

AS 1029.2—1982

Australian Standard<sup>®</sup>

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## **Low voltage contactors**

### **Part 2: Semiconductor (solid state) (up to and including 1000 V a.c. and 1500 V d.c.)**

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[Title allocated by Defence Cataloguing Authority:  
CONTACTOR, SEMICONDUCTOR (SOLID STATE)  
UP TO 1000 V A.C. or 1500 D.C.)]

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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This Standard prepared by Committee EL/6, Industrial Switchgear and Controlgear, was approved on behalf of the Council of the Standards Association of Australia on 9 December 1981, and was published on 19 April 1982.

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*This standard was issued in draft form for comment as DR 80133.*

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**LOW VOLTAGE CONTACTROS**

**Part 2: SEMICONDUCTOR (SOLID  
STATE) (up to and including  
1000 V a.c. and 1500 V d.c.)**

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## PREFACE

This standard was prepared by a subcommittee of the Association's Committee on Industrial Switchgear and Controlgear. It is Part 2 of a two-part standard for low voltage contactors.

The Parts of the standard are as follows:

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

Part 2—Semiconductor (Solid State) (up to and including 1000 V a.c. and 1500 V d.c.)

Part 1 covers many requirements common to all contactors and is referred to extensively herein.

This standard is based on IEC document 17B(Central Office) 115 and acknowledgment is made of the assistance received therefrom. However, it differs from the IEC document in some technical respects and to indicate these differences a rule is shown in the margin alongside the affected clause, table or part thereof.

The standard was originally based on IEC document 17B(Central Office)106. Proposals for the showering arc test for external electrical influences in IEC document 17B(Central Office) 115, not included in this standard as they are still under consideration. However, provision has been made in Clause 8.3.6.3 and Appendix F for the showering arc test.

Attention is drawn to the notes to Clause 4.3.9 concerning protection of semiconductor contactors from voltage transients and external electrical influences.

This standard may require reference to the following publications:

- |         |  |
|---------|--|
| AS 1023 | Thermal Protection of Electric Motors<br>Part 1—Built-in Thermal Detectors and Associated Control Units<br>Part 2—Thermal Overload Protective Devices<br>Part 3—Inherent Overheat Protectors |
| AS 1029 | Low Voltage Contactors<br>Part 1—Electromechanical Contactors (Up to and Including 1000 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.) |
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|         |   |
|---------|---|
| AS 1931 | High Voltage Testing Techniques<br>Part 1—General Definitions, Test Requirements, Test Procedures and Measuring Devices<br>Part 2—Application Guide for Measuring Devices |
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|         |   |
|---------|---|
| AS 1939 | Classification of Degrees of Protection Provided by Enclosures for Electrical Equipment |
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|         |   |
|---------|---|
| AS 2005 | Fuses with Enclosed Fuse-links (up to and including 1000 V a.c. and 1500 V d.c.)<br>Part 1—General Requirements<br>Part 2—Fuses for Industrial Application<br>Part 3—Fuses for Household and Similar Applications |
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|         |  |
|---------|--|
| 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) |
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|         |  |
|---------|--|
| AS 2279 | Disturbances in Mains Supply Networks<br>Part 1—Limitation of Harmonics Caused by Household and Similar Electrical Appliances<br>Part 2—Limitation of Harmonics Caused by Industrial Equipment |
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|---------|---|
| AS 3100 | Approval and Test Specification for Definitions and General Requirements for Electrical Materials and Equipment |
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| AS 3111 | Approval and Test Specification for Miniature Overcurrent Circuit-breakers |
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| SAA MP19 | Report on Preferred Numbers and Their Use |
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|--------|---|
| IEC 65 | Safety Requirements for Mains Operated Electronic and Related Apparatus for Household and Similar General Use |
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