

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



STANDARDS
NEW ZEALAND
Te Ara Raukōwhiri

AS/NZS 3947.5.1:2000

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/6, Industrial Switchgear and Controlgear. It was approved on behalf of the Council of Standards Australia on 28 March 2000 and on behalf of the Council of Standards New Zealand on 20 March 2000. It was published on 30 May 2000.

The following interests are represented on Committee EL/6:

Australasian Railway Association
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
Independent Electrical Switchboard Manufacturers Association
Institution of Engineers Australia
Ministry of Economic Development New Zealand
National Electrical and Communications Association
Testing Interests (Australia)
WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standard.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

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.
Previous edition AS 3947.5.1—1995.
Jointly revised and designated AS/NZS 3947.5.1:2000.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

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 3370 0

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 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 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.

In January 1997, the IEC commenced numbering its Standards from 60000 by adding 60000 to the number of each existing Standard. This coordinates IEC numbering with ISO numbering. During the transition period an IEC Standard might be identified by its new number or its old number (for example, IEC 60050 or IEC 50).

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

- (i) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (ii) In the source text ‘this standard’ should read ‘this Australian/New Zealand Standard’.
- (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.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-