

Preparation of object lists, including parts lists

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English version

Preparation of object lists, including parts lists
(IEC 62027:2011)

Etablissement des listes d'objet, y compris
des nomenclatures de composants
(CEI 62027:2011)

Erstellung von Objektlisten, einschließlich
Teilelisten
(IEC 62027:2011)

This European Standard was approved by CENELEC on 2011-11-16. 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.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

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Foreword

The text of document 3/1049/FDIS, future edition 2 of IEC 62027, prepared by IEC TC 3 "Information structures, documentation and graphical symbols" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62027:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2012-08-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-11-16

This document supersedes EN 62027:2000.

EN 62027:2011 includes the following significant technical changes with respect to EN 62027:2000:

- the terminology used in the publication has been adapted to the one used in EN 81346-1:2009, EN 62507-1:2011 and IEC/PAS 62569-1:2009;
- the term "object list" has been introduced as the generic term, and "parts list" used as a specific term for object lists associated with the product structure;
- Annex A of the previous edition has been taken away and partly replaced by 6.2 and a reference to IEC 61355 DB;
- a new Annex A providing guidance on the presentation of subsets of characteristic properties has been introduced;
- a new Annex B providing source definitions and references to used data element types has been introduced;
- the examples in the annexes C, D and E (corresponding to B, C and D in the previous edition) have been provided with comments;

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62027:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61360-1:2009	NOTE	Harmonized as EN 61360-1:2010 (not modified).
IEC 82045-1:2001	NOTE	Harmonized as EN 82045-1:2001 (not modified).
IEC 82045-2:2004	NOTE	Harmonized as EN 82045-2:2005 (not modified).
ISO 80000 series	NOTE	Harmonized in EN ISO 80000 series.
ISO 10303-44:1994	NOTE	Harmonized as ENV ISO 10303-44:1995 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61082-1	2006	Preparation of documents used in electrotechnology - Part 1: Rules	EN 61082-1	2006
IEC 61355	2008	IEC Collection of standardized and established document kinds	-	-
IEC 61355-1	2008	Classification and designation of documents for plants, systems and equipment - Part 1: Rules and classification tables	EN 61355-1	2008
IEC 61360	-	Component data dictionary (CDD)	-	-
IEC 62023	201X ¹⁾	Structuring of technical information and documentation	EN 62023	201X ¹⁾
IEC 62507-1	2010	Identification systems enabling unambiguous information interchange - Requirements - Part 1: Principles and methods	EN 62507-1	2011
IEC 81346-1	2009	Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules	EN 81346-1	2009
IEC 81346-2	-	Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 2: Classification of objects and codes for classes	EN 81346-2	-
IEC 82045-2	2004	Document management - Part 2: Metadata elements and information reference model	EN 82045-2	2005
IEC/PAS 62569-1	2009	Generic specification of information on products - Part 1: Principles and methods	-	-
ISO 639-1	-	Codes for the representation of names of languages - Part 1: Alpha-2 code	-	-
ISO 6433	-	Technical drawings - Item references	EN ISO 6433	-
ISO 7200	-	Technical product documentation - Data fields in title blocks and document headers	EN ISO 7200	-

¹⁾ At draft stage.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 13584-42	2010	Industrial automation systems and integration - Parts library - Part 42: Description methodology: Methodology for structuring parts families	-	-

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INTRODUCTION

An object list is primarily used to list and specify the constituent objects (components) of the overall object or system to which the object list applies.

It is generally recognized that information on products, installations and systems can be organized on the basis of tree-like, hierarchical, structures. The structure represents the way in which an industrial system or a product is divided into sub-systems or components, designated by the general term “constituent objects”. In the context of this International Standard, “object” refers to any entity treated in a process of development, implementation, usage and disposal of a plant, installation, system, equipment, etc., or part thereof, in accordance with the definition in 3.1.1.

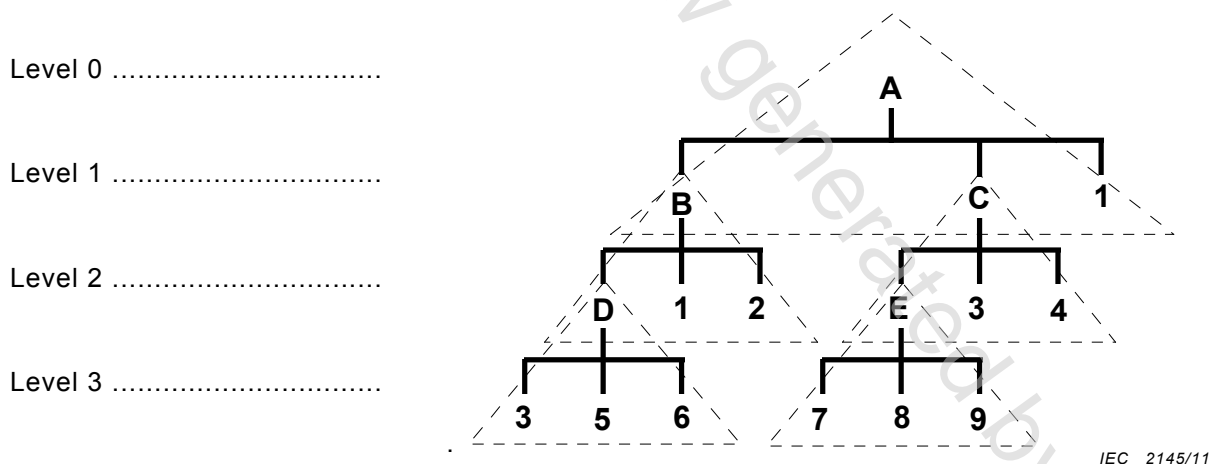
NOTE In the context of other standards, the term “item” is sometimes used with the same meaning as “object”.

