

INTERNATIONAL STANDARD

IEC
61360-1

2002-02

AMENDMENT 1
2003-12

Amendment 1

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

**Part 1:
Definitions – Principles and methods**

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International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE

M

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FOREWORD

This amendment has been prepared by subcommittee 3D: Data sets for libraries, of IEC technical committee 3: Information structures, documentation and graphical symbols.

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

FDIS	Report on voting
3D/120/FDIS	3D/127/RVD

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

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2005. At this date, the publication will be

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- withdrawn;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

Page 6

1.1 Scope and object

Delete, in the second paragraph, the final sentence:

Provision is also made for definition of the terms used in classification.

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1.3 Normative references

Insert the following normative reference:

IEC 60191-4:1999, *Mechanical standardization of semiconductor devices – Part 4: Coding system and classification into forms of package outlines for semiconductor device packages*

Page 8

2 Definitions

Delete, on page 9, definition 2.15 and renumber the remaining definitions accordingly.

Add the following new definitions:

2.21

shape

external form of a component package as given by the set of data element types

2.22

outline style

physical information enclosing the apparently plane figure presented by any object to sight, contour and/or external boundary of a component

2.23

package

term applied to an electric or electromechanical component which covers the physical outline of the component, including terminals and any protective material or casing

2.24

drawing

a drawing illustrates the meaning of a group of data element types describing the geometrical characteristics of a component

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3.2.2 Version number

Replace the existing list in the "Comments section" with the following new list:

- | | |
|--|-------------------------------|
| – preferred name | – short name |
| – preferred letter symbol | – preferred name of condition |
| – component class
(see super/subclass
as described in figure 10) | – data element type |
| | – value code |
| – value meaning | – reference class identifier |
| | – note |

3.2.3 Revision number

Replace the existing list in the "Comments" section with the following new list and sentence:

- | | |
|----------------------------|--|
| – synonymous name | – source document of DET definition |
| – synonymous letter symbol | – source document of value list |
| – remark | – spelling error in the text of the definition |
| – data element type class | – figure |
| – formula | |

The revision number shall be reset to the starting number 01 when the version number is changed.

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3.3.6 Source document of data element type definition

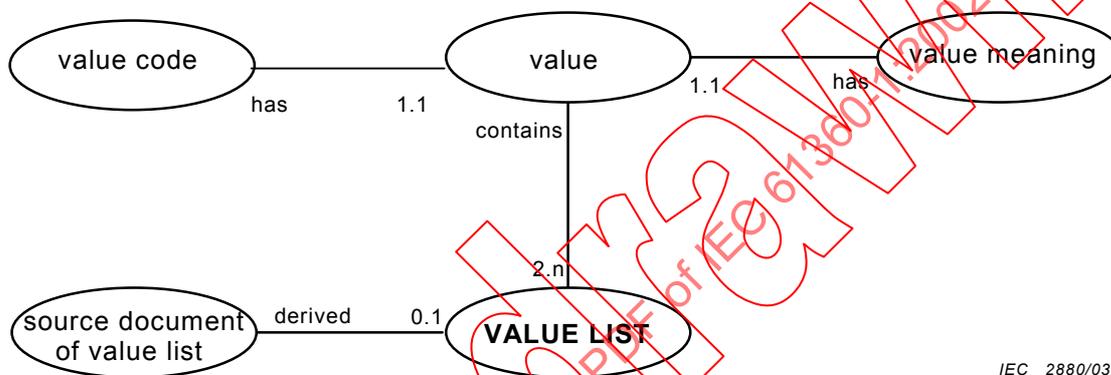
Add the following sentence to the third paragraph concerning Comments:

The value of this attribute shall have a maximum length of 80 characters

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Figure 5 – Attributes of the value list for data element type

Replace the existing Figure 5 by the following new Figure 5



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Figure 5 – Attributes of the value list for data element type

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3.4.2 Value format

Add, after the first sentence in the section marked “Comments”, the following new sentence:

The value of this attribute shall have a maximum length of 80 characters.

