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Australian/New Zealand Standard™

Low-voltage switchgear and controlgear

**Part 6.1: Multiple function equipment—
Automatic transfer switching equipment**



Standards Australia



STANDARDS
NEW ZEALAND
Pūnaha Aotearoa

AS/NZS 3947.6.1:2001

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Australian Chamber of Commerce and Industry
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Electrical Contractors Association of New Zealand
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Australian/New Zealand Standard™

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**Part 6.1: Multiple function equipment—
Automatic transfer switching equipment**

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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 3947.6.1—1996.

The objective of this Standard is to provide characteristics of the equipment, conditions with which the equipment must comply, tests intended to confirm these conditions have been met and data to be marked on the equipment and provided by the manufacturer.

This Standard is Part 6.1 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
AS/NZS 3947.3 Suppl	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 (this Standard)
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 with and has been reproduced from IEC 60947-6-1:1989 + Corrigendum: 1991 + A1:1994 + A2:1997, *Low-voltage switchgear and controlgear—Part 6-1: Multiple function equipment—Automatic transfer switching equipment*.

The provisions of AS/NZS 3947.1, General rules are applicable to this Standard where specifically called for. Clauses and subclauses thus applicable, as well as tables, figures, and annexes are identified by reference to IEC 60947-1, for example subclause 1.2.3 of IEC 60947-1, table 4 of IEC 60947-1 or annex A of IEC 60947-1.

This Standard differs from AS 3947.6.1—1996 by the addition of IEC Amendment 2:1997 which adds appropriate IEC Standards, electromagnetic compatibility requirements and modifications to utilization category and product information.

A vertical line in the margin shows where IEC 60947-6-1:1989 has been modified by amendments 1 and 2 and the Corrigendum.

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 term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

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Australian/New Zealand Standard**Low-voltage switchgear and controlgear****Part 6.1: Multiple function equipment—Automatic transfer switching equipment**

Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian/New Zealand table, figure or passage of text that is added (and identified by shading) is part of this Standard.

1 General

The provisions of the General Rules, IEC Publication 60947-1, are applicable to this standard, where specifically called for. General Rules clauses and sub-clauses thus applicable, as well as tables, figures and appendices are identified by references to Part 1, for example: 'Sub-clause 1.2.3, table 4 or Appendix A of Part 1'.

1.1 Scope

This standard applies to Automatic Transfer Switching Equipment (ATSE) to be used in emergency power systems with interruption of the supply to the load during transfer, the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c. It covers ATSE provided with or without an enclosure.

Devices necessary for the control (e.g. control switches, ...) and the protection (e.g. circuit-breakers, ...) of an ATSE shall comply with the requirements of the relevant IEC standards.

ATSE used only for emergency lighting may be subject to specific rules and/or legal requirements and are not, therefore, covered by this standard.

1.2 Object

The object of this standard is to state:

- 1) the characteristics of the equipment.
- 2) the conditions with which the equipment must comply with reference to:
 - a) operation for which the equipment is intended;
 - b) operation and behaviour in case of specified abnormal conditions, for example, short circuit;
 - c) dielectric properties.
- 3) The tests intended to confirm that these conditions have been met and the methods for performing these tests.
- 4) The data to be marked on the equipment and provided by the manufacturer.