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AS/NZS IEC 61439.5:2016

Australian/New Zealand Standard™

Low-voltage switchgear and controlgear assemblies

Part 5: Assemblies for power distribution in public networks

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 16 March 2016 and by the New Zealand Standards Approval Board on 4 May 2016.
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The following are represented on Committee EL-006:

Association of Accredited Certification Bodies
Australian Industry Group
Bureau of Steel Manufacturers of Australia
Business New Zealand
Electrical Contractors Association of New Zealand
Engineers Australia
National Electrical and Communications Association
National Electrical Switchboard Manufacturers Association
Rail Industry Safety and Standards Board

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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 Standards Australia or the New Zealand Standards Executive at the address shown on the back cover.

This Standard was issued in draft form for comment as DR AS/NZS IEC 61439.5:2014.

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Part 5: Assemblies for power distribution in public networks

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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/NZS 3439.5:2009 five years from the date of publication.

The AS/NZS 61439 series will supersede the AS/NZS 3439 series five years from the date of publication. During this period, low-voltage switchgear and controlgear assemblies may comply with either series. After five years it is anticipated that the AS/NZS 3439 series will be withdrawn.

The objective of this Standard is to provide the user with guidance on the specification that should be provided in order to achieve the desired design of a low-voltage switchgear and controlgear assembly.

This Standard is identical with, and has been reproduced from IEC 61439-5, Ed. 2.0 (2014), *Low-voltage switchgear and controlgear assemblies,* Part 5*: Assemblies for power distribution in public networks* and its Corrigendum 1 (2015), which has been added at the end of the source text.

Where tests on the ASSEMBLY have been conducted in accordance with the IEC 60439, IEC 61439 or AS/NZS 3439 series and the test results fulfil the requirements of the relevant part of AS/NZS 61439, the verification of these requirements need not be repeated (see Clause 10.1).

This edition includes the following significant technical changes with respect to the latest edition:

(a) Confirmation that tests carried out on the most onerous PENDA are deemed to verify the performance of similar and less onerous assemblies of the same general construction and rating.

(b) More precise timing/conditions for impact force withstand tests for PENDAs designed for operation in an arctic climate.

(c) Correction of the direction of the applied force in the static load test.

(d) This Standard is to be read in conjunction with AS/NZS 61439.1. The provisions of the general rules dealt with in AS/NZS 61439.1 (hereinafter referred to as Part 1) are only applicable to this standard insofar as they are specifically cited. When this standard states ‘addition’, ‘modification’ or ‘replacement’, the relevant text in Part 1 is to be adapted accordingly.

(e) Subclauses that are numbered with a 101 (102, 103 etc.) suffix are additional to the same subclause in Part 1.

(f) Tables and figures in this Part 5 that are new are numbered starting with 101.

(g) New annexes in this Part 5 are lettered AA, BB, etc.

(h) In this Standard, terms written in small capitals are defined in Clause 3.

The reader’s attention is drawn to the fact that Annex DD lists all of the ‘in-some-country’ clauses on differing practices of a less permanent nature relating to the subject of this standard.

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

(i) In the source text ‘this part of IEC 61439’ should read ‘this Australian/New Zealand Standard’.

(ii) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
IEC		AS/NZS	
61439	Low-voltage switchgear and controlgear assemblies	61439	Low-voltage switchgear and controlgear assemblies
61439-1	Part 1: General rules	61439.1	Part 1: General rules (IEC 61439-1, Ed. 2.0 (2011), MOD)

Only normative references that have been adopted as Australian or Australian/New Zealand Standards have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annexes 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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AUSTRALIAN/NEW ZEALAND STANDARD

Low-voltage switchgear and controlgear assemblies

Part 5:
Assemblies for power distribution in public networks

1 Scope

This part of IEC 61439 defines the specific requirements for public electricity network distribution assemblies (PENDAs).

PENDAs have the following criteria:

– used for the distribution of electrical energy in three phase systems for which the rated voltage does not exceed 1 000 V a.c. (see Figure 101 for a typical distribution network);

– stationary;

– open ASSEMBLIES are not covered by this standard;

– suitable for installation in places where only skilled persons have access for their use, however, outdoor types may be installed in situations that are accessible to ordinary persons;

– for indoor or outdoor use.

The object of this standard is to state the definitions and to specify the service conditions, construction requirements, technical characteristics and tests for PENDAs. Network parameters may require tests at higher performance levels.

PENDAs may also include control and or signalling devices associated with the distribution of electrical energy.

This standard applies to all PENDAs whether they are designed, manufactured on a one-off basis or fully standardised and manufactured in quantity.

The manufacture and/or assembly may be carried out other than by the original manufacturer (see 3.10.1 of IEC 61439-1:2011).

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

This standard does not apply to specific types of ASSEMBLIES covered by other parts of IEC 61439 series.