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3.4.4.1 Value

Delete the following sentence from the section marked “Comments”:

See also 6.4 for the relations between data element type, term and value

Page 24

3.4.4.2 Value code

In the section marked “Comments”, replace the second paragraph by:

The value code of a classifying (non-quantitative) data element type shall have a maximum length of 18 alphanumeric characters.

Page 24

3.4.4.3 Value meaning

In the section marked “Comments”, replace the existing text by the following text:

for classifying data element types the value meaning shall be defined in the note attribute of the class that has been defined by this classifying data element type.

The value of this attribute shall have a maximum length of 70 characters

Page 24

3.4.4.4 Source document of value list

Add the following section:

Comments: the value of this attribute shall have a maximum length of 80 characters

Page 24

3.4.5 Referenced class identifier

Replace the Attribute definition by:

Attribute definition: class identifier as defined in 5.5.

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5 Component class specification

Replace the last sentence of the 7th paragraph by the following text:

Classifying data element types are indicated by black dots, corresponding to the nodes of the tree, and the branches correspond to their values, the value meanings of which are defined in the note attribute of the class that has been defined by the classifying data element type.

Page 30

Insert the following new Subclause 5.1 and renumber the subsequent subclauses accordingly:

5.1 Shape of package outlines for components

The classification scheme for the shapes of package outlines is based on the following three characteristics of the package according to the codes defined in IEC 60191-4:

- outline style ;
- terminal position;
- terminal form.

Based on these characteristics, five levels of classification are defined as follows:

- level 1: outline style;
- level 2: terminal position;
- level 3: terminal form;
- level 4: terminal variant;
- level 5: body variant (optional).

The specification of each class at the lowest level of the classification tree of the component package shapes contains an attribute which makes a reference to a unique drawing. This associated drawing contains the graphical representation of the data element types describing the characteristic dimension parameters of that specific component package geometry.

Each drawing is unambiguously identified by an identifier. Also associated with each drawing is a descriptive designator which is derived from the coded name of the relevant class in the component package classification tree (see 6.1.5).

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Table 4 – List of attributes of class

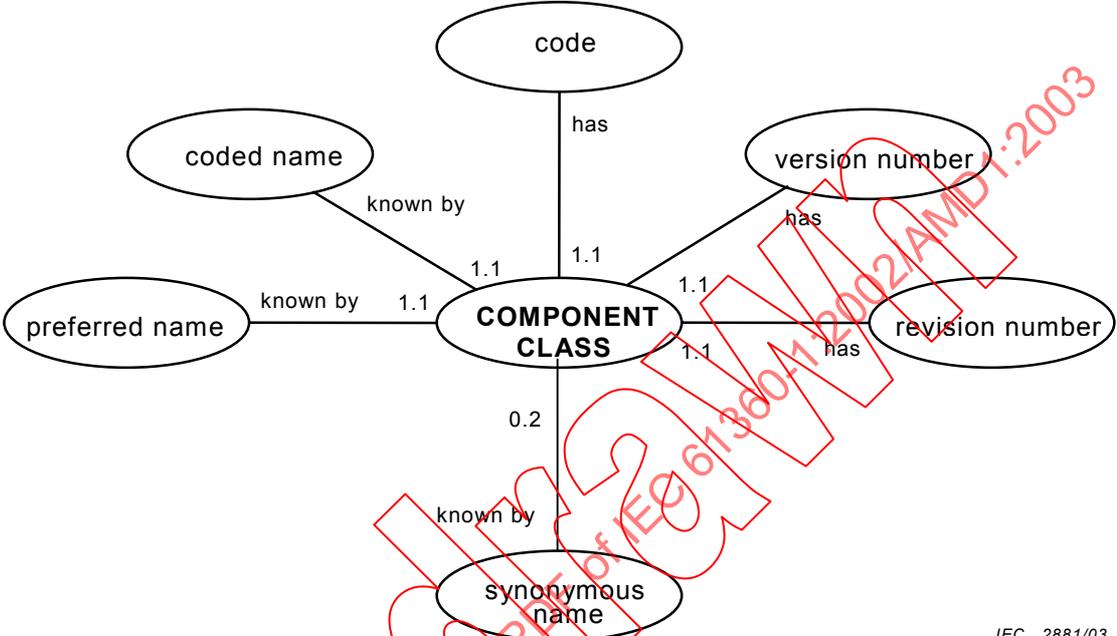
Replace the existing Table 4 by the following new Table 4:

