

Australian/New Zealand Standard™

Low-voltage switchgear and controlgear

**Part 6.2: Multiple function equipment—
Control and protective switching
devices (or equipment) (CPS)**



AS/NZS IEC 60947.6.2:2015

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This Standard was issued in draft form for comment as DR AS/NZS IEC 60947.6.2:2015.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-006, Industrial Switchgear and Controlgear.

This part of IEC 60947 applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1,000 V a.c. or 1,500 V d.c.

The object of this part is to state—

- (a) the characteristics of CPSs;
- (b) the conditions with which CPSs comply with reference to their operation and behaviour, their dielectric properties, and the degree of protection provided by their enclosure where applicable;
- (c) the tests intended to verify that these conditions have been met, and the methods to be adopted for these tests; and
- (d) the information to be marked on or given with the CPSs.

This Standard is identical with, and has been reproduced from IEC 60947-6-2, Ed. 2.1 (2007), *Low-voltage switchgear and controlgear, Part 6-2: Multiple function equipment—Control and protective switching devices (or equipment) (CPS)*. A vertical line in the margins shows where IEC 60947-6-2, Ed. 2.0 (2002) has been modified by amendment 1 (2007).

The principal difference between this and the previous edition, is that this is a joint Australian/New Zealand Standard.

This Standard should be read in conjunction with IEC 60947-1.

The numbering of the tables is not identical to that of the first edition and its Amendments 1 and 2.

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

- (A) In the source text ‘this part of IEC 60947’ should read ‘this Australian/New Zealand Standard’.
- (B) 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/NZS	
60034	Rotating electrical machines	60034	Rotating electrical machines
60034-1	Part 1: Rating and performance	60034.1	Part 1: Rating and performance (IEC 60034-1, Ed. 11 (2004) MOD)
60695	Fire hazard testing	60695	Fire hazard testing
60695-2-10	Part 2-10: Glowing/hot-wire based test methods—Glow-wire apparatus and common test procedure	60695.2.10	Part 2.10: Glowing/hot-wire based test methods—Glow-wire apparatus and common test procedure
60695-2-11	Part 2-11: Glowing/hot-wire based test methods—Glow-wire flammability test method for end-products	60695.2.11	Part 2.11: Glowing/hot-wire based test methods—Glow-wire flammability test method for end-products

60695-2-12	Part 2-12: Glowing/hot-wire based test methods—Glow-wire flammability test method for materials	60695.2.12	Part 2.12: Glowing/hot-wire based test methods—Glow-wire flammability test method for materials
60695-2-13	Part 2-13: Glowing/hot-wire based test methods—Glow-wire ignitability test method for materials	60695.2.13	Part 2.13: Glowing/hot-wire based test methods—Glow-wire ignitability test method for materials
60695-11-10	Part 11-10: Test flames—50 W horizontal and vertical flame test methods Amendment 1 (2003)	60695.11.10	Part 11.10: Test flames—50 W horizontal and vertical flame test methods
IEC 61000	Electromagnetic compatibility (EMC)	AS/NZS 61000	Electromagnetic compatibility (EMC)
61000-4-2	Part 4-2: Testing and measurement techniques—Electrostatic discharge immunity test Amendment 1 (1998) Amendment 2 (2000)	AS/NZS IEC 61000.4.2	Part 4.2: Testing and measurement techniques—Electrostatic discharge immunity test
61000-4-3	Part 4-3: Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test	61000.4.3	Part 4.3: Testing and measurement techniques—Radiated, radio-frequency, electromagnetic field immunity test
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
61000-4-5	Part 4-5: Testing and measurement techniques—Surge immunity test Amendment 1 (2000)	AS/NZS 61000.4.5	Part 4.5: Testing and measurement techniques—Surge immunity test
61000-4-6	Part 4-6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields Amendment 1 (2004) Amendment 2 (2006)	AS/NZS IEC 61000.4.6	Part 4.6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields
61131 61131-2	Programmable controllers Part 2: Equipment requirements and tests	AS IEC 61131 61131.2	Programmable controllers Part 2: Equipment requirements and tests
CISPR 11	Industrial, scientific and medical (ISM) radio-frequency equipment—Electromagnetic Radio-frequency disturbance characteristics—Limits and methods of measurement Amendment 1 (2004) Amendment 2 (2006)	AS/NZS CISPR 11	Industrial, scientific and medical (ISM) radio-frequency equipment—Electromagnetic 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 annexes 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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INTRODUCTION

The provisions of the General Rules are applicable to this part of IEC 60947-6, where specifically called for. General Rules clauses and subclauses thus applicable as well as tables, figures and appendices are identified by reference to Part 1 of IEC 60947-1, for example, 1.2.3, table 4, or annex A of Part 1.

AUSTRALIAN/NEW ZEALAND STANDARD

Low-voltage switchgear and controlgear

Part 6.2:

Multiple function equipment—Control and protective switching devices (or equipment) (CPS)

1 Scope and object

This part of IEC 60947 applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1 000 V a.c. or 1 500 V d.c.

CPSs are intended to provide both protective and control functions for circuits and are operated otherwise than by hand. They may also fulfill additional functions, such as isolation.

Digital inputs and/or digital outputs contained in CPSs, and intended to be compatible with PLCs are covered by IEC 61131-2.

The object of this part is to state:

- the characteristics of CPS's;
- the conditions with which CPS's shall comply with reference to their operation and behaviour, their dielectric properties, the degree of protection provided by their enclosure where applicable;
- the tests intended to verify that these conditions have been met, and the methods to be adopted for these tests;
- the information to be marked on or given with the CPS's.

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.

IEC 60034-1:2004, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60085:2004, *Electrical insulation – Thermal classification*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 60695-2-12:2000, *Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability test method for materials*