

ENLiFEN

Energy Storage Optimiser



Communications



Data Backup



Solar

The Valen ENLiFEN ESO (Energy Storage Optimiser) is designed with the next generation of Lithium Battery Energy Storage in mind and employs technical features and benefits to enable a safer, sustainable and reliable solution. The ESO concept allows for flexibility of design and retrofitting for small to medium systems.



Specifications

Nominal Voltage	48V
Operating Voltage	37.5-54.7 VDC
Nominal Capacity (C/10)	100Ah
Number of cycles at 80% DOD	4000 cycles (80% capacity remaining)
Charge Current	30A
Maximum: 1 minute	50A
Maximum: 10 seconds	60A
Discharge Current	Continuous 30A Peak: 20 seconds 50A
Operating Temperature	Charge: 0 - 55 °C Discharge: -10 - 60 °C
Weight	90kg
Dimensions	482mm x 1030mm x 133mm

*however we recommend that the batteries be operated in the temperature range of 20°C to 30°C to obtain full life and optimum performance.



Features

Superior Life

6 - 10x more life than standard AGM batteries

Safer

BMS preventing short circuit, over-voltage and over-discharge protection, thermal runaway

Multiple BMS

BMS on each battery cell, and a main BMS controlling all the cells within the module

Modular and Flexible

ESO is stackable and extendable allowing it to be retrofitted to existing systems and expand with your needs

Faster Charge

ENLiFEN Batteries have a faster charge rate due to lower impedance

Plug and Play arrangement

Time spent on site inspections and replacing of any Lithium cells reduced

Controlled

Touch screen operation with 3 levels of control: client, installer and manufacturer

Australian Designed and Manufactured

Technical advice is available immediately here in Australia





Module - 4.8kWh

48V100Ah (15 batteries in series)

The Valen ENLiFEN ESO is constructed utilising modular drawers of 15x 3.2V100Ah batteries in series matched with individual BMS's featuring LED lights to indicate faults. An LCD and LED indicator shows the current state, voltage, charge and discharge currents as well as the total rack voltage. A Master BMS is installed on each module which can be customised to different voltages, and has the flexibility allowing for future upgrades to new emerging lithium technologies.



VALEN ESO

Extra modules can be added to the system and cells are able to be hot swapped to reduce site downtime and loss of power, due to the Valen ENLiFEN ESO's advanced controls. These ESO modules are stackable, extendable and designed to fit into a standard 19inch rack meaning the Valen ENLiFEN ESO is able to be retrofitted to existing systems and expand with your needs up to 5 modules in parallel. For large systems (6-25 modules or 120kWh), a Master Control is required. This Master Control is fully programmable and able to communicate with other communication systems such as Canbus and RS485. A 120kWh Valen ENLiFEN ESO is able to deliver 750A at 48V for 3.3 hours. Customised Valen ENLiFEN ESO designs are also available on request.