

AS/NZS 3947.5.1:2000  
IEC 60947-5-1:1997  
IEC 60947-5-1:1997/Amd.1:1999  
IEC 60947-5-1:1997/Amd.2:1999

AS/NZS 3947.5.1

Australian/New Zealand Standard™

## Low-voltage switchgear and controlgear

### Part 5.1: Control circuit devices and switching elements— Electromechanical control circuit devices



Standards Australia



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NEW ZEALAND  
*Pūranga Aotearoa*

## **AS/NZS 3947.5.1:2000**

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AS/NZS 3947.5.1:2000

# Australian/New Zealand Standard™

## Low-voltage switchgear and controlgear

### Part 5.1: Control circuit devices and switching elements— Electromechanical control circuit devices

Originated as part of AS 1431.1—1974, AS 1431.2—1983 and AS 1431.7—1989.  
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/6, Industrial Switchgear and Controlgear to supersede AS 3947.5.1—1995.

The objective of this Standard is to specify characteristics and electrical, mechanical and functional requirements of electromechanical control circuit devices.

This Standard is Part 5.1 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 Suppl1	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 3947.4.1	Part 4.1: Contactors and motor-starters—Electromechanical contactors and motor-starters
AS 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 3947.6.1	Part 6.1: Multiple function equipment—Automatic transfer switching equipment
AS 3947.6.2	Part 6.2: Multiple function equipment—Control and protective switching devices (or equipment) (CPS)
AS 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 60947-5-1:1997 incorporating Amendment 1:1999 and Amendment 2:1999, *Low-voltage switchgear and controlgear* Part 5-1: *Control circuit devices and switching elements—Electromechanical control circuit devices*.

Changes required by Amendments 1 and 2 have been indicated by a marginal bar against each clause, figure, table or annex affected.

This Standard differs from AS 3947.5.1—1995 in the following areas:

- (a) All Australian variations have been removed. For material relating to push-buttons refer to IEC 60073:1996. For material relating to direction of movement of control circuit devices refer IEC 60447 and for the definition of safety and auxiliary colours refer to Publication 2 of the International Commission of Illumination(CIE).
- (b) The layout of the Standard has been revised so that the material previously in Chapter 1 now forms the text of the body of the Standard. Material from Chapters 2 & 3 is reproduced unchanged as are Annexes J and K respectively.
- (c) Test sequences have been changed with an extra test in test sequence I, changed making and breaking capacities test and dielectric verification test in test sequences II-IV and an extra test in test sequences V and VI.
- (d) Conditional short-circuit current test was a 3 phase test.
- (e) Tables for semiconductor switching elements added in Annex A.
- (f) Durability declaration added in Annex C.

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.

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

The term ‘normative’ has been used in this Standard to define the application of the annex to which it applies. A ‘normative’ annex is an integral part of a Standard.

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