



SLOVENSKI STANDARD SIST EN IEC 81346-2:2019

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Industrijski sistemi, inštalacije in oprema ter industrijski izdelki - Načela strukturiranja in referenčne oznake - 2. del: Razvrščanje objektov v razrede in njihove kode (IEC 81346-2:2019)

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 2: Classification of objects and codes for classes (IEC 81346-2:2019)

Industrielle Systeme, Anlagen und Ausrüstungen und Industrieprodukte - Strukturierungsprinzipien und Referenzkennzeichnung - Teil 2: Klassifizierung von Objekten und Kennbuchstaben für Klassen (IEC 81346-2:2019)

Systèmes industriels, installations et appareils, et produits industriels - Principes de structuration et désignations de référence - Partie 2: Classification des objets et codes pour les classes (IEC 81346-2:2019)

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EN IEC 81346-2

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August 2019

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Supersedes EN 81346-2:2009 and all of its amendments
and corrigenda (if any)

English Version

**Industrial systems, installations and equipment and industrial
products - Structuring principles and reference designations -
Part 2: Classification of objects and codes for classes
(IEC 81346-2:2019)**

Systèmes industriels, installations et appareils, et produits
industriels - Principes de structuration et désignations de
référence - Partie 2: Classification des objets et codes pour
les classes
(IEC 81346-2:2019)

Industrielle Systeme, Anlagen und Ausrüstungen und
Industrieprodukte - Strukturierungsprinzipien und
Referenzkennzeichnung - Teil 2: Klassifizierung von
Objekten und Kennbuchstaben für Klassen
(IEC 81346-2:2019)

This European Standard was approved by CENELEC on 2019-07-23. 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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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 3/1393/FDIS, future edition 2 of IEC 81346-2, prepared by IEC/TC 3 "Information structures and elements, identification and marking principles, documentation and graphical symbols" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 81346-2:2019.

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) 2020-04-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-07-23

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The text of the International Standard IEC 81346-2:2019 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 60898 (series)	NOTE	Harmonized as EN 60898 (series)
ISO 12006-2:2015	NOTE	Harmonized as EN ISO 12006-2 ¹ (not modified)

¹ Under preparation. Stage at the time of publication: prEN ISO 12006-2:2019.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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

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IEC 81346-2

Edition 2.0 2019-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE



HORIZONTAL STANDARD
NORME HORIZONTALE

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

**Systèmes industriels, installations et appareils, et produits industriels –
Principes de structuration et désignations de référence –
Partie 2: Classification des objets et codes pour les classes**

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INDUSTRIAL SYSTEMS, INSTALLATIONS
AND EQUIPMENT AND INDUSTRIAL PRODUCTS –
STRUCTURING PRINCIPLES AND REFERENCE DESIGNATIONS –****Part 2: Classification of objects and codes for classes**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 81346-2 has been prepared by IEC technical committee 3: Information structures and elements, identification and marking principles, documentation and graphical symbols, in cooperation with ISO technical committee 10: Technical product documentation.

It is published as a double logo standard.

It has the status of a horizontal standard in accordance with IEC Guide 108.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

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

- a) The entry classes of the classification scheme have been defined to reflect the “inherent function” of the object classified;
- b) The classes are defined to align with the principles of ISO 22274 and ISO 704;
- c) A three-level classification scheme has been defined, which provides a greater flexibility for the designer in some technical fields;
- d) Classes are defined by their definition and provided with a preferred term. Examples are provided if needed;
- e) A separate classification scheme for spaces has been provided.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
3/1393/FDIS	3/1402/RVD

Full information on the voting for the approval of this International Standard 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.

A list of all parts in the IEC 81346 series, published under the general title *Industrial systems, installations and equipment and industrial products – Structuring principles and reference designations*, can be found on the IEC website.

