integrator.	
Parallel Connection	Up to 63P. Contact Eaton for any application >10P in parallel.	
Self-Discharge	Eaton PWTLFeLi series batteries may be stored for up to 1 year at 25oC (77oF) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	
Cycle Life	>5000 cycles at 80% DoD	
	>3500 cycles at 100% DoD	
Design Life	>20 years	

Layout



Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	1h*	3h	5h	7.5h	10h
43.2Vdc	95.0	33.0	20.0	13.3	10.0

Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	1h*	2h	3h	5h	10h
43.2Vdc	4800	2500	1690	1024	512

Specification subject to change without prior notice

* 1hr discharge rate may not be appropriate for all applications. Discuss with Eaton prior to deployment.