AS 3011.2:2019

Australian STANDARD®

Electrical installations — Secondary batteries installed in buildings

Part 2: Sealed cells

STANDARDS Australia

AS 3011.2:2019

This Australian Standard® was prepared by EL-005, Secondary Batteries. It was approved on behalf of the Council of Standards Australia on 9 December 2019.

This Standard was published on 20 December 2019.

The following are represented on Committee EL-005:

Australasian Fire and Emergency Service Authorities Council
Australian Industry Group
Clean Energy Council
Communications, Electrical and Plumbing Union — Electrical Division
Consumers Federation of Australia
CSIRO
Electrical Compliance Testing Association of Australia
Electrical Regulatory Authorities Council
Energy Networks Australia
Energy Storage Council
Engineers Australia
Institute of Electrical Inspectors
International Copper Association Australia
Joint Accreditation System of Australia and New Zealand
Master Electricians Australia

This Standard was issued in draft form for comment as DR AS 3011.2:2019.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:
www.standards.org.au

ISBN 978 1 76072 687 4

Electrical installations — Secondary batteries installed in buildings

Part 2: Sealed cells

Originated as AS 3011.2 1992.
Second edition 2019.

Preface

This Standard was prepared by the Standards Australia Committee EL-005, Secondary batteries, to supersede AS 3011.2—1992.

The objective of this Standard is to set out minimum requirements for the installation of sealed secondary batteries to ensure safety from fire and electric shock.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Contents

Introduction

Both the ampere-hour capacity and voltage of battery installations have increased to the point where some voltages now border on the medium and high voltage range. Even in extra-low voltage installations, the low internal resistances of batteries under short-circuit conditions can cause severe injuries to staff working on a battery or cell, or cause fire and explosion.

Tests have shown that batteries of 24 V d.c. and above may present problems in breaking fault currents and that additional precautions need to be taken to reduce the possibility of accidental short-circuits.

In preparing this Standard, the Committee considered the requirements of both sealed lead-acid cells and sealed alkaline cells.

Australian Standard®

Electrical installations — Secondary batteries installed in buildings

Part 2: Sealed cells

1 Scope and general

1.1 Scope

This Standard sets out requirements for the installation of sealed lead-acid and sealed alkaline secondary batteries with a nominal voltage exceeding 24 V d.c. and a capacity exceeding 10 A.h at the 1 h rate of discharge, permanently installed in buildings, structures or premises. This Standard applies to premises with critical power continuity requirements, for example acute care hospitals, sub-station support and black start.

NOTE 1 Refer to AS 2676.2 for guidance on the installation and maintenance of sealed secondary batteries.

NOTE 2 This Standard applies to sealed cells only. Refer to AS 3011.1 and AS 2676.1 for the installation and maintenance of vented cells.

NOTE 3 Refer to AS/NZS 3015 for requirements specifically applicable to the design and installation of extra-low voltage (d.c.) power supplies that are used by telecommunications carriers in the provision of public telecommunications networks.

NOTE 4 Refer to AS 5139 for general installation and safety requirements for battery energy storage systems (BESSs).

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 2676.2, *Guide to the installation, maintenance, testing and replacement of secondary batteries in buildings, Part 2: Sealed cells*

AS/NZS 1680.1, *Interior and workplace lighting, Part 1: General principles and recommendations*

AS/NZS 3000, *Electrical installations (known as the Australian/New Zealand Wiring Rules)*

AS/NZS 61439.1, *Low-voltage switchgear and controlgear, Part 1: General rules*

AS/NZS IEC 60947-2, *Low-voltage switchgear and controlgear, Part 2: Circuit-breakers*

AS/NZS IEC 60947-3, *Low voltage switchgear and controlgear, Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units*

1.3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

1.3.1
authorized person
person in charge of the premises, or the licensed electrical contractor or electrician or other competent person appointed or selected by the person in charge of the premises to perform certain duties associated with the battery installation on the premises