



Industrial Batteries and Energy Storage

VALEN LITHIUM BATTERIES BROCHURE 21



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12-24V

Lithium Monobloc Batteries

Valen ENLiFEN range features a Lithium Phosphate (LiFe PO₄) battery constructed utilising individual 3.2V3200mAh cells in series and parallel. These Lithium cells are controlled by the Valen ENLiFEN Battery Management System (BMS). Customised BMS allows the Valen ENLiFEN battery to perform safely without the fear of thermal runaway and explosion. Another crucial feature of the Valen ENLiFEN BMS is to equalise all individual Lithium cells in the battery ensuring longevity.

Customisation ensures the Valen ENLiFEN battery range can be retrofitted into a range of space restrictive areas. Thanks to the Valen ENLiFEN ranges flexibility, BMS and proven ability to withstand high temperatures, it has become the battery of choice for remote, space restrictive and hot environments such as monitoring equipment and signage.



Applications include:



Floor Scrubber



Hospitals & Medical



Datacentre



Automatic Gates



Mobility



Rail



Comms



Solar



Mining



Telemetry



UPS



Golf & Electric Vehicles



Features

Superior Life

Valen ENLiFEN battery range offers superior life with an expectancy of 6 to 10 times more than standard AGM batteries

Lighter Weight

Up to two thirds lighter in weight than standard AGM batteries

Safer

Safer battery option as the customised built-in Valen ENLiFEN BMS prevents short circuit, over-voltage and over-discharge, as well as thermal runaway

Flexible

Customisation allows the Valen ENLiFEN to be fitted into areas standard VRLA batteries cannot be utilised due to size restrictions

Maintenance Free Design

Maintenance free battery range dramatically reduces time spent on site for battery related issues



Specifications

Voltage	12 & 24 Volt nominal
Cells	Cylindrical 3.2V3200mAh
Charge Voltage	Cycle 14.4V at 25°C Cycle 28.8V at 25°C Constant Voltage
Operating Temp*	-20°C to +60°C

*However Valen recommend the ENLiFEN batteries be operated in the temperature range of 20°C to 30°C to obtain full life and optimum performance.

12-24V Lithium (LiFe PO4) Monobloc Batteries

Product Code	Nom. Cap (25°C)	Terminal ^	Dimensions (mm)			Weight (Kg)	Stocked Item
			L	W	H		
12 EL 9	9	F2	151	65	95	1.2	✓
12 EL 12	12	F2	151	98	96	1.6	✓
12 EL 21	21	M6	180	76	166	3	✓
12 EL 25	25	M5	174	164	125	3.5	✓
12 EL 33	33	M6	199	133	157	4.3	✓
12 EL 40	40	M6	194	132	170	5.5	✓
12 EL 55	55	M6	228	138	208	6.85	✓
12 EL 60	60	M8	229	138	208	9.8	—
12 EL 80	80	M8	260	168	214	9.5	✓
12 EL 100	100	M8	342	173	212	13	✓
12 EL 200	200	M8	483	170	241	24.2	✓
24 EL 30	30	M5	197	165	170	8.5	✓
24 EL 100	100	M8	530	266	215	26.8	✓

Valen ENLiFEN Lithium Customisation

Valen ENLiFEN Lithium batteries are able to be customised to your application.

The Battery Management System (BMS) is programmed based on the systems voltage, constant discharge current, peak discharge current, rate of charge, method of charge, and any space or sizing requirements.

To add flexibility, the batteries are able to be shrink-wrapped, mounted in an aluminium enclosure or a standard VRLA battery casing. Aluminium casing is available with a variety of anderson connectors and additional handles based on your requirements.

Other features are available on request including thermo monitoring and software interactive monitoring.

Call the team today to discuss your requirements.



48V

Energy Storage Optimiser Module



The ENLiFEN ESO is a top of the range customised Lithium battery storage, designed, engineered and manufactured in Australia and to Australian Standards. This gives the ESO the extra flexibility that is required to retrofit mission-critical systems.