Table 4 – List of attributes of class

Attributes	Subclause
Code	5.4.1
Version number	5.4.2
Revision number	5.4.3
Preferred name	5.4.4
Coded name	5.4.5
Synonymous name	5.4.6
Definition	5.5.1
Note	5.5.2
Remark	5.5.3
Drawing reference	5.5.4
Source document of class definition	5.5.5

Figure 8 – Identifying attributes for class

Replace the existing Figure 8 by the following new Figure 8:



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Figure 8 – Identifying attributes for class

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5.3.1 Code (now 5.4.1 ...)

In the section marked “Comments”, add the following text:

In case of at least one attribute of the components class, which affects the meaning and or communication of the components class, changed, a new (other) component class, having a new code, shall be defined. Such an attribute is:

- definition

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5.3.3 Revision number (now 5.4.3 ...)

In the section marked “Comments”, add the following text:

A new revision number of a component class shall be generated if an attribute of the component class is changed which neither affects the use (communication, database definitions etc.) nor the meaning of the components class, or when editorial changes of typing and spelling errors have been implemented. Those attributes which, when changed, will result in a revision change are:

- note
- remark
- source document of class definition

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5.3.4 Preferred name (now 5.4.4 ...)

In the section marked “Comments”, replace the existing text by the following text:

The length of the preferred name of a class shall be limited to 70 characters. The preferred name of a class is related to the value meaning of the classifying data element type that defines the relevant class.

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5.3.5 Coded name (now 5.4.5 ...)

In the section marked “Comments”, replace the second sentence by the following text:

The coded name of a class shall have a maximum length of 18 alphanumeric characters.

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Add, at the end of 5.3.5 (now 5.4.5...) the following new Subclause 5.4.6:

5.4.6 Synonymous name

Attribute name:	synonymous name
Attribute definition:	single-word or multi-word designation to a class that differs from the given preferred name but represents the same class concept
Comments:	the number of synonymous names shall be limited to two. For pragmatic reasons, the length of the synonymous name shall be limited to 70 characters
Obligation:	optional
Character type of values:	those characters from the character set of ISO/IEC 10646-1, as defined in annex A.

NOTE A synonymous name for a class shall only be used for identification purposes where there are acceptable alternatives to the preferred name. In all references to the class, only the preferred name shall be used.

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5.4.2 Note (now 5.5.2 ...)

In the section "Attribute definition" add a footnote with the following text:

The note attribute should be used to define the meaning of the class.

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5.4.4 Drawing reference (now 5.5.4 ...)

Replace in the section Attribute definition:

"the geometrical characteristics of a component" by "the characteristics of a component"

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5.4.5 Source document of component class definition (now 5.5.5 ...)

Add the following section:

Comments: the value of this attribute shall have a maximum length of 80 characters

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Replace the existing clause 6 by the following new clause 6:

6 Drawing specification attributes

In this clause the various attributes of a drawing are explained. For a list of these attributes, see table 5. These attributes are related to the identification of drawings.

