

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)**



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	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
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.

## CONTENTS

	<i>Page</i>
1 General.....	1
1.1 Scope .....	1
1.2 Normative references.....	1
2 Normal and special service conditions .....	2
2.1 Normal service conditions .....	2
2.2 Special service conditions.....	3
3 Terms and definitions.....	3
4 Ratings .....	5
4.1 Rated voltage for equipment ( $U_r$ ) .....	6
4.2 Rated insulation level.....	6
4.3 Rated frequency ( $f_r$ ).....	8
4.4 Rated normal current and temperature rise .....	8
4.5 Rated short-time withstand current ( $I_k$ ).....	9
4.6 Rated peak withstand current ( $I_p$ ).....	9
4.7 Rated duration of short-circuit ( $t_k$ ) .....	9
4.8 Rated supply voltage of closing and opening devices and of auxiliary and control circuits ( $U_a$ ).....	9
4.9 Rated supply frequency of closing and opening devices and of auxiliary circuits.....	9
4.10 Rated pressure of compressed gas supply for insulation and/or operation .....	9
5 Design and construction.....	9
5.1 Requirements for liquids in switchgear and controlgear.....	9
5.2 Requirements for gases in switchgear and controlgear .....	9
5.3 Earthing of switchgear and controlgear .....	10
5.4 Auxiliary and control equipment .....	10
5.5 Dependent power operation .....	10
5.6 Stored energy operation.....	10
5.7 Independent manual operation.....	10
5.8 Operation of releases.....	10
5.9 Low- and high-pressure interlocking and monitoring devices.....	10
5.10 Nameplates.....	11
5.11 Interlocking devices .....	11
5.12 Position indication.....	11
5.13 Degrees of protection by enclosures .....	11
5.14 Creepage distances .....	11
5.15 Gas and vacuum tightness .....	12
5.16 Liquid tightness.....	12
5.17 Flammability .....	12
5.18 Electromagnetic compatibility (EMC).....	12
5.101 Pressure coordination .....	12
5.102 Internal fault .....	13
5.103 Enclosures.....	14
5.104 Partitions .....	15
5.105 Pressure relief .....	16
5.106 Noise .....	17
5.107 Interfaces.....	17
5.108 Corrosion.....	18

	<i>Page</i>
6	Type tests ..... 18
6.1	General ..... 18
6.2	Dielectric tests ..... 19
6.3	Radio interference voltage (r.i.v.) test ..... 23
6.4	Measurement of the resistance of circuits ..... 23
6.5	Temperature-rise tests ..... 23
6.6	Short-time withstand current and peak withstand current tests ..... 24
6.7	Verification of the protection ..... 25
6.8	Gas tightness tests ..... 25
6.9	Electromagnetic compatibility tests (EMC) ..... 25
6.10	Additional tests on auxiliary and control circuits ..... 25
6.101	Verification of making and breaking capacities ..... 25
6.102	Mechanical and environmental tests ..... 25
6.103	Proof tests for enclosures ..... 26
6.104	Pressure test on partitions ..... 27
6.105	Test under conditions of arcing due to an internal fault ..... 28
6.106	Insulator tests ..... 28
6.107	Corrosion test on earthing connections ..... 29
6.200	Dielectric dissipation factor ..... 29
7	Routine tests ..... 29
7.1	Dielectric test on the main circuit ..... 30
7.2	Tests on auxiliary and control circuits ..... 30
7.3	Measurement of the resistance of the main circuit ..... 30
7.4	Tightness test ..... 30
7.5	Design and visual checks ..... 30
7.101	Pressure tests of enclosures ..... 30
7.102	Mechanical operation tests ..... 31
7.103	Tests on auxiliary circuits, equipment and interlocks in the control mechanism ..... 31
7.104	Pressure test on partitions ..... 31
7.200	Dielectric dissipation factor ..... 31
7.201	Partial discharge test ..... 31
8	Guide to the selection of switchgear and controlgear ..... 31
9	Information to be given with enquiries, tenders and orders ..... 31
9.101	Information with enquiries and orders ..... 32
9.102	Information with tenders ..... 32
10	Rules for transport, storage, installation, operation and maintenance ..... 32
10.1	Conditions during transport, storage and installation ..... 32
10.2	Installation ..... 32
10.3	Operation ..... 37
10.4	Maintenance ..... 37
11	Safety ..... 37
12	Environmental aspects ..... 37
Annex A (normative)	Test procedure for dielectric test on three-phase encapsulated GIS, range II ..... 39
Annex B (normative)	Methods for testing gas-insulated metal-enclosed switchgear under conditions of arcing due to an internal fault ..... 40
Annex C (informative)	Technical and practical considerations of site testing ..... 43
Annex D (informative)	Calculations related to an internal fault ..... 48
Annex E (informative)	Information to be given with enquiries, tenders and orders ..... 49
Annex ZA (informative)	Items subject to agreement between the manufacturer and user ..... 54
Annex ZZ (normative)	Variations to IEC 62271-203, Ed. 1.0 (2003) for application in Australia ..... 56
Bibliography	..... 57



## 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 60 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 of 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~~