Years of experience with Valen ENLiFEN Lithium cells have enabled our engineers to confidently design and deliver a safer, sustainable and reliable Valen ENLiFEN ESO battery solution. Each Valen ENLiFEN ESO module has a Battery Management System (BMS) containing electronics and the intelligence to protect and control Lithium Phosphate (LiFe PO₄) cells to ensure they operate at optimum levels. These advanced BMS systems allow for optional remote monitoring, an essential feature for teams managing multiple remote sites. The Valen ENLiFEN ESO's hot-swappable individual Lithium cells allow technicians to minimise system downtime and allow for maximum system efficiency.



Applications include:



UPS



Comms



Datacentre



Mining



Rail



Solar



Features

Safer

Valen ENLiFEN ESO features a BMS which prevents short-circuiting and has an over-voltage protection relay as well. These are some of the many features that support the ESO in being a safer Lithium Battery Energy Storage System.

Multiple BMS

Each individual battery cell contains an individual BMS. There is also a main BMS which controls all the individual battery cells within the module. The BMS advanced system allows for safer operation and longevity

Plug and Play

Time spent on site inspections and maintenance is reduced thanks to the Valen ENLiFEN ESO having a hot swappable plug and play arrangement for the replacement of Lithium battery cells

Total Control

An optimised touch screen operation with 3 levels of control: client, installer and manufacturer, ensures that the operation of the Valen ENLiFEN ESO system is controlled and monitored preventing untoward errors

Australian Made

Designed and manufactured in Australia, means the technical product support is readily available throughout the life of the Valen ENLiFEN ESO system

Software Analysis

Valen ENLiFEN ESO has a Windows software system available for data analysis



Specifications

Voltage	48 Volt nominal
Operating Voltage	37.5-54.7VDC at 25°C
Capacity	100Ah
Weight	75kg
Dimensions	475(W) x 600(D) x 310(H)
Operating Temp*	-20°C to +60°C*

*However Valen recommend the ENLiFEN ESO be operated in the temperature range of 20°C to 30°C to obtain full life and optimum performance.

48V

Energy Storage Optimiser Rack

The Valen ENLiFEN Energy Storage Optimiser (ESO) system is the next generation of Lithium Energy Storage.

To increase the system, the 48V100Ah modules can be installed into a 19-inch rack allowing the battery system to grow with demand. 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, ideal for remote applications. Individual Lithium cells can be hot swapped at site to minimise system downtime and allow the user to gain maximum efficiency from their Energy Storage Optimiser (ESO).



Applications include:



UPS



Comms



Datacentre



Mining



Rail



Solar



Features

Modular and Flexible

Valen ENLiFEN ESO is stackable and extendable meaning that it can be retrofitted to existing systems and expand with requirements

Redundancy

Being modular and having all modules in parallel, should one have an issue, the system will continue to function. Each module has the capability to supply the load individually or collectively

Longevity

Valen ENLiFEN battery cells have been utilised in various applications since 2014 in Australia, and have proven their stamina in outperforming standard VRLA batteries

Standby & Cyclic

The ESO is designed for standby and cyclic use; internal and external applications. The BMS regulates and equalises each individual Lithium cell, cassette and module ensuring they are cycled evenly. This has the safety advantage of preventing thermal runaway as well as lengthening the life of the cells

Replacement of Existing Cells

Reduced downtime and expertise required during failure due to the modular arrangement. Swap and play modules allow for easy troubleshooting, replacements and maintenance



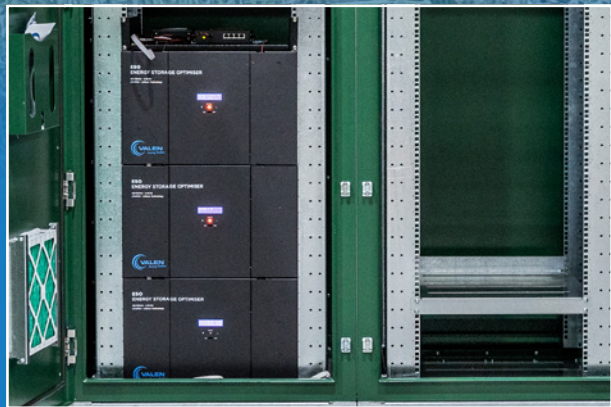
Specifications

Voltage	48 Volt nominal
Operating Voltage	37.5-54.7VDC at 25°C
Capacity	500Ah
Weight	540kg
Dimensions	475(W) x 600(D) x 2000(H) (19" cabinet, 45RU high)
Operating Temp*	-20°C to +60°C*

*However Valen recommend the ENLiFEN ESO be operated in the temperature range of 20°C to 30°C to obtain full life and optimum performance.

