Australian Standard®

LETTER SYMBOLS FOR USE IN ELECTROTECHNOLOGY

Part 2— TELECOMMUNICATIONS AND ELECTRONICS

This standard, prepared by the Joint Telecommunications and Electronics and Electrical Committee TE/13, Symbols, Units and Quantities for Electrotechnology, was approved on behalf of the Council of the Standards Association of Australia on 4 August 1977, and was published on 1 December 1978.

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 Electronics Manufacturers Association
Australian Institute of Refrigeration, Air Conditioning and Heating Inc.
Confederation of Australian Industry
Department of Construction
Department of Defence
Department of Productivity
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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PREFACE

This standard was prepared by the Association's Committee on Symbols, Units and Quantities for Electrotechnology under the authority of both the Telecommuncations and Electronics Standards Board and the Electrical Standards Board, as Part 2 of the standard on letter symbols.

The purpose of this Part of the standard is to specify letter symbols for physical quantities used specifically in the telecommunications, electronics and related fields of electrotechnology and to specify abbreviations and symbols for units for such quantities. The standard defines rules for the application of such symbols and as such is an extension of AS 1046, Part 1 — General, which covers the general area of electrical technology.

This Part 2 does not attempt to be exhaustive, but covers the most commonly used fields of use listed in the table of contents and extends these symbols by the specification of subscripts and indices to indicate variations of characteristics listed.

This standard is closely aligned with IEC 27-2 and IEC 27-2A;. Acknowledgment is made of the assistance received from this source. Like the international standards on this subject, the standard lists both International System (SI) units and non-SI units likely to be met in text books and scientific papers originating outside Australia. It is emphasized, however, that for future Australian use preference should be given to the units within the International System.

For a fuller understanding of the symbols and methods adopted in this standard reference should be made to the following Australian standards:

AS 1000 The International System of Units (SI) and Its Application

AS 1046 Letter Symbols for Use in Electrotechnology
Part 1— General

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
LETTER SYMBOLS FOR USE IN ELECTROTECHNOLOGY

PART 2—TELECOMMUNICATIONS AND ELECTRONICS

1 SCOPE. This standard specifies letter symbols for physical quantities and abbreviations and symbols for units for use particularly in telecommunications and electronics engineering. This standard supplements the symbols given in AS 1046, Part 1—General.

2 APPLICATION. The recommendations in this standard on the use of symbols, alphabets and type fonts relate specifically to printed matter. In written and typewritten documents it is recommended that the choice of type be indicated by underlining with a straight line for italic type and with a wavy line for bold type.

In order to make the best use of the limited number of readily available alphabets and fonts, it is recommended that the general principles specified internationally be adopted.

Even with the provisions made for the use of different fonts, and cases, the number of distinctive letter symbols available for use is insufficient to enable each physical quantity or unit to be allotted a unique symbol or abbreviation. Alternatives have therefore been allotted where a need for them is most likely to arise or where alternative usage has been firmly established.

The use of the preferred symbol or abbreviation is strongly recommended.

3. GENERAL. This standard extends the list of symbols given for physical quantities and abbreviations for symbols and units in AS 1046, Part 1—General. The rules for choice of alphabet, choice of type, treatment of vectors and combination of symbols as stated in that standard are followed in this Part. Reference should be made to Part 1 for this information.

4 TABLES FOR LETTER SYMBOLS AND ABBREVIATIONS. The tables include in addition to symbols and abbreviations specific to telecommunications and electronic engineering other symbols and abbreviations used in these fields although specific to other disciplines. In the interests of simplicity, the vectorial or tensorial character of certain quantities, or their complex representation, may be disregarded.

5 PREFERRED SYMBOLS AND UNITS. The preferred symbols for quantities are listed in the first column after the name of the quantity. Reserve symbols for use where the preferred symbol is unsatisfactory, e.g. where confusion could arise with a similar letter with a different significance, are listed in the following column.

Names are used only for identification and in general agree with AS 1852, International Electrotechnical Vocabulary. Should this name of a quantity or unit, or the symbol or abbreviation vary from that listed in the international standard ISO/R31, this is indicated by a Note. Sometimes preference is given to a certain symbol in cases where ISO, by reasons of its widespread use, has been unable to indicate a distinction between those listed.

The units that belong to the International System of Units (SI) shall be used in preference to others listed. Additional information on SI units is given in AS 1000.