SLOVENSKI STANDARD
SIST EN 61360-1:2000

01-februar-2000

Standard data element types with associated classification scheme for electric components - Part 1: Definitions - Principles and methods (IEC 61360-1:1995)

Standard data element types with associated classification scheme for electric components -- Part 1: Definitions - Principles and methods (IEC 61360-1:1995)

Genormte Datenelementtypen mit Klassifikationsschema für elektrische Bauteile -- Teil 1: Definitionen - Regeln und Methoden

Types normalisés d'éléments de données avec plan de classification pour composants électriques -- Partie 1: Définitions - Principes et méthodes

Ta slovenski standard je istoveten z: EN 61360-1:1995

ICS:

29.100.20	Električni in elektromehanski sestavni deli	Electrical and electromechanical components

SIST EN 61360-1:2000 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61360-1

July 1995

ICS 29.100.20; 31.020

Descriptors: Classification, electric component, description, data, data element type

English version

Standard data element types with associated classification scheme for electric components
Part 1: Definitions
Principles and methods
(IEC 1360-1:1995)

Types normalisés d'éléments de données avec plan de classification pour composants électriques
Partie 1: Définitions
Principes et méthodes
(CEI 1360-1:1995)

Genormte Datenelementtypen mit Klassifikationsschema für elektrische Bauteile
Teil 1: Definitionen
Regeln und Methoden
(IEC 1360-1:1995)

This European Standard was approved by CENELEC on 1995-07-04. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national eléctrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61360-1:1995 E

Foreword

The text of document 3D(CO)5, future edition 1 of IEC 1360-1, prepared by SC 3D "Data sets for libraries of electric component data" of IEC TC 3 "Documentation and graphical symbols", was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61360-1 on 1995-07-04.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1996-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-04-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A, B, C and ZA are normative and annex D is informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 1360-1:1995 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 27	series	Letter symbols to be used in electrical technology	HD 245	series
IEC 148	1969	Letter symbols for semiconductor devices and integrated microcircuits	-	-
ISO 31	1992	Quantities and units Part 0: General principles	-	-
ISO/R 843	1968	International system for the transliteration of Greek characters into Latin characters	-	-
ISO 2382-2	1976	Data processing Vocabulary	-	-
ISO 6093	1985	Information processing Representation of numerical values in character strings for information interchange	-	-
ISO 9735	1988[1)]	Electronic data interchange for administration, commerce and transport (EDIFACT) Application level syntax rules	-	-
ISO/IEC 646	1991	Information technology ISO 7-bit coded character set for information interchange	-	-
ISO/IEC 6429	1992	Information technology Control functions for coded character sets	-	-
ISO/IEC 10646-1	1993	Information technology Universal Multiple-Octet Coded Character set (UCS) - Part 1: Architecture and Basic Multilingual Plane	-	-

1) The amended and reprinted version ISO 9735:1990 is harmonized as EN 29735:1992.

Publication	Year	Title	EN/HD	Year
ISO/IEC 11179-3	1994	Information technology Specification and standardization of data elements - Basic attributes of data elements	-	-

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
1360-1

Première édition
First edition
1995-04

Types normalisés d'éléments de données avec plan de classification pour composants électriques –

Partie 1:
Définitions – Principes et méthodes

Standard data element types with associated classification scheme for electric components –

Part 1:
Definitions – Principles and methods

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE XA

Pour prix, voir catalogue en vigueur
For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

STANDARD DATA ELEMENT TYPES WITH ASSOCIATED CLASSIFICATION SCHEME FOR ELECTRIC COMPONENTS –

Part 1 : Definitions – Principles and methods

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organisation for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subject dealt with.

3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 1360-1 has been prepared by sub-committee 3D: Data sets for libraries of electric component data, of IEC technical committee 3: Documentation and graphical symbols.

The text of this standard is based on the following documents:

DIS	Report on voting
3D(CO)5	3D/34/RVD

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

IEC 1360 consists of the following parts, under the general title *Standard data element types with associated classification scheme for electric components:*

Part 1: Definitions – Principles and methods

Part 2: EXPRESS Dictionary schema

Part 3: Maintenance and validation procedures

Part 4: IEC Reference Collection of standard data element types, component classes and terms.

Annexes A, B and C form an integral part of this standard.

Annex D is for information only.

STANDARD DATA ELEMENT TYPES WITH ASSOCIATED CLASSIFICATION SCHEME FOR ELECTRIC COMPONENTS –

Part 1 : Definitions – Principles and methods

1 General

1.1 *Scope and object*

This part of IEC 1360 specifies the principles to be used for defining technical data element types with associated classification schemes needed to describe fully electric components, including electronic and electromechanical components and materials used in electro-technical equipment and systems.

The object of this standard is to specify principles to be used for defining and the methods required for implementing:

a) a set of uniquely defined data element types required to describe electric components each having an unambiguously defined meaning and a defined value domain in a prescribed format.

b) a classification scheme of components whereby sets of relevant and valid data element types are assigned to describe the various classes of components.

NOTE – The goal of this classification scheme of components is to arrange the data element types in an unambiguous structured way. The selected classification scheme shows one possibility; a subset may be used and the scheme may also be extended.
Any user is free to define other classification schemes for his own purposes.

Both a) and b) are meant for use in computerized systems for component selection and management, parts list processing, and computer-aided design, manufacturing and testing.

