Australian/New Zealand Standard™

Low-voltage switchgear and controlgear assemblies

Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999 MOD)

Standards Australia

STANDARDS NEW ZEALAND
Paerewa Aotearoa

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 8 October 2002 and on behalf of the Council of Standards New Zealand on 2 October 2002. It was published on 11 December 2002.

The following are represented on Committee EL-006:

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
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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.

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Part 1: Type-tested and partially type-tested assemblies (IEC 60439-1:1999 MOD)

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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 3439.1—1993, *Low-voltage switchgear and controlgear assemblies*, Part 1: *Type-tested and partially type-tested assemblies*.

The objective of this Standard is is to lay down the definitions and to state the service conditions, construction requirements, technical characteristics and tests for low-voltage switchgear and controlgear assemblies.

This Standard is a Part of a series:

AS(/NZS) 3439 Low-voltage switchgear and controlgear assemblies
AS/NZS 3439.1 Part 1: Type-tested and partially type-tested assemblies (this Standard)
AS/NZS 3439.2 Part 2: Particular requirements for busbar trunking systems (busways)
AS/NZS 3439.3 Part 3: Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use—Distribution boards
AS 3439.4 Part 4: Particular requirements for assemblies for construction sites (ACS)
AS/NZS 3439.5 Part 5: Particular requirements for assemblies intended to be installed in public places—Cable distribution cabinets (CDCs) for power distribution in networks

This Standard is an adoption with national modifications and has been reproduced from, IEC 60439-1:1999, *Low-voltage switchgear and controlgear assemblies, Part 1: Type-tested and partially type-tested assemblies*, and has been varied as indicated to take account of Australian/New Zealand conditions.

Variations to IEC 60439-1:1999 are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand Standard, are deleted. Where Australian/New Zealand tables, figures or passages of text are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border. These changes are identified in Annex ZZ for easy reference.

Additional information for Australian/New Zealand conditions is contained in Annexes ZA to ZF.

Differences between this Standard and AS 3439.1—1993 are listed in Annex ZG.

Information regarding the current carrying capacity of copper busbars can be found in AS 4388—1996.

This Standard provides requirements for stationary or moveable assemblies. Such assemblies consist of fixed, removable or withdrawable parts.

A separate class of assemblies, commonly known as demountable assemblies exists. These assemblies contain parts which can be removed but which may not comply with the minimum clearance requirements of removable or withdrawable parts as specified in this Standard.

Safety requirements for these assemblies are not necessarily covered in this Standard. Requirements for these assemblies are ‘under consideration’. It is the responsibility of the manufacturer to supply adequate information for the safe operation of these assemblies.

All type test approvals gained in accordance with AS 1136.1—1988 and AS 3439.1—1993 still remain valid.

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.

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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

1.1 Scope and object

This International Standard applies to low-voltage switchgear and controlgear ASSEMBLIES (type-tested ASSEMBLIES (TTA) and partially type-tested ASSEMBLIES (PTTA)), the rated voltage of which does not exceed 1 000 V a.c. at frequencies not exceeding 1 000 Hz, or 1 500 V d.c

This standard also applies to ASSEMBLIES incorporating control and/or power equipment, the frequencies of which are higher. In this case, appropriate additional requirements will apply.

This standard applies to stationary or movable ASSEMBLIES with or without enclosure.

NOTE Additional requirements for certain specific types of ASSEMBLIES are given in supplementary IEC standards.

This standard applies to ASSEMBLIES intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment.

It also applies to ASSEMBLIES designed for use under special service conditions, for example in ships, in rail vehicles, for machine tools, for hoisting equipment or in explosive atmospheres, and for domestic (operated by unskilled persons) applications, provided that the relevant specific requirements are complied with.

This standard does not apply to individual devices and self-contained components, such as motor starters, fuse switches, electronic equipment, etc. complying with their relevant standards.

The object of this standard is to lay down the definitions and to state the service conditions, construction requirements, technical characteristics and tests for low-voltage switchgear and controlgear ASSEMBLIES.

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

AS/NZS 3439.1:2002 Low-voltage switchgear and controlgear assemblies - Type-tested and partially type-tested assemblies