

Li^{TE} Home and Business 52V Range

The following specifications pertain to the Freedom Won Li^{TE} Commercial range of 52V lithium iron phosphate batteries manufactured by Freedom Won with capacities fitting in above the Freedom Won Li^{TE} Home and Business and below the Freedom Li^{TE} Industrial ranges.



	Home 5/4	Home 10/8	Home 15/12	Home 20/16	Home 30/24	Business 40/32	Business 60/48	Business 80/64
Total Energy Capacity [kWh]	5	10	15	20	30	40	60	80
Energy, 80% DoD [kWh] ¹	4	8	12	16	24	32	48	64
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] ²	100	200	300	400	600	600	800	800
Max & Cont. Charge Power [kW] ²	5	10	15	20	30	30	40	40
Max/Cont. Discharge Current [A] ²	200/100	300/200	480/300	480/400	750/600	750/600	1000/800	1000/800
Max/Cont. Discharge Power [kW] ²	10/6	15/10	24/15	24/20	38/30	38/30	50/40	50/40
Max Recommended Inverter Total Rated Power (cont.) [kVA]	8	10	15	15	25	25	35	35
Nominal Voltage [V]	52V, to suit 48V Inverters, min 47V, max 56V							
Weight [kg]	49	89	130	173	254	326	508	637
Dimensions on or against wall excluding protuberances such as glands and breaker handle -Height X Width X Depth [mm]	500x340x290	745x340x290	745x490x290	745x640x290	1300x413x370	1300x522x370	1300x743x370	1300x1009x370
Enclosure	Aluminium enclosure painted white, for use indoors or fully protected under-cover environments, rated to IP20							
DC Connection - Integrated Cables [no. per electrode] ³	1x 50mm ²	1x 50mm ²	2 x 50mm ²	2 x 50mm ²	2 x 95mm ²	2 x 95mm ²	2 x 95mm ²	2 x 95mm ²
Control Interface	RJ45 Socket x 2 - CAN Bus for Interfacing with Compatible Inverters and System Controllers, and communication for the connection of parallel batteries - note that parallel batteries must all be of the same model.							
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, USB Plug for Programming.							
Warranty ⁴	10 years or 4 000 cycles for average 80% DoD, and max 90% DoD							
Service Life ⁴	16 years (>5 500 cycles) expected life at 80% DoD ¹ >20 years (>7 500 cycles) at 50% DoD							
Essential Accessories	Note that for connecting the battery to a PC a USS "printer" cable is required (one is supplied with each battery) CAN Bus Termination Resistor - one required per battery (one included with battery) CAN Bus Cable (RJ45 LAN Cable)-one required per battery (not supplied with battery). Note some inverters will require a special (non-standard pin configuration) cable - see installation manual.							

Notes to Specification Sheet

- 1 DoD = Depth of Discharge, recommended 80% DoD for average daily discharge, 70% DoD on average for optimal life - max for normal operation 90% DoD, max for system in standby 100% DoD.
- 2 Max load duration - 30 seconds per 40 second cycle. 1.5 x Max overload can be handled for 5 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 End of Life (EoL) defined as cell dropping to 60%.