1.2 *Normative references*

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 1360. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 1360 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 27, *Letter symbols to be used in electrical technology*

IEC 148: 1969, *Letter symbols for semiconductor devices and integrated microcircuits*

ISO 31: 1992, *Quantities and units – Part 0: General principles*

ISO/R843: 1968, *International system for the transliteration of Greek characters into Latin characters*

ISO 2382, *Data processing – Vocabulary*

ISO 6093: 1985, *Information processing – Representation of numerical values in character strings for information interchange*

ISO 9735[1]: 1988, *Electronic data interchange for administration, commerce and transport (EDIFACT) – Application level syntax rules*

ISO/IEC 6429: 1992, *Information technology – Control functions for coded character sets*

ISO/IEC 646: 1991, *Information technology – ISO 7-bit coded character set for information interchange*

ISO/IEC 10646-1: 1993, *Information technology – Universal Multiple-Octet Coded Character set (UCS) – Part 1: Architecture and Basic Multilingual Plane*

ISO/IEC 11179-3: 1994, *Information technology – Specification and standardization of data elements – Basic attributes of data elements*

2 Definitions

For the purpose of this part of IEC 1360 the following definitions apply:

2.1 **entity:** Any concrete or abstract object of interest, including associations among things.

2.2 **association:** Observed connection between **entities.**

2.3 **data element type:** Unit of data for which the identification, description and value representation have been specified.

2.4 **attribute:** Any one of the properties of an **entity**, possibly involving one or more other **entities**, used in the description of a **data element type.**

2.5 **product:** Result of labour or of a natural or industrial process.

2.6 **component:** Industrial **product** which serves a specific function or functions, which is not decomposable or physically divisible and which is intended for use in a higher order assembled **product.**

2.7 **electric component:** Component with conductive terminals through which voltages or currents may be applied or delivered.

NOTE – Electronic components and electric transducers are included in this definition.

2.8 **component class:** Set of **components** of which each **component** can be described by the same group of data element types.

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[1]) This normative reference is based on the Trade Data Elements Directory (TDED) of the United Nations Economic Commission for Europe (UNECE), Trade Facilitation.

2.9 **quantitative data element type:** Data element type with a numerical value representing a physical quantity, a quantity of information or a count of objects.

2.10 **non-quantitative data element type:** Data element type which identifies or describes an object by means of codes, abbreviations, names, references or descriptions.

2.11 **condition data element type:** Data element type that affects the value of another **data element type.**

2.12 **classifying data element type:** Data element type valid for a particular **component class,** addressing a single elementary **attribute** of that **component** and having a homogeneous complementary value domain, whose values define the component subclasses.

2.13 **data element type class:** Class of similar data element types.

2.14 **classification:** Systematic division of a set of items into subsets according to their difference in some predetermined characteristics.

2.15 **term:** Conventional symbol for a concept, consisting of a word or a phrase.

3 Data element type specification attributes

In this clause the various attributes of data element types as encountered in the specifications are explained. An overview is given in figures 1 and 2. These attributes are related to identification, description, and value of data element types and to relationships between data element types.

For the representation of the attributes of the data element types, in general upper-case letters and lower-case letters are used according to the existing international standards from which the attributes are taken. When no standard exists, the commonly used IEC methodology is followed (IEC 27 and IEC 148). Characters are taken from the character set ISO/IEC 10646-1, unless otherwise specified.

```
 1        5          6          12                    13
 |        |          |          |                     |
 AAF307-005          01         NR3 S..3.3ES2         E25
                                K**-1 ———————————————————— 9

 2 ┤ temp factor of permeability   $a_F ———————————————— 4
   │ temp factor of reluctivity    α_F ———————————————— 3

   │                                   ┌———————————————— 14
   │ value as specified by level (minTypMax) of the
   │ negative of the change in the permeability due to a
 7 ┤ change in temperature, divided by that change in
   │ temperature (in K**-1) of a soft magnetic material at
   │ specified frequency.
 8 ── AAE029-005=frequency
```

$$\alpha_F = -\frac{\frac{1}{\mu_\theta} - \frac{1}{\mu_{ref}}}{\theta - \theta_{ref}} = \frac{\mu_\theta - \mu_{ref}}{\mu_\theta \mu_{ref} (\theta - \theta_{ref})}$$

```
   where μ_θ and μ_ref are the permeabilities at
   temperatures θ and θ_ref respectively.

11 ── IEC 50(221),term 02.49
```

Figure 1 - Quantitative data element type specification attributes


```
 1        5          6          12                    13
 |        |          |          |                     |
 AAE759-005          01         M..3                  A57
19 ─ #
 2 ── coercivity class          coercivity cl ———————— 4

 7 ┤ code of the coercivity class of a magnetic part
   │ or magnetic material.

15 ┤ HRD = hard magnetic
   │ SFT = soft magnetic
   │                   ┌———————————————————————— 17
   └———————————————————————————————————————————— 16

18 ┤ IEC 50(221),term 01.14
   │ IEC 50(221),term 01.15
```

Figure 2 - Non-quantitative data element type specification attributes

1 Code (3.2.1)
2 Preferred name/synonymous name (3.2.2/3.2.3)
3 Preferred letter symbol/synonymous letter symbol (3.2.4/3.2.5)
4 Short name (3.2.6)
5 Version number (3.2.7)
6 Revision number (3.2.8)
7 Definition (3.3.1)
8 Condition(s) (3.5.3)
9 Unit of measure (3.4.3)
10 Formula (3.3.5)
11 Source document of data element type definition (3.3.6)
12 Value format (3.4.1)
13 Data element type class (3.5.2)
14 Level (3.4.5)
15 Values (3.4.6) forming a value domain (3.4.2)
16 Value code (3.4.7)
17 Value meaning (3.4.8)
18 Source document(s) of value(s) (3.4.4)
19 Mark that indicates this data element type is a classifying data element type