

Australian/New Zealand Standard™

**Low-voltage switchgear and controlgear**

**Part 1: General rules**



## **AS/NZS IEC 60947.1:2015**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-006, Industrial Switchgear and Controlgear. It was approved on behalf of the Council of Standards Australia on 19 May 2015 and on behalf of the Council of Standards New Zealand on 29 May 2015. This Standard was published on 29 June 2015.

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## Low-voltage switchgear and controlgear

### Part 1: General rules

Originated as AS 3650—1988.  
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-006, Industrial Switchgear and Controlgear, to supersede AS 60947.1—2004.

The objective of this Standard is to state the general rules and common safety requirements for low voltage switchgear and controlgear.

This Standard is identical with, and has been reproduced from, IEC 60947-1, Ed. 5.2 (2014), *Low-voltage switchgear and controlgear*, Part 1: *General rules*. A vertical line in the margin shows where IEC 60947-1, Ed. 5.0 (2007), is modified by its Amendments 1 (2010) and 2 (2014). Additions and deletions are displayed in red, with deletions being struck through.

As this Standard is reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>	
IEC		AS	
60068	Environmental testing	60068	Environmental testing
60068-1	Part 1: General and guidance Amendment 1 (1992)	60068.1	Part 1: General and guidance
60068-2-1	Part 2-1: Tests—Tests A: Cold	60068.2.1	Part 2.1: Tests—Tests A: Cold
60068-2-27	Part 2-27: Tests—Test Ea and guidance: Shock	60068.2.27	Part 2.27: Tests—Test Ea and guidance: Shock
60068-2-30	Part 2-30: Tests—Test Db: Damp heat, cyclic (12 h + 12 h cycle)	60068.2.30	Part 2.30: Tests—Test Db: Damp heat, cyclic (12 h + 12 h cycle)
60068-2-52	Part 2-52: Tests: Test Kb: Salt mist, cyclic (sodium chloride solution)	60068.2.52	Part 2.52: Tests: Test Kb: Salt mist, cyclic (sodium chloride solution)
60068-2-78	Part 2-78: Tests—Test Cab: Damp heat, steady state	60068.2.78	Part 2.78: Tests—Test Cab: Damp heat, steady state
60269	Low-voltage fuses	60269	Low-voltage fuses
60269-1	Part 1: General requirements Amendment 1 (2005)	60269.1	Part 1: General requirements
60269-2	Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) Amendment 1 (1995) Amendment 2 (2001)	60269.2	Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)
		AS/NZS IEC	
60947	Low-voltage switchgear and controlgear	60947	Low-voltage switchgear and controlgear
60947-5-1	Part 5-1: Control circuit devices and switching elements— Electromechanical control circuit devices Amendment 1 (2009)	60947.5.1	Part 5.1: Control circuit devices and switching elements— Electromechanical control circuit devices
60947-8	Part 8: Control units for built-in thermal protection (PTC) for rotating electrical machines Amendment 1 (2006)	60947.8	Part 8: Control units for built-in thermal protection (PTC) for rotating electrical machines

IEC 60999	Connecting devices—Electrical copper conductors—Safety requirements for screw-type and screwless-type clamping units	AS/NZS IEC 60999	Connecting devices—Electrical copper conductors—Safety requirements for screw-type and screwless-type clamping units
60999-1	Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm <sup>2</sup> up to 35 mm <sup>2</sup> (included)	60999.1	Part 1: General requirements and particular requirements for clamping units for conductors from 0.2 mm <sup>2</sup> up to 35 mm <sup>2</sup> (included)
60999-2	Part 2: Particular requirements for clamping units for conductors above 35 mm <sup>2</sup> up to 300 mm <sup>2</sup> (included)	60999.2	Part 2: Particular requirements for clamping units for conductors above 35 mm <sup>2</sup> up to 300 mm <sup>2</sup> (included)
61000	Electromagnetic compatibility (EMC)	AS/NZS 61000	Electromagnetic compatibility (EMC)
61000-3-2	Part 3-2: Limits—Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	61000.3.2	Part 3.2: Limits—Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
61000-3-3	Part 3-3: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤ 16 A per phase and not subject to conditional connection	61000.3.3	Part 3.3: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
61000-4-11	Part 4-11: Testing and measurement techniques—Voltage dips, short interruptions and voltage variations immunity tests	61000.4.11	Part 4.11: Testing and measurement techniques—Voltage dips, short interruptions and voltage variations immunity tests
IEC 61000-4-13	Part 4-13: Testing and measurement techniques—Harmonics and interharmonics including mains signalling at a.c. power port, low-frequency immunity tests	AS/NZS 61000.4.13	Part 4.13: Testing and measurement techniques—Harmonics and interharmonics including mains signalling at a.c. power port, low-frequency immunity tests
61000-6-2	Part 6-2: Generic standards—Immunity for industrial environments	61000.6.2	Part 6.2: Generic standards—Immunity for industrial environments
61131	Programmable controllers	AS IEC 61131	Programmable controllers
61131-2	Part 2: Equipment requirements and tests	61131.2	Part 2: Equipment requirements and tests
61508	Functional safety of electrical/electronic/programmable electronic safety-related systems (series)	AS 61508	Functional safety of electrical/electronic/programmable electronic safety-related systems (series)

IEC		AS	
62061	Safety of machinery—Functional safety of safety-related electrical, electronic and programmable electronic control systems	62061	Safety of machinery—Functional safety of safety-related electrical, electronic and programmable electronic control systems
62430	Environmentally conscious design for electrical and electronic products	62430	Environmentally conscious design for electrical and electronic products
CISPR		AS/NZS CISPR	
11	Industrial, scientific and medical equipment—Radio-frequency disturbance characteristics—Limits and methods of measurement Amendment 1 (2010)	11	Industrial, scientific and medical equipment—Radio-frequency disturbance characteristics—Limits and methods of measurement

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard 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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