

TECHNICAL SPECIFICATION

Identification of units of measurement for computer-based processing



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Identification of units of measurement for computer-based processing

INTERNATIONAL
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CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Relations between quantities, units and their systems	13
4.1 General.....	13
4.2 The International System of Quantities and the International System of Units	13
4.3 Other systems of quantities and units	15
4.4 List of quantities and units	15
5 Prefixes and prefix symbols.....	15
5.1 General.....	15
5.2 Formation of multiples and factors	15
5.3 Usage of SI prefixes and SI prefix symbols	17
5.3.1 General	17
5.3.2 Combination of SI prefixes, SI prefix symbols, names of units and symbols for units	17
5.3.3 Use of power exponentials in conjunction with SI prefixes, SI prefix symbols, names of units or symbols for units.....	18
5.3.4 Restrictions on combining SI prefixes, SI prefix symbols, names of units and symbols for units.....	18
5.4 Selecting SI prefixes and SI prefix symbols.....	18
6 Identification of units	19
Annex A (informative) Information about units.....	21
Annex B (normative) Identifiers for units and quantities	22
Annex C (informative) Quantities and assigned units of measure	23
Bibliography.....	86
Figure 1 – International Registration Data Identifier (IRDI).....	19
Table 1 – Examples of generic concepts for individual quantities	7
Table 2 – Base quantity and base unit	8
Table 3 – Base quantities	10
Table 4 – Base quantities and base units in the International System of Units	14
Table 5 – Representation of base quantities in the International System of Units.....	14
Table 6 – Formation of multiples and factors of units to the base of 10	16
Table 7 – Formation of multiples of units to the base of 2	17
Table 8 – Units that are used without prefixes or prefix symbols	18
Table C.1 – Codes of quantities	23
Table C.2 – Codes of units.....	35

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOR COMPUTER-BASED PROCESSING****FOREWORD**

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

International Standard IEC 62720, which is a technical specification, has been prepared by subcommittee 3D: Product properties and classes and their identification, of IEC technical committee 3: Information structures and elements, identification and marking principles, documentation and graphical symbols.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

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

- a) the detailed description of the units is contained in the IEC CDD (<http://cdd.iec.ch/>¹) and removed from this document;
- b) Annex B contains the reference to the IEC CDD;
- c) Annex C contains an abridged listing of quantities, units and their identifying codes;
- d) Annexes D and E are removed.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
3D/282/DTS	3D/289/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

¹ Website checked on 2016-06-10.

INTRODUCTION

For the interpretation of documents such as data sheets, catalogues, or other product related documentation, units of measure play an inconspicuous but important role. All quantitative data can be prone to misinterpretation if its unit of measure is unclear or wrong. Thus, there is a strong requirement to unambiguously identify units of measure and ensure that each unit of measure and its underlying quantity is clearly specified.

As a consequence there is a need to provide computer interpretable identifiers for units of measure. This document assigns identifiers to many standard or non-standard units of measure currently in use.

To ensure timely and fast maintenance of the collection, the content of the document is provided in the IEC Common Data Dictionary (CDD), thus making possible easy maintenance and fast introduction of missing units of measure and quantities.

IDENTIFICATION OF UNITS OF MEASUREMENT FOR COMPUTER-BASED PROCESSING

1 Scope

This document specifies identifiers for units to support computer-based processing of product data. It provides a survey of quantities with associated collections of internationally standardized as well as non-standardized units used in business and science.

Within the scope of this document are any standard or non-standard units of measure currently in use, in two or more distinct ethno-linguistic groups or nations, at least in one domain of industry, for which an explicit method of conversion to a known standard unit of measure or its equivalent is well documented or evident from external references.

IEC 62720 collects units commonly used in business data. It does not purport to be complete. The standardization of units or parts thereof is out of the scope of this document.

NOTE Having assigned an identifier by being mentioned in this document does not imply that the unit of measure in question or parts thereof can be considered to be standardized.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 11179 (all parts), *Information technology – Metadata registries (MDR)*

3 Terms and definitions

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

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

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

3.1

quantity

property of a phenomenon, body, or substance, where the property has a magnitude that can be expressed by means of a number and a reference

Note 1 to entry: The generic concept “quantity” can be divided into several levels of specific concepts, as shown in Table 1. The left hand side of the table shows specific concepts under “quantity”. These are generic concepts for the individual quantities in the right hand column.