

Australian/New Zealand Standard™

**Approval and test specification—Air
break switches**

AS/NZS 3133:2003

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-004, Electrical Accessories. It was approved on behalf of the Council of Standards Australia on 13 June 2003 and on behalf of the Council of Standards New Zealand on 24 June 2003.

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The following are represented on Committee EL-004:

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Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Canterbury Manufacturers Association, New Zealand
Consumer Electronic Suppliers Association
Electricity Supply Association of Australia
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Australian/New Zealand Standard™

Approval and test specification—Air break switches

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004 on Electrical Accessories to supersede AS 3133—1989 (NZS/AS 3133—1989), *Approval and test specification — Air break switches* from the date of publication.

This Standard incorporates Amendment No. 1 (February 2005). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide Australian and New Zealand electrical industries (including manufacturers, test laboratories, installers and regulators) with electrical safety requirements and test methods for air break switches. This Standard does not apply to cord-line switches within the scope of AS/NZS 3127:2002, *Approval and test specification—Cord-line switches*.

This Standard is one of a series of approval and test specifications to be read in conjunction with AS/NZS 3100, *Approval and test specification—General requirements for electrical equipment*. The purpose of this series is to outline conditions which must be met to secure approval for the sale and use of electrical accessories in Australia and New Zealand. Only safety matters and related conditions are covered.

This Standard was revised to incorporate Amendment No.1 to AS 3133—1989 (NZS/AS 3133—1989), to introduce editorial changes and the following technical changes:

- (a) The Scope is modified.
- (b) Definition for isolating switch is modified.
- (c) Sequence of operation is modified as in AS/NZS 3190.
- (d) Definition of ‘ways’ is modified.
- (e) Definition of ‘pole’ is modified.
- (f) Introduction of Marking of IP rating.
- (g) Additional mounting aspects for IR testing.
- (h) Additional aspects for IR testing for switches with removable faceplates.
- (i) Introduction of Table 1 for tests and application.
- (j) Test limitation for fault current when under test.
- (k) Requirements for tightening of mounting screw and terminals.
- (l) Test voltages better specified.
- (m) Endurance test requirements and test circuits with modified requirements for mounting.
- (n) Endurance test requirements now in terms of operating cycles.
- (o) The temperature test is modified.
- (p) HV test No.2 introduced.
- (q) Endurance tests for fluorescent lamp loads.
- (r) Introduction of tests for IP rating.
- (s) New switch test circuits.
- (t) Additional requirements for isolating switches.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

This Standard does not include all the necessary provisions of a contract.

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Approval and test specification—Air break switches

1 SCOPE AND REFERENCED DOCUMENTS**1.1 Scope***

This Standard applies to air break switches having current ratings not exceeding 125A for use in electrical circuits and equipment operating at low voltage but not exceeding 500V and intended for household or similar use and for use in indoor and outdoor electrical installations.

This Standard does not apply to cord-line switches, as defined in AS/NZS 3127.

1.2 Referenced documents

The following documents are referred to in this Standard:

STANDARDS

AS

- | | |
|--------|---|
| 1931 | High voltage test techniques |
| 1931.1 | Part 1: General definitions and test requirements |
| 1939 | Degrees of protection provided by enclosures for electrical equipment (IP Code) |

AS/NZS

- | | |
|---------|--|
| 3947 | Low-voltage switchgear and controlgear |
| 3947.3 | Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units |
| 61058 | Switches for appliances |
| 61058.1 | Part 1: General requirements |

APPROVAL AND TEST SPECIFICATIONS

AS/NZS

- | | |
|-------|---|
| 3100 | General requirements for electrical equipment |
| 3121 | Insulating mouldings |
| 3127 | Cord-line switches |
| IEC | |
| 60669 | Switches for household and similar fixed electrical installations (all parts) |

2 DEFINITIONS

For the purpose of this Standard the following definitions apply:

2.1 Air break switch

A mechanical device for making and breaking in air a circuit carrying a load current.

For the purpose of this Standard an air break switch is referred to as a switch.

* This Standard will cease to apply to switches for use with or fitted within appliances on 14 March 2007. Until that time this Standard or AS/NZS 61058.1 may be used for switches for use with or fitted within appliances.