SLOVENSKI STANDARD
oSIST prEN IEC 80000-13:2024

01-marec-2024

Veličine in enote - 13. del: Informacijska znanost in tehnologija

Quantities and units - Part 13: Information science and technology

Größen und Einheiten - Teil 13: Informationswissenschaft und -technik

Grandeurs et unités - Partie 13: Science et technologies de l'information

Ta slovenski standard je istoveten z: **prEN IEC 80000-13:2024**

ICS:

01.060	Veličine in enote	Quantities and units
35.020	Informacijska tehnika in tehnologija na splošno	Information technology (IT) in general

oSIST prEN IEC 80000-13:2024 **en**

25/774/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 80000-13 ED2**	
DATE OF CIRCULATION: **2024-01-05**	CLOSING DATE FOR VOTING: **2024-03-29**
SUPERSEDES DOCUMENTS: **25/767/CD, 25/773/CC**	

IEC TC 25 : QUANTITIES AND UNITS

SECRETARIAT: Italy	SECRETARY: Mr Andrea Nafi
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 1,TC 13,TC 57,TC 65,TC 100	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY

☒ SUBMITTED FOR CENELEC PARALLEL VOTING	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant “In Some Countries” clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).

TITLE:

Quantities and units - Part 13: Information science and technology

PROPOSED STABILITY DATE: 2028

NOTE FROM TC/SC OFFICERS:

On the TC 25/JWG 2 meeting of the 15th of October 2023, experts expressed their favour for the circulation of the CDV.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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QUANTITIES AND UNITS

Part 13: Information science and technology

FOREWORD

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IEC 80000-13 ED 2.0 has been prepared by IEC technical committee 25: Quantities and units in close cooperation with ISO/TC 12 Quantities and units. It is an International Standard.

This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

This edition includes the following significant technical change with respect to the previous edition:

addition of new prefixes for binary multiples.

The text of this International Standard is based on the following documents:

Draft	Report on voting
XX/XX/FDIS	XX/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

0.1 Tables of quantities

In most cases only one name and only one symbol for the quantity are given; where two or more names or two or more symbols are given for one quantity and no special distinction is made, they are on an equal footing. When two types of italic letters exist (for example as with *J* and *θ*; *φ* and *f*; *a* and *a*; *g* and *g*) only one of these is given. This does not mean that the other is not equally acceptable. It is recommended that such variants should not be given different meanings. A symbol within parenthesis implies that it is a reserve symbol, to be used when, in a particular context, the main symbol is in use with a different meaning.

0.2 General

The names of units for the corresponding quantities are given together with the international symbols and the definitions. These unit names are language-dependent, but the symbols are international and the same in all languages. For further information, see the SI Brochure (9th edition 2019, updated in 2022) from BIPM and ISO 80000-1.

The units are arranged in the following way:

- The coherent SI units are given first. The SI units have been adopted by the General Conference on Weights and Measures (Conférence Générale des Poids et Mesures, CGPM). The use of coherent SI units, and their decimal multiples and submultiples formed with the SI prefixes are recommended, although the decimal multiples and submultiples are not explicitly mentioned.
- Some non-SI units are then given, being those accepted by the International Committee for Weights and Measures (Comité International des Poids et Mesures, CIPM), or by the International Organization of Legal Metrology (Organisation Internationale de Métrologie Légale, OIML), or by ISO and IEC, for use with the SI. Such units are separated from the SI units in the item by use of a broken line between the SI units and the other units.

0.3 Remark on units for quantities whose dimensional exponents are all equal to zero

The coherent unit for any quantity whose dimensional exponents are equal to zero is the number one, symbol 1. When the value of such a quantity is expressed, the unit symbol 1 is generally not written out explicitly.

EXAMPLE 1

Refractive index $n = 1{,}53 \times 1 = 1{,}53$

Prefixes shall not be used to form multiples or submultiples of this unit. Instead of prefixes, powers of 10 are recommended.

