

AS 60947.2—2005  
IEC 60947-2, Ed.3 (2003)

AS 60947.2—2005

Australian Standard™

**Low-voltage switchgear and controlgear**  
**Part 2: Circuit-breakers**

This Australian Standard was prepared by Committee EL-006, Industrial Switchgear and Controlgear. It was approved on behalf of the Council of Standards Australia on 3 March 2005.

This Standard was published on 5 April 2005.

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The following are represented on Committee EL-006:

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Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Bureau of Steel Manufacturers of Australia  
Electrical Contractors Association of New Zealand  
Electricity Supply Association of Australia  
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## **Low-voltage switchgear and controlgear**

### **Part 2: Circuit-breakers**

Originated as AS 3858—1990.  
Revised and redesignated AS 3947.2—1997.  
Jointly revised and designated AS/NZS 3947.2:2002.  
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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-006, Industrial Switchgear and Controlgear to supersede AS/NZS 3947.2:2002.

The objective of this Standard, in addition to that stated in Clause 1, is to bring Australian requirements into line with Edition 3.0 (2003-04) of IEC 60947-2.

This Standard is Part 2 of a series which, when complete, will consist of the following:

AS 60947	Low-voltage switchgear and controlgear
AS 60947.1*	Part 1: General rules
AS 60947.2*	Part 2: Circuit-breakers (this Standard)
AS 60947.3	Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units
AS 60947.3 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 60947.4.1*	Part 4.1: Contactors and motor-starters—Electromechanical contactors and motor-starters
AS 60947.4.2*	Part 4.2: Contactors and motor-starters—A.C. semiconductor motor controllers and starters
AS 60947.4.3	Part 4.3: Contactors and motor-starters—A.C. semiconductor controllers and contactors for non-motor loads
AS 60947.5.1*	Part 5.1: Control circuit devices and switching elements—Electromechanical control circuit devices
AS 60947.5.2*	Part 5.2: Control circuit devices and switching elements—Proximity switches
AS 60947.5.3	Part 5.3: Control circuit devices and switching elements—Requirements for proximity devices with defined behaviour under fault conditions
AS 60947.5.4*	Part 5.4: Control circuit devices and switching elements—Methods of assessing the performance of low-energy contacts—Special tests
AS 60947.5.5	Part 5.5: Control circuit devices and switching elements—Electrical emergency stop devices with mechanical latching function
AS 60947.5.6	Part 5.6: Control circuit devices and switching elements—D.C. interface for proximity sensors and switching amplifiers (NAMUR)
AS 60947.5.7*	Part 5.7: Control circuit devices and switching elements—Requirements for proximity devices with analogue output
AS 60947.6.1	Part 6.1: Multiple function equipment—Automatic transfer switching equipment
AS 60947.6.2*	Part 6.2: Multiple function equipment—Control and protective switching devices (or equipment) (CPS)
AS 60947.7.1*	Part 7.1: Ancillary equipment—Terminal blocks for copper conductors
AS 60947.7.2*	Part 7.2: Ancillary equipment—Protective conductor terminal blocks for copper conductors

AS 60947.7.3*	Part 7.3:	Ancillary equipment—Safety requirements for terminal blocks for the reception of cartridge fuse-links
AS 60947.8*	Part 8:	Control units for built-in thermal protection for rotating machines

It is the intention of the Standards Australia Committee to align the numbering of this series of Standards with that of the corresponding IEC 60947 series of Standards.

Standards from the list above that are marked with an asterisk (\*) are, at the time of publication of this document, available as a part of the AS 60947 series of Standards.

Standards that are not so marked remain as AS/(NZS) 3947 series Standards. Following the next amendment or revision of the corresponding IEC Standard, each of these Standards remaining in the AS/(NZS) 3947 series will be revised and renumbered as a part of the AS 60947 series.

This Standard is identical with, and has been reproduced from IEC 60947-2, Ed.3(2003), *Low-voltage switchgear and controlgear—Part 2: Circuit-breakers*.

AS 2184—1985 *Low-voltage switchgear and controlgear—Moulded-case circuit-breakers for rated voltages up to and including 600 V a.c. and 250 V d.c.* will be replaced by this Standard on 5 June 2007, on which date AS 2184—1985 will be withdrawn.

However for the regulatory purpose of approval renewal to AS 3111, a test report conforming to the appropriate requirements of AS 2184 is an accepted alternative to the requirement of test sequence III,  $I_{cu}$  stated in this Standard.

This Standard differs from AS/NZS 3947.2:2002 in the following areas:

- (a) References listed in Clause 1.2 *Normative references* have been updated.
- (b) Clause 5.2 *Marking* has been updated.
- (c) Clause 7.1 *Constructional requirements* has been revised.
- (d) Clause 7.1.6 *Additional requirements for circuit-breakers provided with a neutral pole* has been added.
- (e) Tests of Clauses 8.3.3, 8.3.4, 8.3.5 and 8.3.6 have been added.
- (f) Annex B *Circuit-breakers incorporating residual current protection* has been updated.
- (g) Annex F *Additional test for circuit-breakers with electronic over-current protection* has been rewritten.
- (h) In Annex J *Electromagnetic compatibility (EMC)—Requirements and tests for circuit-breakers*, Table J1 has been revised.
- (i) Annex L *Circuit-breakers not fulfilling requirements for overcurrent protection* has been added.
- (k) Annex M has been added.
- (l) Annex N has been added.

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 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.

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