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Australian Standard 1103, Part 2—1982

DIAGRAMS, CHARTS AND TABLES FOR ELECTROTECHNOLOGY

ITEM DESIGNATION

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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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 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

Education Department of Victoria

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

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AUSTRALIAN STANDARD

DIAGRAMS, CHARTS AND TABLES FOR ELECTROTECHNOLOGY

Part 2
ITEM DESIGNATION

AS 1103, Part 2—1982

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PREFACE

This edition of this standard has been prepared by the Association's Committee on Symbols, Units and Quantities for Electrotechnology, under the authority of both the Telecommunications and Electronics Standards Board and the Electrical Standards Board, to supersede the 1975 edition. It is one in the series of standards on diagrams, charts and tables being prepared by the committee.

In its terminology, format and general treatment of the subject, this standard is consistent with the recommendations of IEC 113-2:1971 of the International Electrotechnical Commission. Acknowledgement is made of the assistance received from this source.

This edition of the standard is technically similar to the 1975 edition except that additions and deletions to Tables 1 and 2 have been made to meet Australian conditions. Some of these changes include the codifying of printed circuit boards, earphones, synchronous capacitors, digital and analogue integrated circuits and devices, light-emitting diodes, voltage regulators, etc, and the deletion of some 'kind of items' and 'examples' which were considered to be obsolete and superfluous.

During the preparation of this edition, attention was given to the work being undertaken by the IEC in revising IEC 113-2:1971. The changes to Tables 1 and 2 in this edition have been forwarded to the IEC by the Australian National Committee participating in the IEC work, as recommendations for inclusion in the latest IEC document.

The purpose of the standard is to prescribe a single unambiguous system for the establishment and use of item designations (component references) for electrical parts and equipment. When the 1975 edition was published it was recognized that the proposed system differed from those which were in common use in Australia; although some of the designations were changed, those in the most common usage remained. The advantages of this system to users, is its simplicity when compared with any of the other systems in use. It must be emphasized that this system has been prepared by an international body and has been introduced by many of the countries which voted for its adoption internationally.

The system provides information on a specific item with respect to—

(a) correlation with other parts of a larger unit;

(b) location;

(c) identification of kind, number and function; and

(d) the terminal or conductor marking.

This standard may require reference to the following Australian standards:

AS 1102	Graphical Symbols for Electrotechnology
AS 1103	Diagrams, Charts and Tables for Electrotechnology
	Part 3—Basic Principles for the Presentation of Elements of Electrical Diagrams
	Part 4—Guiding Principles for the Preparation of Circuit Diagrams

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
DIAGRAMS, CHARTS AND TABLES FOR ELECTROTECHNOLOGY

PART 2—ITEM DESIGNATION

1 SCOPE. This Part of the standard specifies a system of discrete item designations for electrical parts and equipment.

2 APPLICATION. The designation shall be shown at an appropriate place near the graphical symbol of the item. The designation correlates the item on different diagrams, parts lists, circuit descriptions, and instructions, and in the equipment. For maintenance purposes, the designation or part of it may also be shown on or near the item in the equipment.

3 DEFINITIONS. For the purpose of this Part of this standard, the following definitions apply:

3.1 Designation—a distinctive code which serves to identify an item in a diagram, list, and chart, and on the equipment. The type and amount of information given by a designation will depend on the nature of the diagram, list, chart or equipment.

3.2 Section—a group of related designations.

3.3 Complete item designation—a group of four sections arranged in a specified sequence.

3.4 Diagram—a figure showing the manner in which the various parts of a network, installation, equipment or components are interrelated and interconnected.

3.5 Chart or graph—a display showing the interrelation between

(a) different operations;
(b) operations and time;
(c) operations and physical quantities; or
(d) the state of several items.

3.6 Table (or series of tables)—a display in which interrelated information is shown in tabular form. A table may provide the same information as either a diagram or a chart and may therefore replace them.

3.7 Item—a component, equipment, plant, unit, etc which is represented by a graphical symbol on a diagram.

3.8 Kind of item—the code (for the kind of item) derived from sort, variety, class or group of items regardless of their function in a circuit.

3.9 Function—the characteristic action or purpose of an item in relation to others. The designation of the function can be general, e.g. a relay may have an auxiliary function (auxiliary relay). The designation of the function can also be specific, e.g. a motor may have the function of driving a pump of the cooling system of a generator.

3.10 Number—a number assigned to each item in an unambiguous manner. The numbers need not necessarily be in an uninterrupted sequence. Groups of numbers may be assigned to groups of items if desired.

3.11 Location—the physical position of an item in a subassembly, unit, plant, etc. The location designation may be essential to identify the item, e.g. for maintenance.

3.12 Higher-level assignment—a supplementary designation assigned to an item, if it is desired to express its relation to a larger unit of a system of which it is a part. The designation may be derived from the kind, purpose or location of the larger unit.

3.13 Qualifying symbols—a symbol used to identify the various designation blocks. Hyphens, colons, etc are used as qualifying symbols.

4 PURPOSE OF DIFFERENT TYPES OF DESIGNATION. An item designation may be used for general or specific purposes depending on the kind of information required. The different sections of the designation provide information for the following purposes:

(a) Higher-level assignment showing correlation with other parts of the equipment with regard to location and/or function.
(b) Location of item.
(c) Identification of item according to—
  (i) kind;
  (ii) number; and
  (iii) function.
(d) Terminal and conductor marking.

On most diagrams an appropriate section of the complete item designation (for the purposes listed above) is sufficient. The selection of the section used depends on the type of diagram.

The kind, number and function of an item and sometimes its higher-level assignment, are known at an early state of the design and development of the equipment; therefore these sections only of the complete item designation fulfil the requirements for most sketches and diagrams.