

Australian/New Zealand Standard™

**Low-voltage switchgear and controlgear  
assemblies**

**Part 2: Particular requirements for  
busbar trunking systems (busways)**

## **AS/NZS 3439.2:2002**

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 22 April 2002 and on behalf of the Council of Standards New Zealand on 18 April 2002. It was published on 3 June 2002.

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# Australian/New Zealand Standard™

## Low-voltage switchgear and controlgear assemblies

### Part 2: Particular requirements for busbar trunking systems (busways)

Originated as AS C151—1960.  
Previous edition AS 3439.2—1994.  
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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 3439.2—1994.

The objective of this Standard is to provide definitions, service conditions, construction requirements, technical characteristics and tests for low-voltage switchgear and controlgear assemblies particular to busbar trunking systems (busways).

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

AS/(NZS) 3439	Low-voltage switchgear and controlgear assemblies
AS/NZS 3439.1	Part 1: Type-tested and partially type-tested assemblies
AS/NZS 3439.2	Part 2: Particular requirements for busbar trunking systems (busways) (This Standard)
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 outdoors in public places—Cable distribution cabinets (CDCs) for power distribution in networks

This Standard is identical with and has been reproduced from IEC 60439-2:2000, *Low-voltage switchgear and controlgear assemblies—Part 2: Particular requirements for busbar trunking systems (busways)*.

This Standard covers low-voltage busbar trunking systems (BTS) and their accessories for feeding and distributing power in residential, retail, public, agricultural and industrial premises.

The provisions of AS/NZS 3439.1, *Type-tested and partially type-tested assemblies* are applicable to this Standard unless otherwise indicated.

This Standard differs from AS 3439.2—1994 in the following:

- (a) Tap-off units may be partially type-tested assemblies (PTTA).
- (b) There is no requirement to state resistance values for busbar trunking systems with rated current greater than 630 A.
- (c) There are additional requirements for:
  - (i) Nameplate and information required.
  - (ii) Service conditions.
  - (iii) Abnormal heat and fire conditions.
  - (iv) Clearance.
  - (v) Busbar trunking with several circuits.
  - (vi) Protection against direct contact.
  - (vii) Busbar trunking systems with trolley tap-off facilities.
- (d) There are additional type tests for verification of:
  - (i) Crushing resistance.
  - (ii) Resistance of insulating materials to abnormal heat and flame propagation.
  - (iii) Fire barrier in building penetration.

- (e) Temperature rise test and test arrangements have been added.
- (f) There are additional annexes dealing with:
  - (i) Voltage drop of the system.
  - (ii) Method of determination of the magnetic field in the vicinity of busbar trunking systems.
  - (iii) Verification of maintenance circuit integrity under fire conditions.
  - (iv) Test arrangement.
- (g) Appendices AA, BB, CC and DD are not included.

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.

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 term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

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**Australian/New Zealand Standard**
**Low-voltage switchgear and controlgear assemblies**  
**Part 2: Particular requirements for busbar trunking systems (busways)**


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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**

*Add the following paragraphs:*

This International Standard applies to busbar trunking systems (BTS) and their accessories for feeding and distributing electrical power in residential, retail, public, agricultural and industrial premises. It also applies to busbar trunking systems which are designed to incorporate communication and/or control systems or intended to supply luminaires through tap-off units but does not apply to supply track systems in accordance with IEC 60570.

The busbar trunking systems considered in this standard are type-tested ASSEMBLIES (TTA) when tested in accordance with clause 8 of this standard; variations in length and angles of bends are considered to be covered.

Tap-off units may be partially type-tested ASSEMBLIES (PTTA).

**1.2 Normative references**

References to International Standards that are struck through in this Clause are replaced by references to equivalent Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is appropriately identified.

~~IEC 60269 (all parts), Low-voltage fuses~~

AS/NZS 60269, *Low-voltage fuses (All parts identical with the corresponding part of IEC 60269, including amendments)*

~~IEC 60332-3:1992, Tests on electric cables under fire conditions — Part 3: Tests on bunched wires or cables~~

AS/NZS 1660.5.1, *Test methods for electric cables, cords and conductors, Part 5.1: Fire tests — Tests on bunched cables*

~~IEC 60439-1:1999, Low-voltage switchgear and controlgear assemblies — Part 1: Type-tested and partially type-tested assemblies~~



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