AS/NZS 3947.3:2001
IEC 60947-3:1999
IEC 60947-3:1999/Cor.1:1999
IEC 60947-3:1999/Amd1:2001

Australian/New Zealand Standard™

Low-voltage switchgear and controlgear

Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

Standards Australia

STANDARDS NEW ZEALAND

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 18 June 2001 and on behalf of the Council of Standards New Zealand on 1 August 2001. It was published on 4 October 2001.

The following interests are represented on Committee EL-006:

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Australian Chamber of Commerce and Industry
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Electrical Contractors Association of New Zealand
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This Standard was issued in draft form for comment as DR 01004.

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Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

Originated as AS 1775—1975.
Previous edition AS 3947.3—1994.
Jointly revised and designated AS/NZS 3947.3:2001.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 4046 4

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-006, Industrial Switchgear and Controlgear to supersede AS 3947.3—1994 and its Amendment 1:1995.

The objective of this Standard is to specify the characteristics of the equipment, the condition with which the equipment shall comply, the tests for confirming that these conditions have been met, the methods to be adopted for these tests and the information to be marked on the equipment or made available by the manufacturer.

This Standard is Part 3 of a series which, when complete, will consist of the following:

AS(/NZS) 3947	Low-voltage switchgear and controlgear	
AS/NZS 3947.1	Part 1:	General rules
AS 3947.2	Part 2:	Circuit-breakers
AS/NZS 3947.3	Part 3:	Switches, disconnectors, switch-disconnectors and fuse-combination units (this Standard)
AS/NZS 3947.3 Supp1	Part 3:	Switches, disconnectors, switch-disconnectors and fuse-combination units Supplement 1: Fuse-switch-disconnectors and switch-disconnectors for use with low-voltage aerial bundled cables
AS/NZS 3947.4.1	Part 4.1:	Contactors and motor-starters—Electromechanical contactors and motor-starters
AS/NZS 3947.4.2	Part 4.2:	Contactors and motor-starters—A.C. semiconductor motor controllers and starters
AS/NZS 3947.4.3	Part 4.3:	Contactors and motor-starters—A.C. semiconductor controllers and contactors for non-motor loads
AS/NZS 3947.5.1	Part 5.1:	Control circuit devices and switching elements—Electromechanical control circuit devices
AS/NZS 3947.5.2	Part 5.2:	Control circuit devices and switching elements—Proximity switches
AS/NZS 3947.5.3	Part 5.3:	Control circuit devices and switching elements—Requirements for proximity devices with defined behaviour under fault conditions
AS/NZS 3947.5.4	Part 5.4:	Control circuit devices and switching elements—Methods of assessing the performance of low-energy contacts—Special tests
AS/NZS 3947.5.5	Part 5.5:	Control circuit devices and switching elements—Electrical emergency stop devices with mechanical latching function
AS/NZS 3947.5.6	Part 5.6:	Control circuit devices and switching elements—D.C. interface for proximity sensors and switching amplifiers (NAMUR)
AS/NZS 3947.6.1	Part 6.1:	Multiple function equipment—Automatic transfer switching equipment
AS/NZS 3947.6.2	Part 6.2:	Multiple function equipment—Control and protective switching devices (or equipment) (CPS)
AS/NZS 3947.7.1	Part 7.1:	Ancillary equipment—Terminal blocks for copper conductors
AS 3947.7.2	Part 7.2:	Ancillary equipment—Protective conductor terminal blocks for copper conductors
AS/NZS 3947.7.3	Part 7.3:	Ancillary equipment—Safety requirements for terminal blocks for the reception of cartridge fuse-links

This Standard is identical in technical content with and has been reproduced from IEC 60947-3:1999 + Corrigendum:1999 + Amendment 1:2001, *Low-voltage switchgear and controlgear*—Part 3: *Switches, disconnectors, switch-disconnectors and fuse-combination units.*

Changes required by the Corrigendum and Amendment 1 to IEC have been indicated by a margin bar against each clause, figure, table or annex affected.

This Standard differs from AS 3947.3—1994, incorporating its Amendment 1:1995, in the following areas:

a) The Australian variation to Clause 7.2.2, adding an extra row to Table 2 of AS/NZS 3947.1 to limit the temperature rise of the fuse contact for fuse-combination units to 80K has been deleted and replaced by the added overload current requirements and tests.

b) Requirements for resistance of materials to abnormal heat and fire have been added.

c) Requirements for direction of movement for actuators of devices have been added.

d) Additional construction requirements for equipment suitable for isolation have been varied.

e) Requirements and tests for dielectric properties have been varied to add requirements and tests for impulse withstand voltage and power frequency withstand voltage.

f) Requirements and tests for dependent and independent power operation have been added.

g) Requirements and tests for switching overvoltages have been deleted.

h) Supplementary requirements for equipment with provision for electrical interlocking with contactors or circuit-breakers have been added.

i) Supplementary requirements for equipment provided with means for padlocking in the open position have been added.

j) Requirements and simplified tests for equipment having the same fundamental design have been added.

k) Overload requirements and tests (new Test Sequence V) for equipment incorporating fuses have been added.

l) Requirements and tests for Electromagnetic Compatibility have been added.

m) Appendix B of AS 3947.3:1994 relating to creepage and clearance distances has been deleted.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (example). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

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

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text ‘this standard’ should read ‘this Australian/New Zealand Standard’.

(c) A full point should be substituted for a comma when referring to a decimal marker.

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.