Australian Standard®

Approval and test specification—Air break switches

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The following interests are represented on Committee EL/4:

Australian Electrical and Electronic Manufacturers Association

Confederation of Australian Industry

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Department of Public Works, N.S.W.

Electrical Contractors Association of Australia

Electricity Supply Association of Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee on Electrical Accessories to supersede AS 3133—1983.

It is one of a series of Approval and Test Specifications issued by the organization. These Specifications are accompanied by a general Specification AS 3100, containing definitions and general requirements for electrical materials and equipment. The purpose of these Specifications is to outline conditions which must be met to secure approval for the sale and use of electrical equipment in Australia. Only safety matters and related conditions are covered.

This Standard was revised to incorporate Amendment No. 1, October 1984 (which affected Clause 4) to AS 3133—1983 and introduces other technical and editorial changes such as—

- Deletion of thermoplastic switch tests and requirements.
- Deletion of dispensation (in Clause 4) that material which does not expose live parts is not subjected to tests.
- Amended marking requirements.
- Clarification of requirements for the insulation resistance, high voltage and temperature test.
- Updating of the cross-reference to referred Standards and other minor editorial changes.

This Standard supersedes AS 3133—1983 (including Amendment No. 1, October 1984) from date of publication.

Standards Australia points out that this Specification does not purport to include all the necessary provisions of a contract.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard

Approval and test specification—Air break switches

This Specification shall be read in conjunction with AS 3100. (See also Clause 3, below.)

1 SCOPE AND REFERENCED DOCUMENTS.

1.1 Scope. This Specification applies to air break switches operated manually, mechanically, hydraulically or by other means, having current ratings not exceeding 300 A, and intended for use in electrical circuits and appliances operating at low or medium voltage.

This Specification does not apply to the following:

(a) Switches within the scope of other Approval and Test Specifications or switches which are specifically excluded from compliance with AS 3133 in another Approval and Test Specification.

(b) Motor starters and speed controllers other than direct-on-line starting switches of the manually operated type.

(c) Switches not intended to make or break a circuit on load, such as isolating switches and certain types of reversing switch.

1.2 Referenced documents. The documents below are referred to in this Specification.

STANDARDS

AS

1775 Low voltage switchgear and controlgear—Air break switches, isolators and fuse-combination units (up to and including 1000 V a.c. and 1200 V d.c.)

1939 Classification of degrees of protection provided by enclosures for electrical equipment

ASTM

E 104-51 Recommended practice for maintaining constant relative humidity by means of aqueous solutions

APPROVAL AND TEST SPECIFICATIONS

AS

3100 Definitions and general requirements for electrical materials and equipment

3121 Insulating mouldings

2 DEFINITIONS.

For the purpose of this Specification, the definitions below apply.

2.1 Air break switch—a mechanical device for making and breaking in air a circuit carrying a load current.

2.2 Ceiling switch—a switch for mounting on a ceiling, or suitable overhead surface, and operated by pulling a cord, or the like, attached to the switch.

2.3 Flush switch—a switch for mounting behind or incorporated with a switch-plate, the back of the plate being flush with the surface of the wall or enclosure.

2.4 Intermediate switch—a switch for controlling a circuit where more than two positions of control are required, and which generally occupies an intermediate position between the two 2-way switches used in conjunction therewith.

2.5 Isolating switch—a switch for making and breaking a circuit, when it is not on load.

2.6 Number of ways (of a switch)—the number of paths provided on each pole.

2.7 (An) Operation—a make and break on one set of contacts in the switch in the manner intended under normal conditions of use.

2.8 Pole—a conducting path in a switch equipped with a set of contacts for making, breaking and carrying the normal current through the switch.

2.9 Recovery voltage—the r.m.s. value of the normal frequency voltage, or d.c. voltage, as appropriate, which exists across the terminals of each pole of the switch after final arc extinction.

2.10 Rocker switch—a switch operated by moving an actuating member having a rocking motion, the rocker being pressed at one end to open, and at the other end to close the switch contacts.

2.11 Semi-recessed switch—a switch for mounting with its base partially sunk into the surface of a wall or enclosure.

2.12 Surface switch—a switch provided with a seating surface so that when mounted it projects wholly above the surface on which it is mounted.

2.13 Tumbler switch—a switch operated by moving an actuating lever or dolly other than a rocker.

2.14 Wall switch—a flush, semi-recessed or surface switch primarily intended for mounting on, or in, a wall or related part of a building structure, for local control of lighting and socket-outlets.

2.15 Examples of switch arrangements—