AS/NZS 61439.6:2016

Australian/New Zealand Standard™

Low-voltage switchgear and controlgear assemblies

Part 6: Busbar trunking systems (busways) (IEC 61439-6, Ed. 1.0 (2012), MOD)

STANDARDS Australia

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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
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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 61439.6:2014.

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Part 6: Busbar trunking systems (busways) (IEC 61439-6, Ed. 1.0 (2012), 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 supersed AS/NZS 3439.2:2002 fixe 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 After five years it is anticipated that the AS/NZS 3439 series will be withdrawn.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, in conjunction with Part 1 of the series, to provide definitions and state the service conditions, construction requirements, technical characteristics and verification requirements for low voltage busbar trunking systems.

This Standard is an adoption with national modifications. It has been reproduced from IEC 61439-6, Ed. 1.0 (2012), *Low-voltage switchgear and controlgear assemblies*, Part 6: *Busbar trunking systems (busways),* and has been varied as indicated to take account of Australian/New Zealand conditions.

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).

Variations made to IEC 61439-6, Ed. 1.0 (2012) form the Australian/New Zealand variations for the purposes of the CB scheme for recognition of testing to standards for safety of electrical equipment. They are listed in Appendix ZZ for easy reference.

This Standard is structured as follows:

(a) Preface.

(b) IEC 61439-6, Ed. 1.0 (2012) (unedited from the contents page to the final clause of the source document).

(c) Appendix ZZ—Australian/New Zealand variations to the source document.

This edition of IEC 61439-6 includes the following significant technical changes with respect to the latest edition of IEC 60439-2:

(i) Alignment on the second edition of IEC 61439-1 (2011) regarding the structure and technical content, as applicable;

(ii) Introduction of new verifications, accordingly;

(iii) Correction of inconsistencies in resistance, reactance and impedance measurements and calculations;

(iv) Numerous editorial improvements.

(v) 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.

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

(vii) Tables and figures in this Part 6 that are new are numbered starting with 101.

(viii) New annexes in this Part 6 are lettered AA, BB, etc.

(ix) The ‘in some countries’ notes regarding differing national practices are contained in Clause 5.4.

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

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

(2) 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	
60439	Low-voltage switchgear and controlgear assemblies	3439	Low-voltage switchgear and controlgear assemblies
60439-2	Part 2: Particular requirements for busbar trunking systems (busways)	3439.2	Part 2: Particular requirements for busbar trunking systems (busways)
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 Standard have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annexes or appendices to which they apply. A ‘normative’ annex or appendix is an integral part of a standard, whereas an ‘informative’ annex or appendix is only for information and guidance.

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AUSTRALIAN/NEW ZEALAND STANDARD

Low-voltage switchgear and controlgear assemblies

Part 6:
Busbar trunking systems (busways) (IEC 61439-6, Ed. 1.0 (2012), MOD)

1 Scope

NOTE 1 Throughout this part, the abbreviation BTS is used for a busbar trunking system. Where reference to Part 1 is made, the term ASSEMBLY therefore reads as “BTS”.

This part of IEC 61439 lays down the definitions and states the service conditions, construction requirements, technical characteristics and verification requirements for low voltage BTS (see 3.101) as follows:

- BTS for which the rated voltage does not exceed 1 000 V in case of a.c. or 1 500 V in case of d.c.;
- BTS intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment;
- BTS designed for use under special service conditions, for example in ships, in rail vehicles, and for domestic applications (operated by unskilled persons), provided that the relevant specific requirements are complied with;

  NOTE 2 Supplementary requirements for BTS in ships are covered by IEC 60092-302.

- BTS designed for electrical equipment of machines. Supplementary requirements for BTS forming part of a machine are covered by the IEC 60204 series.

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

The manufacture and/or assembly may be carried out by a manufacturer other than the original manufacturer (see 3.10.1 and 3.10.2 of Part 1).

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

This standard does not apply to the specific types of ASSEMBLIES covered by other parts of the IEC 61439 series, to supply track systems in accordance with IEC 60570, to cable trunking and ducting systems in accordance with the IEC 61084 series, nor to power track systems in accordance with the IEC 61534 series.

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60332-3-10:2000, *Tests on electric and optical fibre cables under fire conditions – Part 3-10: Test for vertical flame spread of vertically-mounted bunched wires or cables – Apparatus*

IEC 60439-2:2000, *Low-voltage switchgear and controlgear assemblies – Part 2: Particular requirements for busbar trunking systems (busways)*