

Australian Standard[®]

**High-voltage switchgear and
controlgear**

Part 1: Common specifications



This Australian Standard® was prepared by Committee EL-007, Power Switchgear. It was approved on behalf of the Council of Standards Australia on 10 August 2012. This Standard was published on 27 August 2012.

The following are represented on Committee EL-007:

- Australian British Chamber of Commerce
 - Australian Industry Group
 - Energy Australia
 - Energy Networks Association
 - Engineers Australia
 - University of New South Wales
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Part 1: Common specifications

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PREFACE

This Standard was prepared by the Standards Australia Committee EL-007, Power Switchgear to supersede AS 2650—2005, *Common specifications for high-voltage switchgear and controlgear standards (IEC 60694, Ed.2.2 (2002) MOD)*.

The objective of this Standard is to state those specifications common to high-voltage switchgear and controlgear within the scope of the Standard.

This Standard applies to all high-voltage switchgear and control gear except as otherwise specified in the relevant high-voltage switchgear and controlgear standards for the particular type of switchgear and controlgear.

This Standard is identical with, and has been reproduced from, IEC 62271-1, Ed.1.1 (2011), *High-voltage switchgear and controlgear—Part 1: Common specifications*. This is a consolidated edition that consists of the first edition (2007) and its amendment 1 (2011). Amended text is indicated by marginal bars.

Common numbering of Standards falling under the responsibility of EL-007

In accordance with the decision taken by EL-007, a common numbering system will be established in order to align the numbering of Australian Standards falling under the responsibility of EL-007 with the IEC Standards. All high-voltage switchgear and controlgear Standards will, at their next revision (or as equivalent Standards become available in IEC), become parts of the AS 62271 (*High-voltage switchgear and controlgear*) series. The table below gives the relationship between AS 62271 numbering and original Standard numbers. Standards current at the time of publication of this Standard are marked with an asterisk (*).

| AS 62271 series part number | High-voltage switchgear and controlgear | Previous AS number |
|-----------------------------|--|--------------------|
| 100* | High-voltage alternating-current circuit-breakers | AS 2006 |
| 102* | Alternating current disconnectors and earthing switches | AS 1306 |
| 103 | Switches for rated voltages above 1 kV and less than 52 kV | *AS/NZS 60265.1 |
| 104 | Switches for rated voltages of 52 kV and above | *AS 60265.2 |
| 105 | Alternating current switch-fuse combinations | *AS 2024 |
| 106 | Alternating current contractors and contractor-based motor-starters | *AS 60470 |
| 110* | Inductive load switching | AS 4372 |
| 200* | AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV | AS 2264 |
| 201* | AC insulation-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV | AS 2264 |
| 202* | High-voltage/low-voltage prefabricated substations | AS 61330 |
| 203* | Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV | AS 2263 |
| 301* | Dimensional standardization of terminals | AS 2395 |
| 303 | Use and handling of sulphur hexafluoride (SF ₆) in high-voltage switchgear and controlgear | *AS 2791 |
| 304 | Additional requirements for enclosed switchgear and controlgear from 1 kV to 72.5 kV to be used in severe climactic conditions | *AS 4243 |
| 308* | Guide for asymmetrical short-circuit breaking test duty T100a | — |

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text ‘this part of IEC 62271’ should read ‘this part of AS 62271’.
- (c) A full point substitutes for a comma when referring to a decimal marker.

Only normative references in the source document that have been adopted as Australia or Australia/New Zealand have been listed as follows:

| <i>Reference to International Standard</i> | | <i>Australian or Australian/New Zealand Standard</i> | |
|--|--|--|---|
| IEC | | AS | |
| 60038 | IEC Standard voltages | 60038 | Standard voltages |
| 60068 | Environmental testing | 60068 | Environmental testing |
| 60068-2 | Part 2: Tests (all parts) | 60068.2 | Part 2: Tests (all parts) |
| 60269 | Low voltage fuses | 60269 | Low voltage fuses |
| 60269-2 | Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) | 60269.2 | Part 2: Supplementary requirements for fuses for use by authorized persons (fuses for industrial application) |
| 60270 | High-voltage test techniques—Partial discharge measurements | 60270 | High-voltage test techniques—Partial discharge measurements |
| 60417 | Graphical symbols for use on equipment | 60417 | Graphical symbols for use on equipment |
| 60947 | Low-voltage switchgear and controlgear | 60947 | Low-voltage switchgear and controlgear |
| 60947-2 | Part 2: Circuit-breakers | 60947.2 | Part 2: Circuit breakers |
| 60947-4-1 | Part 4-1: contactors and motor-starters—Electromechanical contactors and motor-starters | 60947.4.1 | Part 4.1: Contactors and motor-starters—Electromechanical contactors and motor-starters |
| 60947-4-2 | Part 4-2: Contactors and motor-starters—AC semiconductor motor controllers and starters | 60947.4.2 | Part 4.2: Contactors and motor-starters—AC semiconductor motor controllers and starters |
| 60947-5-1 | Part 5-1: Control circuit devices and switching elements—Electromechanical control circuit devices | 60947.5.1 | Part 5.1: Control circuit devices and switching elements—Electromechanical control circuit devices |
| 60947-7-1 | Part 7-1: Ancillary equipment—Terminal blocks for copper conductors | 60947.7.1 | Part 7.1: Ancillary equipment—Terminal blocks for copper conductors |
| 60947-7-2 | Part 7-2: Ancillary equipment—Protective conductor terminal blocks for copper conductors | 60947.7.2 | Part 7.2: Ancillary equipment—Protective conductor terminal blocks for copper conductor |
| | | AS/NZS | |
| 60227 | Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V | 60227 | Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V |
| 60227-5 | Part 5: Flexible cables (cords) | 60227.5 | Part 5: Flexible cables (cords) |
| 61000 | Electromagnetic compatibility (EMC) | 61000 | Electromagnetic compatibility (EMC) |
| 61000-4-1 | Part 4-1: Testing and measurement techniques—Overview of IEC 61000-4 series | 61000.4.1 | Part 4.1: Testing and measurement techniques—Overview of IEC 61000-4 series |
| 61000-4-4 | Part 4-4: Testing and measurement techniques—Electrical fast transient/burst immunity test | 61000.4.4 | Part 4.4: Testing and measurement techniques—Electrical fast transient/burst immunity test |

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