

Australian Standard™

**High-voltage switchgear and  
controlgear**

**Part 203: Gas-insulated metal-enclosed  
switchgear for  
rated voltages above 52 kV  
(IEC 62271-203, Ed. 1.0 (2003) MOD)**

**STANDARDS**  
Australia



This Australian Standard was prepared by Committee EL-007, Power Switchgear. It was approved on behalf of the Council of Standards Australia on 11 April 2005. This Standard was published on 15 July 2005.

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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-007, Power Switchgear, to supersede AS 2263—1995.

The objective of this Standard is to provide requirements for gas-insulated metal-enclosed switchgear in which the insulation is obtained, at least partly, by an insulation gas other than air at atmospheric pressure for alternating current of rated voltages above 52 kV, for indoor and outdoor installations.

This Standard is an adoption with national modifications and has been reproduced from IEC 62271-203, Ed. 1.0 (2003), *High-voltage switchgear and controlgear – Part 203. Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV*, and has been varied as indicated to take account of Australian conditions.

Variations to IEC 62271-203, Ed. 1.0 (2003) are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (**example**). Added figures are not themselves shaded, but are identified by a shaded border.

### Common numbering of standards falling under the responsibility of EL-007

In accordance with the decision taken by the committee 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 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 future numbering and existing Standard numbers. Standards current at the time of publication of this Standard are marked with an asterick (\*).

AS 62271 Series	High-voltage switchgear and controlgear	Old AS Number
1	Common specifications	*AS 2650
100*	High-voltage alternating current circuit-breakers	AS 2006
102*	Alternating current disconnectors and earthing switches	AS 1306
103	Switchgear for rated voltages above 1 kV and less than 52 kV	*AS/NZS 60265.1
104	Switchgear for rated voltages of 52 kV and above	*AS 60265.2
106	Alternating current contactors and contactor based motor-starters	*AS 2024
110	Inductive load switching	*AS 4372
200*	A.C. metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	AS 2086
201	A.C. insulation-enclosed switchgear and controlgear for rated voltages above 1 kV up to and including 38 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

AS 62271 Series	High-voltage switchgear and controlgear	Old AS Number
303	Use and handling of sulphur hexafluoride (SF <sub>6</sub> ) 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 climatic conditions	*AS 4243

This Standard differs from the Standard it supersedes in the following major areas:

- (a) The Standard has been basically changed to be updated to today's use of high voltage switchgear above 52 kV.
- (b) Adopting the content to AS 2650 'Common Clauses'.
- (c) Deleting not used technologies, like 3-phase measurements.
- (d) Annex ZA 'Items subject to agreement between the manufacturer and user' has been updated.
- (e) References have been updated.

This Standard shall be read in conjunction with AS 2650, which is applicable unless otherwise specified in this Standard. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in AS 2650. Amendments to these clauses and subclauses are given under the same references, whilst additional subclauses are numbered from 101.

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

- (i) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (ii) In the source text 'this international standard' should read 'this Australian Standard'.
- (iii) A full point should be substituted for a comma when referring to a decimal marker.
- (iv) Any French text on figures should be ignored.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral Part of a standard, whereas an informative annex is only for information and guidance.

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## STANDARDS AUSTRALIA

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Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian, figure or text that is added is part of this standard and is identified by shading.

**1 General****1.1 Scope**

This standard specifies requirements for gas-insulated, metal-enclosed switchgear in which the insulation is obtained, at least partly, by an insulating gas other than air at atmospheric pressure, for alternating current of rated voltages above 52 kV, for indoor and outdoor installation, and for service frequencies up to and including 50 Hz.

For the purpose of this standard, the terms “GIS” and “switchgear” are used for “gas-insulated metal-enclosed switchgear”.

The gas-insulated metal-enclosed switchgear covered by this standard consists of individual components intended to be directly connected together and able to operate only in this manner.

This standard completes and amends, if necessary, the various relevant standards applying to the individual components constituting GIS.

**1.2 Normative references**

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

References to international standards that are struck through in this clause are replaced by references to Australian Standards that are listed immediately thereafter and identified by shading. Any Australian Standard that is identical to the International Standard it replaces is identified as such.

Subclause 1.2.6. IEC 60694 is applicable with the following additions:

~~IEC 60044-1, Instrument transformers — Part 1: Current transformers~~

AS 60044.1, Instrument transformers, Part 1: Current transformers

~~IEC 60044-2, Instrument transformers — Part 2: Inductive voltage transformers~~

AS 60044.2, Instrument transformers, Part 2: Single-phase inductive voltage transformers

~~IEC 60068-2-11, Environmental testing — Part 2: Tests. Test Ka: Salt mist~~

AS 60068.2.11, Environmental testing, Part 2: Tests. Test Ka: Salt mist (identical to IEC 60068-2-11)

~~IEC 60137, Insulating bushings for alternating voltages above 1 000 V~~