

RACK MOUNT LITHIUM 48V 106AH

48ELRM100

- Built using lithium iron phosphate (LiFePO₄) cells configured to deliver a stable 48V (51.2V nominal) solution in a compact 3U rack-mount format, ideal for modern energy storage systems.
- Designed for high-cycle applications, supporting 6,000+ cycles at 80% depth of discharge, significantly outperforming traditional lead-acid batteries.
- A built-in Valen ENLiFEN BMS provides protection against over-voltage, under-voltage, over-current, short circuit and temperature extremes, ensuring safe and reliable operation
- Supports parallel operation with integrated CAN and RS485 communications for seamless inverter compatibility and system monitoring
- Sealed, maintenance-free construction reduces on-site servicing while maximising energy density in a minimal footprint.

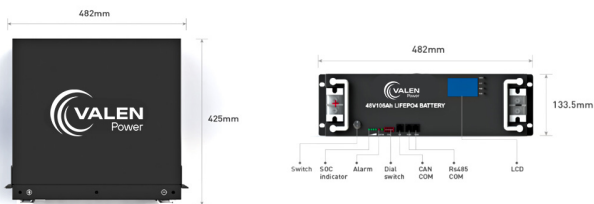




48ELRM100

BATTERY SPECIFICATIONS

Dimensions

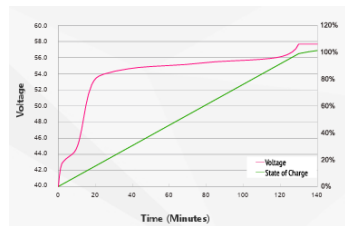


Specifications

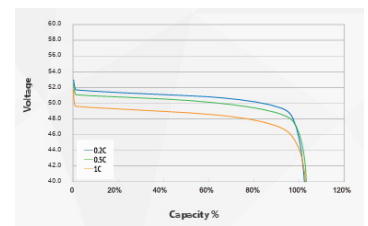
Nominals Voltage	51.2V
Capacity	106Ah
Cell	3.2V 106Ah Prismatic Cell
Parrellel Connection	Max. 16 Units
Serial Connection	No
BMS	16S100A
Circuit Protection	Over Charge, Over Discharge, Over Current, Over Temp, Short, Balance
Communication	2x RS485 and 1x CAN; LCD
Cycle Life	3000 times Cycles @ 100% DOD and 6000 Times Cycles @ 80% DOD
Charge Efficiency	100% @ 0.2C
Discharge Efficiency	98-100% @ 1C
Dimensions ±2mm	482×425×133.5mm (3U Standard Size)
Weight	40kg
Terminal	4x M6
Case Colour/Material	Black Metal Case
IP Rating	IP56
Charge Voltage	57.8±0.8V
Standard Current	20A
Fast Current	50A
Standard Discharge Current	20A
Max. Continuous Discharge Current	100A
Peak Current	250A (2s)
Discharge Cut-off Voltage	40V
Charge Temperature	0°C ~ +55°C
Discharge Temperature	-20°C ~ +60°C
Storage Temperature	-20°C ~ +45°C

Valen ENLiFEN Rack Mount Battery 48V 106Ah

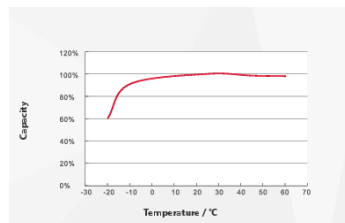
Charging Characteristics (0.5°C @25°C)



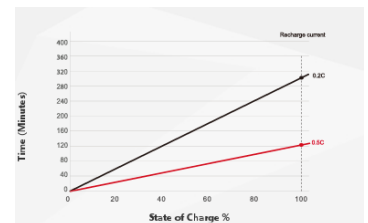
Discharging Characteristics (0.2C, 0.5C, 1C @25°C)



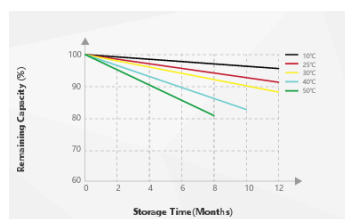
Different Temperature Capacity Curve



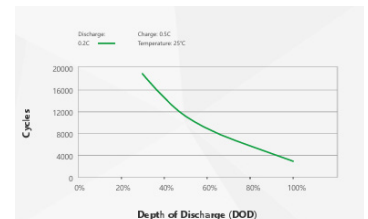
Typical Charge Time Curve



Different Temperature Self Discharge Curve



Different DOD Discharge Cycle Life Curve



Disclaimer:

While Valen have taken every effort to represent the ENLiFEN PO4 accurately within this specification, Valen advise the user to ascertain their own measurements and test the parameters and specifications to which the battery must conform. The Lithium battery technology is rapidly being developed and research is continually carried out to ensure that the ENLiFEN PO4 battery will meet the needs of a growing market.

*Specifications subject to change without notice.