ESO Rack

How to build the system



See how easy this process is.



Scan this code to watch the video





Step 1

Each cassette has a Polyethylene base with a groove that fits over the ridge in the chassis and allows it to slide into place. The self centering pins at back are used to guide the cassette into the back of the cradle. The front cassette has a connector which should be at the front when inserting it into the cradle.

Step 2

Insert the front panel onto the self-centering pins on the cassettes and gently push to make sure the connectors have aligned and mated.

Step 3

Busbars are supplied that allow you to parallel units.

NOTE: Ensure all Modules placed in parallel during installation.

Step 4

The charge/discharge cable should be used to space either the first or final busbar as required.

Step 5

Using a 13mm Socket, tighten the M8 Washer and Nut on to the Busbar.

Step 6

Connect the communication cable, each ESO module is supplied with 1x short cable for daisy chaining the modules together. Once all modules are connected together in the daisy chain, there is one communication cable from either the first or last module to your PC that runs the Windows Software.

Step 7

Once all connections have been made, the two front panels can be installed.

NOTE: There is no power on the terminals until the panels have been installed and the unit turned on.



The Valen Story

Valen was first founded as Regal Electro in 1999. Over the next few years, it became apparent that there was a growing need in the industry for a battery supplier who knew not only the characteristics of various technologies, but also understood the technical manufacturing procedures to ensure a quality product.

2009 Opened premises in Hallam, VIC to ensure fast service & delivery to clients.

2010 A presence in New Zealand was established.

2015 Successfully completed its first ENLiFEN Energy Storage Optimiser (ESO) prototype which was put proudly on display at the Comms Connect Exhibition in Melbourne.

2017 Rebranding and reinvigorating of the core product range, Power Charge renamed to Valen, meaning 'Power' in Latin.

2018 A Sydney office and logistics centre was opened in April with the view to further improve the level of service offered to clients.

2018 The company name was changed from Regal Electro to Valen! This decision was made to strengthen the brand and recognition within the industrial battery market.

2020 Valen has continued to grow year on year and strengthened our position as an End to End Solution provider for Australia and New Zealand.



Wow Customers through Service

- Our customers want service and we want our employees to go above and beyond for our customers.



Move Fast & Remain Focused to Get Results

- We are serious about results and we must never lose focus on our goals and our sense of urgency to achieve.
- We believe in working hard and putting in extra effort to get things done.



Upbeat Positive Attitude

- If our employees have a positive attitude and constantly strive to give your best effort, eventually we will overcome our immediate problems and find you are ready for greater challenges.
- Positive and negative are directions that lead to different outcomes. We expect our employees to move in the right direction each day.



Challenge the Status Quo

- We are committed to great results and good is the enemy of great. We want our employees to embrace & drive change




Play as a Team


- Working effectively as a team creates momentum, improves morale.
- The difference between success and failure is a great team and we expect our employees to work together as a team.




Wow Customers
through Service


Move Fast &
Remain Focused
to Get Results


Upbeat Positive
Attitude


Challenge the
Status Quo


Play as a Team

Our team is ready to deliver!

- ✓ Making the Promise
- ✓ Delivering the Promise
- ✓ Keeping the score



Complete Solution

Valen are an End-to-End Solution Provider; so we offer you a complete system solution! Being able to offer the complete solution we save you the hassle of having to search for additional suppliers. From design to supply, we are with you every step of the way!



Quality Control

With our in-house quality control team and state of the art facilities, we ensure the delivery of a unique product that meets and goes beyond your expectations.



Innovative Products

At Valen we take pride in being original, so we have an exclusive range of products for our clients. These unique products and innovation ensure you stay at the front of an ever changing market.



Technical Support

Our support doesn't stop once you invest in our products; with our experienced and skilled technical team we assist you even after sale. If you have any questions about your System or Products purchased, our technical team have the answers.



Personalised Training

Our qualified team of experts are readily available to provide world class training to your team. Thus, ensuring you remain up to date with the latest battery technologies, safety and testing.



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