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Australian Standard®

Graphical symbols for electrotechnical documentation

Part 104: Passive components

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STANDARDS AUSTRALIA

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The following interests are represented on Committee TE/13:

Association of Consulting Engineers, Australia
Australian Electrical and Electronic Manufacturers Association
Civil Aviation Authority
Confederation of Australian Industry
Department of Administrative Services—Construction Group
Department of Defence
Department of Technical and Further Education, N.S.W., Vic. and S.A.
Electricity Supply Association of Australia
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Graphical symbols for electrotechnical documentation

Part 104: Passive components

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PREFACE

This Standard was prepared by the Standards Australia Committee on Symbols, Units and Quantities for Electrotechnology under the Authority of both the Telecommunications and Electronics Standards Board and the Electrical Standards Board.

THE 'NEW' AS 1102 SERIES

This Standard is one part of a major revision of the AS 1102 series, all 15 parts of which have or are currently being revised and consolidated so that the series is aligned with the 13-part IEC 617 series, *Graphical symbols for diagrams*.

The Committee decided upon this alignment rather than continue with the development of an Australian series based on but not aligned with IEC 617. Such a course would eventually have proved counter-productive since the IEC 617 series has already gained wide national and international acceptance.

Since the generic AS number for the series (AS 1102) is so well established throughout industry and technical colleges as *the* Australian Standard for electrotechnical graphical symbols, it was felt appropriate that it be retained. However, to clearly identify the revised Standards, three-digit part numbers have been employed (e.g. AS 1102.106) and in this Preface these revised Standards are referred to as the 'new' AS 1102 series.

The Standards of the 'new' AS 1102 series are derived as follows:

(a) Eleven parts of the 'old' AS 1102 series (i.e. Parts 1 to 7, 10, 11, 13 and 14) are now consolidated and aligned with the first 10 parts of IEC 617 and thus become AS 1102.101 to AS 1102.110. These are published simultaneously.

(b) Of the outstanding balance of parts of the 'old' AS 1102 series (i.e. Parts 8, 9, 12 and 15), these will all be revised and aligned in due course as follows:

   (i) Part 8—1986, *Symbols for location diagrams*. This part will become AS 1102.111.

   (ii) Part 9—1986, *Binary logic elements*. This part is already substantially in alignment with IEC 617-12 (1983) and will become AS 1102.112.

   (iii) Part 12—1984, *Electric traction*. This part is wholly of Australian origin and it does not correspond with any IEC Standard. However, when it is revised it will be redesignated with a 3-digit part number. For the meantime it retains its 2-digit part number i.e. Part 12.

   (iv) Part 15—1982, *Analogue elements*. This part is already substantially in alignment with IEC 617-13 (1978) and will become AS 1102.113.

The following are the parts of the 'new' AS 1102 series that are published simultaneously:

AS 1102 *Graphical symbols for electrotechnical documentation*

AS 1102.101 *General information and general index*

AS 1102.102 *Symbol elements, qualifying symbols and other symbols having general application*

AS 1102.103 *Conductors and connecting devices*

AS 1102.104 *Passive components*

AS 1102.105 *Semiconductors and electron tubes*

AS 1102.106 *Production and conversion of electrical energy*

AS 1102.107 *Switchgear, controlgear and protective devices*

AS 1102.108 *Measuring instruments, lamps and signalling devices*

AS 1102.109 *Telecommunications: Switching and peripheral equipment*

AS 1102.110 *Telecommunications: Transmission*

The above parts collectively supersede the following Standards of the 'old' AS 1102 series:

AS 1102 *Graphical symbols for electrotechnology*

AS 1102.1—1985 *General, qualifying and supplementary symbols* (first published in 1973, second edition 1981)

AS 1102.2—1981 *Conductors and connecting devices* (first published in 1973)

AS 1102.3—1983 *Resistors, capacitors and inductors* (first published in 1973)

AS 1102.4—1983 *Electron tubes and rectifiers* (first published in 1974)
AS 1102.5—1983 *Semiconductor devices* (first published in 1972)
AS 1102.6—1982 *Rotating electrical machines* (first published in 1975)
AS 1102.7—1982 *Measuring instruments* (first published in 1975)
AS 1102.10—1985 *Signal transmission symbols* (first published in 1973, second edition 1981)
AS 1102.11—1985 *Switching and protective devices* (first published in 1976, second edition 1981)
AS 1102.13—1979 *Microwave technology*
AS 1102.14—1979 *Telephony, telegraphy and transducers*

PARTICULAR POINTS ON PART 104

The purpose of this Part (104) is to provide symbols for passive components such as resistors, capacitors and inductors, ferrite cores, magnetic storage matrices, piezoelectric crystals, electret and delay lines.

In its terminology, format and general treatment of the subject, this Standard aligns with IEC 617-4 (1983) except as modified to suit Australian conditions and includes a number of non-IEC symbols which represent Australian practice. These Australian symbols are separately identified (see Clauses 1.4 to 1.8 of Part 101).

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CHAPTER 0. SPECIFICATION

SECTION 0. SCOPE AND GENERAL

0.1 SCOPE. This Standard defines graphical symbols for passive components, such as resistors, capacitors and inductors, ferrite cores, magnetic storage matrices, piezoelectric crystals, electret and delay lines.

0.2 REFERENCED DOCUMENTS. The following documents are referred to in this Standard:

AS
1102 Graphical symbols for electrotechnical documentation
1102.101 Part 101: General information and general index
1102.102 Part 102: Symbol elements, qualifying symbols and other symbols having general application
1102.106 Part 106: Production and conversion of electrical energy

0.3 GENERAL. This Standard requires to be read in conjuction with AS 1102.101 (in particular, Section 1) and AS 1102.102.

NOTES:

1. Attention is drawn to the fact that reference may also be required to other Standards in the AS 1102 series.
2. AS 1102.101 provides a general index of symbols of the AS 1102 series (see Section 2).
3. Appendix A of AS 1102.101 establishes a grid for computer-aided drafting (CAD) systems.
4. AS 1102.102 provides symbols for general application, qualifying symbols and symbol elements.