AS 1102 Parts 101 to 110 supersede AS 1102.1—1985, AS 1102.2—1981, AS 1102.3—1983, AS 1102.4—1983, AS 1102.5—1983, AS 1102.6—1982, AS 1102.7—1982, AS 1102.10—1985, AS 1102.11—1985, AS 1102.13—1979 and AS 1102.14—1979.

AS 1102.2—1981
UDC 003.62:621.3

Australian Standard 1102, Part 2—1981

GRAPHICAL SYMBOLS FOR ELECTROTECHNOLOGY

CONDUCTORS AND CONNECTING DEVICES

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Electrical and Electronic Manufacturers Association

Australian Institute of Refrigeration, Air Conditioning and Heating Incorporated

Confederation of Australian Industry

Department of Defence

Department of Housing and Construction

Department of Industry and Commerce

Department of Transport

Electricity Supply Association of Australia

Institute of Draftsmen, Australia

Institution of Radio and Electronics Engineers, Australia

Melbourne and Metropolitan Board of Works

Queensland Chamber of Mines

Railways of Australia Committee

Technical Press

Telecom Australia

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AUSTRALIAN STANDARD

GRAPHICAL SYMBOLS FOR ELECTROTECHNOLOGY

Part 2 CONDUCTORS AND CONNECTING DEVICES

AS 1102, Part 2—1981

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PREFACE

This edition of this standard was prepared by the Association's Committee on Symbols, Units and Quantities for Electrotechnology, under the authority of both the Telecommunications and Electronics, and the Electrical Industry Standards Boards, to supersede AS 1102, Part 2—1973.

In its terminology, format and general treatment of the subject, this standard is consistent with the recommendations of various Parts of IEC 117 of the International Electrotechnical Commission. Attention has also been paid to BS 3939: Section 3. Acknowledgement is made of the assistance received from these sources.

This standard is only one Part of a comprehensive standard being prepared on graphical symbols for general use in the field of electrotechnology. The purpose of this Part is to specify graphical symbols for basic electrical conductors and connecting devices.

Examples of the use of the symbols are given both in order to establish the method to be adopted for using the symbols in diagrams and to combine them with symbols specified in other Parts of the standard so as to express more complex ideas.

This edition incorporates Amendment No 1 (October 1975), Amendment No 2 (September 1978), and other editorial and technical amendments to the 1973 edition, including the renumbering of symbols, new symbols for terminal strips and connector assemblies, and the provision of alternative symbols for plugs and sockets.

Graphical symbols for fuses and associated equipment, included in the 1973 edition, have been deleted from this edition, and are now included in AS 1102, Part 11.

Attention is drawn in particular to the following Parts of AS 1102:

Part 1	General, Qualifying and Supplementary Symbols
Part 10	Signal Transmission Symbols

This standard requires reference to the following Australian standards:

AS 1100	Drawing Practice
	Part 6—Letters, Numerals and Symbols
AS 1103	Diagrams, Charts and Tables for Electrotechnology
	Part 1—Definitions and Classifications
	Part 3—Basic Principles for Presentation of Elements of Electrical Diagrams
	Part 4—Guiding Principles for the Preparation of Circuit Diagrams

Reference should also be made to the following standard for letter symbols for use in electrotechnology:

AS 1046	Letter Symbols for use in Electrotechnology
	Part 1—General
	Part 2—Telecommunications and Electronics

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
GRAPHICAL SYMBOLS FOR ELECTROTECHNOLOGY

PART 2—CONDUCTORS AND CONNECTING DEVICES

SECTION 1. SPECIFICATION

1.1 SCOPE. This standard defines graphical symbols for conductors and connecting devices for use in electrotechnology. Examples of the use of the symbols are given in order to establish the method to be adopted for constructing further symbols.

This standard may require reference to:

Part 1 General, Qualifying and Supplementary Symbols, and

Part 10 Signal Transmission Symbols,

for a full understanding of the methods adopted.

1.2 GENERAL.

1.2.1 Relationship with IEC Symbols. Symbols are identical with those internationally agreed within the International Electrotechnical Commission (IEC) except where established usage in Australia makes unqualified acceptance of the IEC symbol difficult. In such cases an alternative symbol is generally shown, with the object of adopting the IEC proposal as soon as practicable. The objective symbol may be marked with an asterisk (which is not part of the symbol). However, only one form of any symbol shall be used on a single diagram or series of drawings.

1.2.2 Size of Symbols. Precise dimensions and proportions of graphical symbols are difficult to specify. The size of each symbol and character used in this standard is regarded as the minimum desirable for reproduction by the various methods in use.

The relative sizes of the symbols should be preserved except where it is necessary to enlarge a symbol to give it prominence in a diagram or to provide adequate space within or around it to show symbols for associated components, or for coding.

At all times however, the relative proportions of the symbols should be maintained such that each symbol shall be unique and immediately recognizable.

1.2.3 Drawing Practice. In general, the drawing of the graphical symbols for use on wiring or circuit diagrams should comply with the requirements of AS 1100 (in particular with Part 6), and AS 1103, Part 3.

1.2.4 Qualifying and Supplementary Symbols. These symbols are added to component symbols where necessary in order to define more closely the item concerned; for example, symbol 2-02-01 which represents twisting of conductors, when added to symbol 2-01-04 which represents two conductors, will produce symbol 2-02-02 which indicates two conductors twisted.

Supplementary symbols define the qualified component even more closely; for example, the two twisted conductors can be further qualified as indicated by symbol 2-02-05 which represents four conductors in multiple twin formation.

Qualifying symbols may not be employed independently but it should be noted that component symbols may be used as qualifying symbols where appropriate.

1.2.5 New Symbols. If a symbol for a particular type of component is not shown as an example in this standard, it should be possible to produce it from the basic and qualifying symbols. New basic symbols for specialized components should be derived and not created.

1.2.6 Symbol Orientation. Orientation of a symbol, including mirror image reversal, does not change the meaning of a symbol.

1.2.7 Terminology. The terms and definitions employed in this standard are given in AS 1103, Part 1.