

Australian Standard[®]

**Secondary batteries for use with
stand-alone power systems**

Part 2: Installation and maintenance

This Australian Standard was prepared by Committee EL/5, Secondary Batteries. It was approved on behalf of the Council of Standards Australia on 21 April 1997 and published on 5 October 1997.

The following interests are represented on Committee EL/5:

Australian Automobile Association
Australian Automotive Aftermarket Association
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Lead Development Association
Electrical Development Association of New Zealand
Electricity Supply Association of Australia
Federal Chamber of Automotive Industries
Telstra Corporation

Additional interests participating in preparation of Standard:

Solar Energy Industries Association of Australia

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Part 2: Installation and maintenance

First published as AS 4086.2— 1997.

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/5, Secondary Batteries. This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

It is the second part of a two-part Standard on stand-alone batteries. The two parts are as follows:

- (a) AS 4086.1, *Secondary batteries for use with stand-alone power systems, Part 1: General requirements.*
- (b) This Standard.

This Standard was prepared in response to requests from battery manufacturers and installers for a standard which specifically covers the installation requirements of stand-alone batteries.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard

Secondary batteries for use with stand-alone power systems

Part 2: Installation and maintenance

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out recommended practices for the installation, maintenance, testing and replacement of secondary batteries, having nominal voltages not exceeding 115 V d.c., for use with stand-alone systems.

Stand-alone systems are systems that are not connected to the power distribution systems of an electricity supply authority. Stand-alone systems are supplied with power from one of a number of sources: a photovoltaic array, a wind generator, a water generator, or a diesel generator.

This Standard applies to the installation of all types of batteries including lead-acid and nickel-cadmium and covers both vented and valve-regulated cells.

NOTE: AS 3011.1 and AS 3011.2 cover requirements for batteries having nominal voltages exceeding 115 V d.c.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

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| 1006 | Solid-stem general purpose thermometers |
| 1319 | Safety signs for the occupational environment |
| 2184 | Low voltage switchgear and controlgear—Moulded-case circuit-breakers for rated voltages up to and including 600 V a.c. and 250 V d.c. |
| 2444 | Portable fire extinguishers and fire blankets—Selection and location |
| 2562 | Hydrometers—Portable syringe-type for lead-acid batteries |
| 2668 | Water for use in secondary batteries |
| 2669 | Sulphuric acid for use in lead-acid batteries |
| 2676 | Guide to the installation, maintenance, testing and replacement of secondary batteries in buildings |
| 2676.1 | Part 1: Vented cells |
| 2676.2 | Part 2: Sealed cells |
| 3000 | Electrical installations—Buildings structures and premises (known as the SAA Wiring Rules) |
| 3011 | Electrical installations—Secondary batteries installed in buildings |
| 3011.1 | Part 1: Vented cells |
| 3011.2 | Part 2: Sealed cells |
| 3111 | Approval and test specification—Miniature overcurrent circuit-breakers |
| 3439 | Low-voltage switchgear and controlgear assemblies |
| 3439.1 | Part 1: Type-tested and partially type-tested assemblies |