AS 1029, Part 1—1982
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Australian Standard 1029, Part 1—1982

LOW VOLTAGE CONTACTORS

Part 1—ELECTROMECHANICAL (up to and including 1000 V a.c.)

STANDARDS ASSOCIATION OF AUSTRALIA
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Represented on the committee which was responsible for the preparation of this standard were the following:

Australian Electrical and Electronic Manufacturers Association

Australian-British Trade Association

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Department of Defence

Department of Productivity

Department of Public Works, N.S.W.

Electricity Supply Association of Australia

Institution of Engineers Australia

Metropolitan Water Sewerage and Drainage Board, N.S.W.

Railways of Australia Committee

State Rail Authority of New South Wales

Testing Authorities

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AUSTRALIAN STANDARD

LOW VOLTAGE CONTACTORS

Part 1 ELECTROMECHANICAL (up to and including 1000 V a.c.)

AS 1029, Part 1—1982

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PREFACE

This standard was prepared by a subcommittee of the Association's Committee on Industrial Switchgear and Controlgear, to supersede AS 1029—1974.

The title has been changed as this standard has now become Part 1 of a two-part standard for low voltage contactors to cover electromechanical contactors, with Part 2 covering semiconductor (solid state) contactors.

The technical content of this Part of the two-part standard has not been changed from the 1974 edition of AS 1029 which it supersedes. However slight changes of an editorial nature have been made and the references to other standards updated. Its format is aligned with that of AS 1202, A.C. Motor Starters (up to and including 1000 V).

This standard applies only to a.c. contactors rated up to and including 1000 V as these are the voltages covered by the International Electrotechnical Commission recommendations. (For higher voltages, refer to AS 1864, High Voltage Alternating Current Contactors.)

The standard is based on IEC 158-1, Low Voltage Controlgear, Part 1—Contactors, but differs from the IEC publication in that it does not apply to d.c. contactors. Furthermore, some technical requirements have been modified to suit Australian conditions. To indicate these changes a rule is shown in the margin alongside the affected clause, table or part thereof.

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

AS 1023	Thermal Protection of Electric Motors Part 1—Built-in Thermal Detectors and Associated Control Units Part 2—Thermal Overload Protective Devices Part 3—Inherent Overheat Protectors
AS 1029	Low Voltage Contactors Part 2—Semiconductor (Solid State) (up to and including 1000 V a.c. and 1500 V a.c.)
AS 1136	Switchgear and Controlgear Assemblies for Voltages up to 1000 V a.c.
AS 1202	A.C. Motor Starters (up to and including 1000 V) Part 1—Direct-on-line (Full Voltage) Starters
AS 1930	Circuit-breakers for Distribution Circuits (up to and including 1000 V a.c. and 1200 V d.c.)
AS 1939	Classification of Degrees of Protection Provided by Enclosures for Electrical Equipment
AS 2184	Moulded-case Circuit-breakers (up to and including 600 V a.c. and 250 V d.c.) (interrupting rating 10 kA and more)
AS 3100	Approval and Test Specification for Definitions and General Requirements for Electrical Materials and Equipment
AS 3111	Approval and Test Specification for Miniature Overcurrent Circuit-breakers
AS 3135	Approval and Test Specification for Semi-enclosed Fuses for A.C. Circuits
AS C320	Classification of Insulating Materials for Electrical Machinery and Apparatus on the Basis of Thermal Stability in Service
SAA MP19	Report on Preferred Numbers and Their Use
BS 3781	Method for Determining the Comparative Tracking Index of Solid Insulating Material
IEC 158-1	Low-voltage Controlgear Part 1—Contactors

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
LOW VOLTAGE CONTACTORS—ELECTROMECHANICAL (up to and including 1000 V a.c.)

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard applies to contactors for industrial use, intended for closing and opening electric circuits.

It applies only to contactors, the main contacts of which are intended to be connected in a.c. circuits and the nominal voltage of which does not exceed 1000 V. (For d.c. applications reference should be made to IEC 158-1.)

Contactors intended for application in merchant ships may also need to comply with supplementary requirements.

This standard does not apply to contactors intended for installation in rail or road vehicles, or in aircraft.

D.C. contactors are not covered by this standard and where required should be subject to agreement between purchaser and manufacturer.

Semiconductor (solid state) contactors are dealt with in AS 1029, Part 2 for voltages up to and including 1000 V a.c. and 1500 V d.c. However this standard would apply to the electromechanical part of hybrid semiconductor contactors to AS 1029, Part 2.

NOTES:

1. For electromechanical contactors with a rated voltage exceeding 1000 V see AS 1864.
2. Contactors which are intended to provide short-circuit protection must additionally satisfy the relevant conditions specified for circuit-breakers (see AS 1930, AS 2184, AS 3111).
3. Where contactors are used in motor starters, reference should also be made to AS 1202.
4. Information to be supplied by the purchaser is listed in Appendix A.

1.2 OBJECTS. The objects of this standard are to state:

(a) the characteristics of contactors;

(b) the conditions with which contactors must comply with reference to—

  (i) their operation and behaviour in normal operation;

  (ii) their dielectric properties;

  (iii) the degrees of protection provided by their enclosures;

(c) the tests intended for confirming that these conditions have been met and the methods to be adopted for these tests;

(d) The data to be marked on the apparatus.

1.3 SAFETY REQUIREMENTS. This standard does not include all the electrical safety requirements with which compliance may be necessary to secure approval for connection or sale of contactors. These matters are covered in AS 3100 and relevant approval and test specifications.