

Best Practice Guide: Battery Storage Equipment Electrical Safety Requirements.

LiFe4851

PowerPlus Energy LiFe4851 Battery

1. Type of battery storage equipment

The PowerPlus Energy LiFe4851 is a 51.2VDC 100Ah 5.1kWh Battery using Lithium Ferro Phosphate cylindrical cells with an internal battery management system (BMS), a 2-pole non-polarised ganged 125A DC circuit breaker, Degson ESS battery terminals and CAN/RS485 interface ports with metal enclosure.

2. Details of the Best Practice Guide - Battery Storage Equipment (BPGSE) method chosen and standards applied

Method 2 of the Best Practice Guide – Battery Storage Equipment Electrical Safety Requirements has been chosen to demonstrate the compliance of the LiFe4851 battery. This method mandates compliance with:

1. UL 1973:2013 batteries for use in light electrical rail applications and stationary applications:

The PowerPlus Energy LiFe4851 battery does contain a Battery Management System (BMS) involving software which controls all safety parameters regarding over and under voltage, over and under temperature and over current events. Furthermore, the PowerPlus Energy LiFe4851 relies upon a 2-pole non-polarised ganged 125A DC circuit breaker for additional safety protection in the unlikely event of a solid-state circuit failure on the BMS. As such the LiFe4851 adequately meets the conditions.

3. Certifications of compliance to standards cited by the mandatory method
by certification bodies recognised in Australia

TUV Rheinland Shenzhen Co., Ltd. has certified that the PowerPlus Energy Pty Ltd LiFe4851 battery complies with the testing requirements of Section 38.3 of the Sixth revised edition Amendment 1 of the Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (ST/SG/AC.10/11/Rev.6/Amend.1/Section 38.3), as of 20th October 2025 on report RZUN2024-4850-M1-1.

UL Solutions has certified that the PowerPlus Energy Pty Ltd LiFe4851 complies with ANSI/CAN/UL 1973 - Batteries for use in stationary and motive auxiliary power applications. Report reference MH67993-20251103 as of issue date 2025-NOV-03.

Declaration of compliance

On the basis of assessment tests undertaken by nationally and internationally recognised test laboratories, and certificates issued by nationally and internationally recognised authorities,

I, Edwin Cotter, Engineering Head of Department for PowerPlus Energy Pty Ltd, hereby declare the LiFe4851 battery to be compliant to Best Practice Guide for Battery Storage Equipment – Electrical Safety Requirements – Version 1 – Pre-assembled battery system equipment – Method 2 mandatory requirements.