EXAMPLE 2

Reynolds number $\mathrm{Re} = 1{,}32 \times 10^3$

0.4 Numerical statements in this International Standard

The sign = is used to denote "is exactly equal to", the sign ≈ is used to denote "is approximately equal to", and the sign := is used to denote "is by definition equal to".

QUANTITIES AND UNITS

Part 13: Information science and technology

1 Scope

This part of IEC 80000 specifies names, symbols and definitions for quantities and units used in information science and technology. Where appropriate, conversion factors are also given. Prefixes for binary multiples are also given.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

The names, definitions and symbols for quantities and units of information science and technology are given in Table 1 on the following pages.

Table 1 – Quantities and units in information science and technology

Item No.	Quantity			Unit		Remarks
	Name	Symbol	Definition	Name	Symbol	
13-1	traffic intensity	A	number of simultaneously busy resources in a particular pool of resources	erlang	E	1 E corresponds to the occupancy of one resource. The name "erlang" was given to the traffic intensity unit in 1946 by the International Telephone Consultative Committee (CCIF), in honor of the Danish mathematician, A. K. Erlang (1878-1929), who was the founder of traffic theory in telephony.
13-2	traffic offered intensity	A_o	traffic intensity (item 13-1) of the traffic that would have been generated by the users of a pool of resources if their use had not been limited by the size of the pool	erlang	E	1 E corresponds to the occupancy of one resource. See IEV 715-05-05.
13-3	traffic carried intensity, traffic load	Y	traffic intensity (item 13-1) of the traffic served by a particular pool of resources	erlang	E	1 E corresponds to the occupancy of one resource. General practice is to estimate the traffic intensity as an average over a specified time interval, e.g. the busy hour.
13-4	mean queue length	L, (Ω)	time average of queue length	one	1	For the unit one, see the introduction. See IEV 171-02-34.
13-5	loss probability	B	probability for losing a call attempt	one	1	For the unit one, see the introduction.
13-6	waiting probability	W	probability for waiting for a resource	one	1	For the unit one, see the introduction.
13-7	call intensity, calling rate	λ	number of call attempts over a specified time interval divided by the duration (ISO 80000-3, item 3-9) of this interval	second to the power minus one inverse second	s^{-1}	See IEV 715-03-13.
13-8	completed call intensity	μ	call intensity (item 13-7) for the call attempts that result in the transmission of an answer signal	second to the power minus one inverse second	s^{-1}	For a definition of the complete call attempt, see IEV 715-03-11.

Item No.	Quantity			Unit		Remarks
	Name	Symbol	Definition	Name	Symbol	
13-9	storage capacity, storage size	*M*	amount of data that can be contained in a storage device, expressed as a number of specified data elements	one	1	For the unit one, see the introduction.
				bit octet byte	bit o B	The specified data elements depend on the organization of the storage device, for example, binary elements also called bits, octets also called bytes, words of a given number of bits, blocks. A subscript referring to a specified data element can be added to the symbol. EXAMPLES: storage capacity for bits, M_{bit} storage capacity for octets, M_{o} or M_{B}. For registers, the term "register length" is used with the same meaning. Although in this context the designation bit, symbol bit, is not really a unit, it is often used like a unit, e.g. $M_{\mathrm{bit}} = 32\,000$, where the unit one is implicit, is often written as $M = 32\,000$ bit. Similarly, although the designation octet or byte, symbols o and B, respectively, are not units, they are often used like units, e.g., $M_{\mathrm{o}} = 4\,000$ or $M_{\mathrm{B}} = 4\,000$, where the unit one is implicit, are often written $M = 4\,000$ o or $M = 4\,000$ B. When used to express a storage capacity or an equivalent binary storage capacity, the bit and the octet (or byte) may be combined with SI prefixes or prefixes for binary multiples. In English, the name byte, symbol B, is used as a synonym for octet. Here byte means an eight-bit byte. However, byte has been used for numbers of bits other than eight. To avoid the risk of confusion, it is strongly recommended that the name byte and the symbol B be used only for eight-bit bytes. The symbol B for byte is not international and should not be confused with the symbol B for bel. See IEV 171-04-16.