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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The aim of this document is to establish classification schemes for objects with assigned letter codes for the defined classes, which can be applied throughout all technical areas, e.g. electric, mechanical, process and civil engineering as well as all branches of industry, e.g. energy, chemical, construction, automotive, shipbuilding and marine. The letter codes are intended for use with the rules for the construction of reference designations in accordance with IEC 81346-1 and other parts of the ISO/IEC 81346 series. The letter codes can also be used "stand-alone" as a generic type designation where a type of component is to be indicated, for example in specifications.

The classification scheme in Clause 5 of this document is an enumerative and faceted classification scheme with the inherent function as the entry class. It is made in accordance with the rules in ISO 704 and the guidelines in ISO 22274.

At the entry level, as shown in Table 1, the inherent function is used to narrow down the areas of applicability of the individual classes to a manageable size. For the sub-divisions of the entry classes, faceted approaches are applied to specify the nature of the concepts contained in the leaf classes.

By applying this method, this document provides stable class codes for objects (including systems and system elements), which are independent of how the objects are used or applied in any design during the entire lifecycle.

Any class is defined by its definition only. Users should select the appropriate class for their object to be classified based on the definition and not rely upon the class name or the examples.

SAMPLE

INDUSTRIAL SYSTEMS, INSTALLATIONS AND EQUIPMENT AND INDUSTRIAL PRODUCTS – STRUCTURING PRINCIPLES AND REFERENCE DESIGNATIONS –

Part 2: Classification of objects and codes for classes

1 Scope

This part of IEC 81346 establishes classification schemes with defined object classes and their associated letter codes, and is primarily intended for use in reference designations and for designation of generic types.

The classification schemes are applicable for objects in all technical disciplines and all branches of industry.

This document is a horizontal publication also intended for use by technical committees in preparation of publications related to reference designations in accordance with the principles laid down in IEC Guide 108.

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.

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 81346-1 and the following 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

inherent function

function of an object, independent of any application of the object

Note 1 to entry: Inherent is regarded as existing in something as a permanent, essential, or characteristic attribute.

3.2

classification scheme

descriptive information for an arrangement or division of objects into groups based on criteria such as characteristics, which the objects have in common

Note 1 to entry: A classification scheme is a concept system used for classifying some objects.

[SOURCE: ISO/IEC 11179-1:2015, 3.3.4, modified – examples deleted.]

3.3

class of object

set of objects characterized by the same inherent function

3.4

space

limited three-dimensional extent defined physically or notionally

[SOURCE: ISO 12006-2:2015, 3.1.8]

3.5

type-of relation

relation between two classes where the characteristics defining one of the classes includes that of the other class and at least one additional delimiting characteristic

Note 1 to entry: This term corresponds to the term "generic relation" defined in ISO 1087-1:2000, 3.2.21.

3.6

part-of relation

relation between two classes where one of the classes constitutes the whole and the other class a part of that whole

Note 1 to entry: This term corresponds to the term "partitive relation" defined in ISO 1087-1:2000, 3.2.22.

Note 2 to entry: Part-of relation is also known as partitive relation, part-whole relation or whole-part relation.

Note 3 to entry: See also IEC 81346-1.

3.7

activity space

space defined by the spatial extension of an activity

Note 1 to entry: A spatial extension of an activity, for example, a table or a bed, and the activity space around them.

[SOURCE: ISO 12006-2:2015, 3.1.9]

3.8

built space

space defined by built or natural environment or both, intended for user activity or equipment

Note 1 to entry: A built space is, for example, a room defined by floor, ceiling, and wall, or a footpath, or power-line corridor defined by a natural forest.

Note 2 to entry: Spaces occupied by construction elements are known as construction spaces, and are handled as properties of construction elements themselves.

[SOURCE: ISO 12006-2:2015, 3.4.4]

4 Classification principles

4.1 General

The purpose of classifying is to distinguish among objects in a collection based on differentiation of characteristics of interest. Classes are organized in type-of relations and are defined by different values of a specific characteristic of interest.