Depending on the “aspect” different structures can be recognized, for example a “product-oriented structure”, a “function-oriented structure” or a “location-oriented structure”. A specific constituent object may be of relevance in one structure only, or in more than one. For further information on structures and structuring (see IEC 81346-1:2009).

An object list is implicitly or explicitly associated with such a structure. The object list concept described in this International Standard is therefore applicable in all structures defined in accordance with IEC 81346-1:2009.

Object lists relevant to the manufacturing and assembly of a product, associated with the product-oriented structure, and generally named parts lists, usually cover only one assembly level each, and the main assembly is normally described by a system of single-level parts lists. An example of a system of single-level parts lists is shown in Figure 1.

Object lists are often generated as reports from a database containing information on the entire structure.



NOTE A is the main assembly; B, C, D and E are sub-assemblies; 1, 2, 3, etc. are parts. A, B, C, D and E are defined by single level parts lists, the content of each indicated by means of dashed lines.

Figure 1 – Illustration of the organization of object lists (in one aspect)

PREPARATION OF OBJECT LISTS, INCLUDING PARTS LISTS

1 Scope

This International Standard provides rules and guidelines for the presentation of information in object lists, and specific rules for such documents. It is applicable to object lists such as parts lists, function lists and location lists used in the design and engineering process intended to be supplied with the documentation.

NOTE 1 The scope of such object lists covers either an object with occurring constituents (c.f. IEC 81346-1:2009) or an assembly with types of constituents (c.f. ISO 7573).

NOTE 2 The role of such lists as a main document in structured documentation is described in IEC 62023:-.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 61082-1:2006, *Preparation of documents used in electrotechnology – Part 1: Rules*

IEC 61355:2008, *IEC Collection of standardized and established document kinds*, available at <http://std.iec.ch/iec61355>

IEC 61355-1:2008, *Classification and designation of documents for plants, systems and equipment – Part 1: Rules and classification tables*

IEC 61360, *Component data dictionary (CDD)*. Available from: <http://std.iec.ch/iec61360>

IEC 62023¹, *Structuring of technical information and documentation*

IEC 62507-1:2010, *Identification systems enabling unambiguous information interchange – Requirements – Part 1: Principles and methods*

IEC 81346-1:2009, *Industrial systems, installations and equipment and industrial products – Structuring principles and reference designation – Part 1: Basic rules*

IEC 81346-2, *Industrial systems, installations and equipment and industrial products – Structuring principles and reference designations – Part 2: Classification of objects and codes for classes*

IEC 82045-2:2004, *Document management – Part 2: Metadata elements and information reference model*

IEC/PAS 62569-1:2009, *Generic specification of information on products – Part 1: Principles and methods*

ISO 639-1, *Codes for the representation of names of languages – Part 1: Alpha-2 code*

ISO 6433, *Technical drawings – Item references*

¹ In preparation.

ISO 7200, *Technical product documentation – Data fields in title blocks and document headers*

ISO 13584-42:2010, *Industrial automation systems and integration – Parts library – Part 42: Description methodology: Methodology for structuring parts families*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. In the definitions, terms that are defined elsewhere in this clause are shown in *italics*.

An alphabetical index of the terms is contained in 3.4.

NOTE Definitions taken over from other International Standards are not necessarily literally cited, but adapted to the form required for definitions according to the ISO/IEC Directives.

3.1 General terms

3.1.1

object

entity treated in a process of development, implementation, usage and disposal

NOTE 1 The object may refer to a physical or non-physical “thing”, i.e. anything that might exist, exists or did exist.

NOTE 2 The object has information associated to it.

[IEC 81346-1:2009, definition 3.1]

3.1.2

system

set of interrelated *objects* considered in a defined context as a whole and separated from their environment

NOTE 1 A system is generally defined with the view of achieving a given objective, e.g. by performing a definite function.

NOTE 2 Elements of a system may be natural or man-made material objects, as well as modes of thinking and the results thereof (e.g. forms of organisation, mathematical methods, programming languages).

NOTE 3 The system is considered to be separated from the environment and from the other external systems by an imaginary surface, which cuts the links between them and the system. [

NOTE 4 The term “system” should be qualified when it is not clear from the context to what it refers, e.g. control system, colorimetric system, system of units, transmission system.

NOTE 5 When a system is part of another system, it may be considered as an object as defined in this standard.

[IEC 81346-1:2009, definition 3.2]

3.1.3

aspect

specified way of viewing an *object*

[IEC 81346-1:2009, definition 3.3]

3.1.4

structure

organization of relations among *objects* of a *system* describing constituency-relations (consists of/is a part of)

[IEC 81346-1:2009, definition 3.9]