

Plug into the current future with



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## SPECIFICATION SHEET- Freedom Lite Home and Business LiFePO4 ENERGY STORAGE

The following specifications pertain to the **Freedom Lite Home and Business** range of 52V lithium iron phosphate batteries manufactured by Freedom Won. For larger models refer to the **Freedom Lite Industrial** range.

Freedom Lite	Home 5/4	Home 10/7	Home 15/11	Home 20/14	Home 30/21	Business 40/28	Business 60/42	Business 80/56
Max Energy [kWh]	5	10	15	20	30	40	60	80
Energy, 70% DoD [kWh] (1)	3,5	7	11	14	21	28	42	56
Energy, 90% DoD [kWh]	4,5	9	13,5	18	27	36	54	72
Current Capacity [Ah]	100	200	300	400	600	800	1200	1600
Max & Cont. Charge Current [A]	100	200	300	400	600	600	800	800
Max & Cont. Charge Power [kW]	5	10	15	20	30	30	40	40
Max/Cont. Discharge Current [A] (2)	300/240	300/240	480/400	480/400	750/600	750/600	1000/800	1000/800
Max/Cont. Discharge Power [kW] (2)	15/12	13,0/12	24/20	24/20	38/30	38/30	50/40	50/40
Max Recommended Inverter Total Rated Power (cont.) [kVA]	10	10	15	15	25	25	35	35
Nominal Voltage [V]	52V, to suit 48V Inverters, min 47V, max 56V							
Weight [kg]	60	108	158	211	310	412	613	811
Dimensions on or against wall - Height x Width x Depth [mm]	570x372x265	936x372x265	936x540x265	936x712x265	953x1044x265	1850x584x310	1850x859x310	1858x1142x310
Enclosure	Aluminium – powder coated white front rated for indoor use							
DC Connection – Fly Leads, [no. per electrode] (3)	1x 50mm <sup>2</sup>	1 x 50mm <sup>2</sup>	2 x 50mm <sup>2</sup>	2 x 50mm <sup>2</sup>	2 x 90mm <sup>2</sup>	2 x 90mm <sup>2</sup>	2 x 90mm <sup>2</sup>	2 x 90mm <sup>2</sup>
External Interfacing – (4)	<p><i>DB15 Plug</i> – 48V Relay Control and Analogue Outputs. Relay control – Separate Remote Enable for Inverter, Charger, Solar Charge Controller and a Multi-Purpose Programmable Output. Analogue Outputs – 0-5V Signals for Charge Current Limit, State of Charge.</p> <p><i>RJ45 Socket x 2</i> – CAN Bus for Interfacing with Compatible Inverters and System Controllers, connection of parallel batteries.</p>							

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Protection	Shunt Trip Circuit Breaker sized to suit max current, can be tripped by BMS if critical fault, manual reset. Includes overcurrent, cell under and over voltage, temperature, weak cell detection, minimum SOC control
Human Interface	State of Charge Display (0 to 100%), Error light, Error Reset Button, Serial RS232 Plug for Programming, WiFi remote monitoring (optional accessory)
Warranty [5]	10 years (or 3 500 cycles) warranty for average 70% DoD, and max 90% DoD
Service Life [5]	15 years (or 5 500 cycles) expected life at 70% DoD (1), 20 years (>7 000 cycles) at 50% DoD

**Notes to Specification Sheet:**

- 1) DoD = Depth of Discharge, recommended 70% DoD on average for extended life, 50% DoD on average for optimal life – max for normal operation is 90% DoD, max for system in standby is 100% DoD.
- 2) Max load duration – 5 minutes per 30 minute cycle. 2 x Max overload can be handled for 2 seconds.
- 3) Fly Leads 1,8m long, power cable Red = Positive, Black = Negative, conductors in table refer to one electrode i.e. per positive and negative connections
- 4) The hardwired control is via a DB15 plug and the CAN control is via a ethernet cable (may be non-standard pin configuration for some inverters). If Hard Wired control is required enquire about Freedom Won accessories eg control harness, contactor box, relay box.
- 5) End of Life (EoL) defined as cell dropping to 60% of Beginning of Life (BoL) capacity for expected life and 70% of BoL capacity for warranty.

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