

D2 97177

This is a free page sample. Access the full version online.

AS 1102.108—1989

1997 ed.

Australian Standard®

**Graphical symbols for
electrotechnical documentation**

**Part 108: Measuring instruments,
lamps and signalling devices**



STANDARDS AUSTRALIA



This Australian Standard was prepared by Committee TE/13, Symbols, Units and Quantities for Electrotechnology. It was approved on behalf of the Council of Standards Australia on 22 March 1989 and published on 19 June 1989.

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
Institute of Draftsmen, Australia
Institution of Radio and Electronics Engineers, Australia
Melbourne & Metropolitan Board of Works
Queensland Chamber of Mines
Railways of Australia Committee
Royal Melbourne Institute of Technology
Telecom Australia
The technical press

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian Standard®

**Graphical symbols for
electrotechnical documentation**

**Part 108: Measuring instruments,
lamps and signalling devices**

For history before 1989 see Preface.
AS 1102.108 first published 1989.

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 Standard 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	<i>Graphical symbols for electrotechnical documentation</i>
AS 1102.101	<i>General information and general index</i>
AS 1102.102	<i>Symbol elements, qualifying symbols and other symbols having general application</i>
AS 1102.103	<i>Conductors and connecting devices</i>
AS 1102.104	<i>Passive components</i>
AS 1102.105	<i>Semiconductors and electron tubes</i>
AS 1102.106	<i>Production and conversion of electrical energy</i>
AS 1102.107	<i>Switchgear, controlgear and protective devices</i>
AS 1102.108	<i>Measuring instruments, lamps and signalling devices</i>
AS 1102.109	<i>Telecommunications—Switching and peripheral equipment</i>
AS 1102.110	<i>Telecommunications—Transmission</i>

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

AS 1102	<i>Graphical symbols for electrotechnology</i>
AS 1102.1—1985	<i>General, qualifying and supplementary symbols</i> (first published in 1973, second edition 1981)
AS 1102.2—1981	<i>Conductors and connecting devices</i> (first published in 1973)
AS 1102.3—1983	<i>Resistors, capacitors and inductors</i> (first published in 1973)
AS 1102.4—1983	<i>Electron tubes and rectifiers</i> (first published in 1974)
AS 1102.5—1983	<i>Semiconductor devices</i> (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 108

The purpose of this Part (108) is to provide symbols for measuring instruments, lamps and signalling devices, indicating/recording/integrating instruments, counting devices, thermocouples, telemetering devices and electric clocks.

In its terminology, format and general treatment of the subject, this Standard aligns with IEC 617-8 (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 Clause 1.4 to 1.8 of Part 101).

CONTENTS

	<i>Page</i>
SECTION 0. SCOPE AND GENERAL	
0.1 SCOPE	4
0.2 REFERENCED DOCUMENTS	4
0.3 GENERAL	4
SECTION 1. INDICATING, RECORDING AND INTEGRATING INSTRUMENTS, GENERAL SYMBOLS	
1.1 ASTERISK	5
1.2 LETTER SYMBOLS FOR UNITS AND QUANTITIES	5
1.3 LETTER SYMBOLS FOR THE UNIT OF THE QUANTITY	5
1.4 MORE THAN ONE QUANTITY	5
SECTION 2. EXAMPLES OF INDICATING INSTRUMENTS	6
SECTION 3. EXAMPLES OF RECORDING INSTRUMENTS	8
SECTION 4. EXAMPLES OF INTEGRATING INSTRUMENTS	9
SECTION 5. COUNTING DEVICES	11
SECTION 6. THERMOCOUPLES	12
SECTION 7. TELEMETERING DEVICES	13
SECTION 8. ELECTRIC CLOCKS	14
SECTION 9. MISCELLANEOUS MEASURING ELEMENTS AND INSTRUMENTS	16
SECTION 10. LAMPS AND SIGNALLING DEVICES	18

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the Head Office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-