AS 1025 — 1979
UDC 621.316.54:621.3.025

Australian Standard 1025–1979

HIGH VOLTAGE SWITCHES

1025 **High voltage a.c. switchgear and controlgear—Switches and switch-disconnectors**
Part 2—1989 For rated voltages of 52 kV and above A4 43pp *F*

Technically equivalent to and reproduced from IEC 265-2 with changes to suit Australian requirements. Specifies requirements for a.c. switches and switch-disconnectors having making and breaking current ratings at rated voltages of 52 kV and above, for indoor and outdoor installations. It is intended to be read in conjunction with AS 2650.

Committee EL/7: ***Supersedes AS 1025—1979 (withdrawn October 1984):*** *Draft for comment DR 86115:* ***Publication date 1989-07-21:*** *ISBN 0 7262 5431 2.*

STANDARDS ASSOCIATION OF AUSTRALIA
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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS were officially represented on the committee entrusted with the preparation of this standard:

Australian Electrical and Electronic Manufacturers Association

Australian-British Trade Association

Confederation of Australian Industry

Electricity Supply Association of Australia

Railways of Australia Committee

Testing Authorities

The Institution of Engineers, Australia

This standard, prepared by a subcommittee of Committee EL/7, Power Switchgear, was approved on behalf of the Council of the Standards Association of Australia on 23 November 1978, and was published on 1 March 1979.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to publish standards, addressed to the head office of the Association, are welcomed.

AUSTRALIAN STANDARD SPECIFICATION

HIGH VOLTAGE SWITCHES

AS 1025–1979

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PREFACE

This standard was prepared by the Association's Committee on Power Switchgear as a revision of AS 1025 — 1971. In general, it is based on IEC 265, High Voltage Switches, including supplements 265A, 265B and 265C and Amendments No 1 and 2. Consideration was also given to a number of IEC documents dealing with common clauses in IEC/SC 17A publications. Acknowledgment is made of the assistance received therefrom.

The main changes from the 1971 edition relate to insulation levels, temperature rise, dielectric tests, artificial pollution tests, partial discharge tests, tests on auxiliary and control circuits and tests for measuring radio interference level.

The insulation levels are based on AS 1824, Insulation Coordination. The values of related voltages are in line with IEC recommendations except that the IEC values of 52 kV and 420 kV are not included. The requirements for temperature rise and the revised test methods closely follow the latest IEC proposals.

Because this standard has been based on various IEC draft documents as well as on IEC 265, and because various sections of the IEC work are being revised and are in a state of flux, it is not practicable to detail deviations from IEC 265. However the intent of the latest IEC proposals for rated normal current, temperature rise, insulation levels and dielectric tests has been incorporated in the standard.

In the application of this standard, reference may be necessary to the following standards:

AS 1029 AC Contactors (up to and including 1000 V) (IEC 158)

AS 1034 High Voltage Current-limiting Fuses

AS 1052 Electromagnetic Interference Measuring Equipment
- Part 2 — Equipment for the Frequency Range 0.15 MHz to 1000 MHz (CISPR Publications 1, 2 and 4)

AS 1202 AC Motor Starters (up to and including 1000 V) (IEC 292)
- Part 1 — Direct-on-line (Full Voltage) Starters
- Part 2 — Star-delta Starters
- Part 3 — Autotransformer Starters
- Part 4 — Rheostatic Rotor Starters

AS 1306 High Voltage Isolators (Disconnectors) on Earthing Switches

AS 1307 Surge Diverters — Non-linear Resistor Type

AS 1824 Insulation Coordination (IEC 71)
- Part 1 — Basic Principles, Standard Insulation Levels and Test Procedures
- Part 2 — Application Guide

AS 1864	High Voltage Alternating Current Contactors (IEC 470)
AS 1931	High Voltage Testing Techniques (IEC 60)
	Part 1 — General Definitions, Test Requirements, Test Procedures and Measuring Devices
	Part 2 — Application Guide for Measuring Devices
AS 2024	High Voltage Fuse/Switch Combinations and Fuse/Circuit-Breaker Combinations (IEC 420)
AS C320	Classification of Insulating Materials for Electrical Machinery and Apparatus on the Basis of Thermal Stability in Service (IEC 85)
IEC 129A	Alternating Current Disconnectors (Isolators) and Earthing Switches — 1st Supplement on IEC 129
IEC 507	Artificial Pollution Tests on High Voltage Insulators to be Used on AC Systems
BS 2725	Temperature Measurements.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
HIGH VOLTAGE SWITCHES

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard applies to high voltage switches, as classified in Clause 1.2 below, designed for use outdoors or indoors on alternating current systems having rated voltages exceeding 1000 V. It should be noted that all switches covered by this standard satisfy the isolating requirements specified in AS 1306 for an isolator.

This standard also applies to the operating devices of the switches and to their auxiliary equipment.

NOTES:

1. Switches in which a fuse is an integral part are not covered by this standard (see AS 2024).
2. Motor starting switches are not covered by this standard (see AS 1202).
3. Contactors are not covered by this standard (see AS 1029 and AS 1864).
4. Earthing switches are not covered by this standard. Earthing switches forming an integral part of a switch are required to comply with the standard for earthing switches (see AS 1306).
5. Switches used in insulated neutral systems may be required to operate under earth-fault conditions. This standard does not include ratings or tests to meet these conditions. A special agreement between manufacturer and purchaser may be necessary.

1.2 CLASSIFICATION OF SWITCHES. For the purpose of this standard, switches shall be classified as follows:

(a) General purpose switches (see Clause 2.2.4).

(b) Limited purpose switches (see Clause 2.2.5).

(c) Transformer off-load switches (see Clause 2.2.6).

(d) Single capacitor bank switches (see Clause 2.2.7).

1.3 NORMAL SERVICE CONDITIONS. This standard applies to switches that have been designed for use under the following service conditions.

1.3.1 Temperature. The temperature conditions as follows:

(a) Maximum ambient air temperature .. $\leqslant$ 40°C.