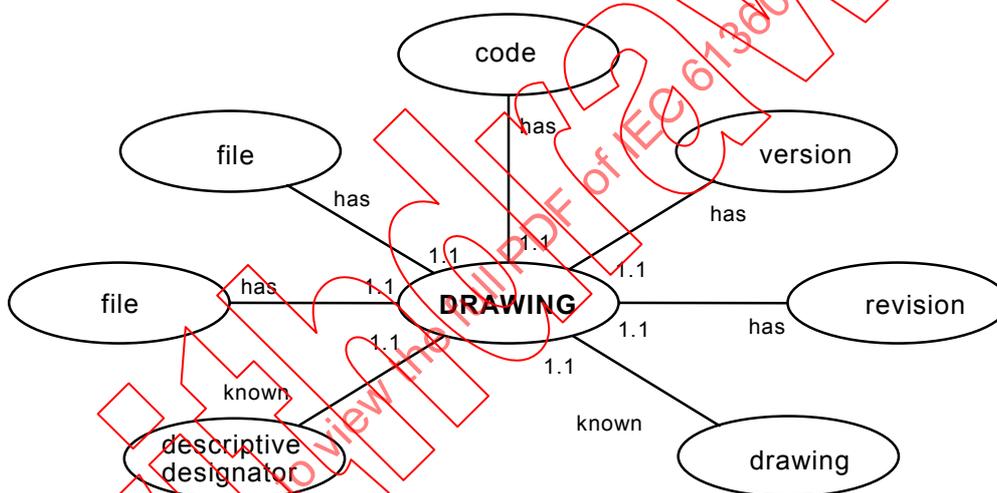
Table 5 – List of attributes of drawing

Attributes	Subclause
Code	6.1.1
Version number	6.1.2
Revision number	6.1.3
Drawing title	6.1.4
Descriptive designator	6.1.5
File name	6.1.6
File format	6.1.7

6.1 Information model of a drawing

The sub-information model (entity-association diagram) of a drawing, given in figure 11 should be read following the same rules as described in 3.1 for a data element type.

NOTE When reading this clause, substitute the entity 'data element type' by 'drawing'.



IEC 2882/03

Figure 11 – Identifying attributes for drawing

6.1.1 Code

- Attribute name: code
- Attribute definition: unique six-character code for a drawing
- Comments: the first three characters shall be alphabetic, the last three numeric (format AAANNN). The character 'X'¹ shall not be used as the first character. The codes are issued sequentially and should not have any relationship with the meaning of the drawing
- Obligation: mandatory
- Character type of values: upper-case Latin letters A through Z (to avoid misunderstanding, the upper-case Latin letters O and I shall not be used); digits 0 through 9

¹ For local use, all codes starting with XAA up to and including codes starting with XZZ may be used and are therefore excluded from the set of standard drawings.

6.1.2 Version number

Attribute name:	version number
Attribute definition:	number used to indicate the versions of a drawing during its life cycle
Comments:	the version number of a drawing shall consist of three numerical characters. Consecutive version numbers shall be issued in ascending order. The version number of a drawing shall be changed when there is a major change to the drawing such as the addition of a new dimension parameter. A change to a drawing version shall result in a change to the version of the class that references the drawing
Obligation:	mandatory
Character type of values:	digits 0 through 9

6.1.3 Revision number

Attribute name:	revision number
Attribute definition:	number used for administrative control of a drawing
Comments:	the revision number of a drawing shall consist of two numerical characters. Consecutive version numbers shall be issued in ascending order. For each drawing with a unique identifier, only one revision number is current at any one time. The revision number of a drawing shall change when there is a minor change to the drawing such as the correction of a typographical error or a minor change to the position of an element of the drawing. There will be no change to the version or revision of the class that references the drawing. Whenever there is a change in the version number of a drawing, the revision number shall be reset to 01
Obligation:	Mandatory
Character type of values:	digits 0 through 9

6.1.4 Drawing title

Attribute name:	drawing title
Attribute definition:	single-word or multi-word descriptive caption applied to a drawing
Comments:	the drawing title shall have a maximum of 70 characters
Obligation:	Mandatory
Character type of values:	those characters from the character set of ISO/IEC 10646-1, as defined in annex A

6.1.5 Descriptive designator

Attribute name:	descriptive designator
Attribute definition:	coded representation of the drawing title. It is constructed by concatenation of the coded names of the relevant classes of the component package classification tree separated by hyphens