

BS EN 62023:2012



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Structuring of technical information and documentation

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National foreword

This British Standard is the UK implementation of EN 62023:2012. It is identical to IEC 62023:2011, incorporating corrigendum February 2012. It supersedes BS EN 62023:2001 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/3, Documentation and graphical symbols.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Date	Text affected
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Structuring of technical information and documentation
(IEC 62023:2011)

Structuration des informations et de la
documentation techniques
(CEI 62023:2011)

Strukturierung technischer Information
und Dokumentation
(IEC 62023:2011)

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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 3/1050/FDIS, future edition 2 of IEC 62023, 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 62023:2012.

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) 2012-08-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-11-23

This document supersedes EN 62023:2000.

EN 62023:2011 includes the following significant technical changes with respect to EN 62023:2000:

- the terminology used in the publication has been adapted to the one used in EN 81346-1:2009 and EN 62507-1:2011;
- the figures have been adapted to the principles used in EN 81346-1:2009 in order to better illustrate the interrelations between the standards;
- the examples in the annexes 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 62023:2011 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 62507-1:2010 | NOTE | Harmonized as EN 62507-1:2011 (not modified). |
| IEC 81346-2:2009 | NOTE | Harmonized as EN 81346-2:2009 (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 61355-1	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 62027	-	Preparation of object lists, including parts lists	EN 62027	-
IEC/PAS 62569-1	-	Generic specification of information on products - Part 1: Principles and methods	-	-
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 82045-1	2001	Document management - Part 1: Principles and methods	EN 82045-1	2001
IEC 82045-2	2004	Document management - Part 2: Metadata elements and information reference model	EN 82045-2	2005
ISO 7200	-	Technical product documentation - Data fields in title blocks and document headers	EN ISO 7200	-

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INTRODUCTION

IEC 62023 can be seen as a bridge between system structuring principles and documentation structuring principles, in that it provides:

- a standardization of common practice in manufacturing industry with regard to the organization of information / documentation according to the product structure by means of a main document;
- a further detailing and formalization of guidance already given in IEC 61355-1:2008, by the general establishment of the main document concept with explicit referencing to complementary documents in a document set for a technical object; and
- an application of the object concept from the structuring principles of IEC 81346-1:2009 in the area of document structuring. It goes beyond the existing documents in that it shows how objects with several aspects can be kept together in a systematic way.

In Product Data Management (PDM) systems the "objects" in the product structure, which are configuration controlled information objects, correspond logically to main documents. However, although they fulfil all necessary requirements for being documents, the term is sometimes not used for them.

STRUCTURING OF TECHNICAL INFORMATION AND DOCUMENTATION

1 Scope

This international standard provides rules for applying a method of structuring technical information and documentation by using a main document (leading document) for the clustering of the information for each object.

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 61355-1:2008, *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 62027: -, *Preparation of object lists, including parts lists*¹

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

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

IEC 82045-1:2001, *Document management – Part 1: Part 1: Principles and methods*

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

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

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 terms is given 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.

¹ In preparation.

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 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 2 A *system* is generally defined with a view to achieve a given objective.

NOTE 3 The term *system* should be qualified if it is not clear from the context to what it refers.

Examples of a system: a drive system, a water supply system, a stereo system, a computer.

NOTE 4 When a *system* is part of another *system*, it may be considered as an *object*.

[IEC 351-21-20, modified]

3.1.3 plant

assembly of different *systems* on a specific site

[IEC 61355-1:2008, definition 3.10]

3.1.4 aspect

specified way of viewing an *object*

[IEC 81346-1:2009, definition 3.3]

3.1.5 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]

3.1.6 occurrence (of an object)

use of an *object type* within a specified context (another *object* or system) irrespective of which *object individual* is being used

[IEC 62507, definition 3.15]

3.1.7 identifier

attribute associated with an *object* to unambiguously identify it in a specified *domain*

NOTE In an identification system several types of identifiers may be required.

[IEC 62507-1, definition 3.8]

3.1.8**identification number****ID**

string of characters representing the value of the *identifier*

NOTE 1 It is practice that although the term says “number” the string can contain other types of characters as well.

NOTE 2 The terms product number, item number; part number; article number; product identifying number, traceability number (serial or batch) are sometimes used as synonyms to identification number.

NOTE 3 Identification numbers are often required to be *unique* (an object shall have one number only). This is an unnecessary strong requirement, it is sufficient if they are unambiguous. An object may have more than one identification number, even if this is an undesirable situation.

Furthermore, it is assumed in the definition that an organization may be responsible for more than one identification number domain. This is a commonly occurring situation when organizations are merged, etc.

NOTE 4 For products, identification number is normally assigned at the engineering of the object. Objects with the same identification number are supposed to have the same “form, fit and function” and hence being interchangeable.

[IEC 62507-1, definition 3.5, modified]

3.1.9**identification (activity)**

act of associating *identification numbers* to an *object*

[IEC 62507-1, definition 3.4]

3.1.10**product number****product ID****part number****part ID**

identification number of a product, based on an identification system used by a particular organization

NOTE The term part is often synonym for a product that is expected to be used as a component of one or more assembled products. Part number is therefore synonym to product number.

3.1.11**reference designation**

identifier of a specific *object* formed with respect to the *system* of which the *object* is a constituent, based on one or more *aspects* of that *system*

[IEC 81346-1:2009, definition 3.11]

3.1.12**reference designation set**

collection of two or more *reference designations* assigned to an *object* of which at least one unambiguously identifies this *object*

[IEC 81346-1:2009, definition 3.14]

3.1.13**type (of object)**

class of *objects* having the same set of characteristic properties

[IEC 62507-1, definition 3.16]