SVENSK STANDARD SS-EN 81346-1

Fastställd	Utgåva	Sida	Ansvarig kommitté
2010-03-29	1	1 (1+83)	SEK TK 3

Struktureringsprinciper och referensbeteckningar – Del 1: Grundläggande regler

Industrial systems, installations and equipment and industrial products – Structuring principles and reference designations – Part 1: Basic rules

Som svensk standard gäller europastandarden EN 81346-1:2009. Den svenska standarden innehåller den officiella engelska språkversionen av EN 81346-1:2009.

Nationellt förord

Europastandarden EN 81346-1:2009

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 81346-1, First edition, 2009 - Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61346-1, utgåva 1, 1996 och SS-EN 61346-1/T1, utgåva 1, 1998, gäller ej fr o m 2012-08-01.

ICS 01.110; 29.020

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 81346-1

October 2009

ICS 01.110; 29.020

Supersedes EN 61346-1:1996

English version

Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules

(IEC 81346-1:2009)

Systèmes industriels, installations et appareils, et produits industriels - Principes de structuration et désignations de référence - Partie 1: Règles de base (CEI 81346-1:2009)

Industrielle Systeme, Anlagen und Ausrüstungen und Industrieprodukte - Strukturierungsprinzipien und Referenzkennzeichnung - Teil 1: Allgemeine Regeln (IEC 81346-1:2009)

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 81346-1:2009 E

SEK Svensk Elstandard

Foreword

The text of document 3/947/FDIS, future edition 1 of IEC 81346-1, prepared by IEC TC 3, Information structures, documentation and graphical symbols, in close co-operation with ISO TC 10, Technical product documentation, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 81346-1 on 2009-08-01.

This European Standard supersedes EN 61346-1:1996.

EN 81346-1:2009 includes the following substantial changes with respect to EN 61346-1:1996:

– a new introductory clause providing a description and explanation to the concepts used elsewhere in the publication;

– a more comprehensive description of the structuring principles and rules for structuring are provided;

– “other aspects” are introduced, and the prefix sign # is assigned to these aspects;

– the concept of reference designation group has been deleted;

– the specific term “transition” has been avoided and been replaced by an improved textual description of this phenomenon in Annex D;

– a new clause about labelling is introduced;

– the old annexes have been removed with the exception of the annex showing an example of the application of reference designations within a system;

– a new annex explaining the manipulation of objects is introduced;

– 4 new annexes are introduced as rearrangement of detailed examples or explanatory information.

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)	2010-05-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 81346-1:2009 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 60297-3-101	NOTE	Harmonized as EN 60297-3-101:2004 (not modified).
IEC 61082-1	NOTE	Harmonized as EN 61082-1:2006 (not modified).
IEC 61335-1	NOTE	Harmonized as EN 61335-1:2008 (not modified).
IEC 62023	NOTE	Harmonized as EN 62023:2000 (not modified).
IEC 62027	NOTE	Harmonized as EN 62027:2000 (not modified).
IEC 62491	NOTE	Harmonized as EN 62491:2008 (not modified).
IEC 81346-2	NOTE	Harmonized as EN 81346-2:2009 (not modified).
ISO 3166-1	NOTE	Harmonized as EN ISO 3166-1:2006 (not modified).
ISO 4157	NOTE	Harmonized in EN ISO 4157 series (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.

Publication	Year	Title	EN/HD	Year
ISO/IEC 646	-[1)]	Information technology - ISO 7-bit coded character set for information interchange	-	-

[1)] Undated reference.

CONTENTS

INTRODUCTION

0.1 General

This standard establishes a further development of earlier and withdrawn standards (IEC 60113-2, IEC 60750) on item designation, see Annex A. It provides basics for establishing models of plants, machines, buildings etc.

The standard specifies:

- principles for structuring of objects including associated information;
- rules on forming of reference designations based on the resulting structure.

By applying the structuring principles, even very large sets of information in a complex installation can be handled efficiently.

The structuring principles and the rules for reference designations are applicable to objects of both physical and non-physical character.

The structuring principles and the rules for reference designations provide a system that is easy to navigate within and easy to maintain. This system provides an excellent overview on a technical system since composite structures are simple to establish and understand.

The structuring principles and the rules for reference designations support alternative design and engineering processes in the life cycle of an object since they are based on the successively established results of this process and not on how the engineering process itself is carried out.

The structuring principles and the rules for reference designations allow, by accepting more than one aspect, that more than one coding principle can be applied. This technique also allows ‘old structures’ to be handled together with ‘new structures’ by using multiple unambiguous identifiers.

The structuring principles and the rules for reference designations support individual management for the establishment of reference designations, and enable subsequent integration of modules into larger constructs. They also support the establishment of reusable modules, either as functional specifications or as physical deliverables.

NOTE The concept of reusable modules encompasses for example, for manufacturers: the establishment of contract independent modules, and, for operators of complex assemblies: the description of requirements in terms of supplier independent modules.

The structuring principles and the rules for reference designations support concurrent work and allow different partners within a project to add and / or remove data to the structured project result as it proceeds.

The structuring principles and the rules for reference designations recognize time factor within the life-cycle as important for the application of different structures based on different views on the considered technical system.

0.2 Basic requirements for this standard

The basic requirements were developed during the preparation of IEC 61346-1 Ed. 1, and accepted by vote by the national committees.

NOTE These basic requirements concern the development of the structuring principles in this standard and not its application. They are therefore not normative vis-à-vis the application of this standard.

- This standard should be applicable to all technical areas and enable a common application.
- This standard shall be applicable to all kind of objects and their constituents, such as plants, systems, assemblies, software programs, spaces, etc.
- This standard should be capable of being consistently applied in all phases (i.e. conceptual development, planning, specification, design, engineering, construction, erection, commissioning, operation, maintenance, decommissioning, disposal, etc.) of the life time of an object of interest, i.e. an object to be identified.
- This standard shall provide the ability to identify unambiguously any single object being a constituent of another object.
- This standard shall support the incorporation of sub-object structures from multiple organizations into objects from other organizations without change to the original object structures and neither to the sub-object structures nor any of their documentation.
- This standard shall support a representation of an object independently of the complexity of the object
- This standard should be easy to apply and the designations should be easy for the user to understand.
- This standard should support the use of, and should be able to be implemented by, computer-aided tools for conceptual development, planning, specification, design, engineering, construction, erection, commissioning, operation, maintenance, decommissioning, disposal, etc.

0.3 Required properties of the standard

The required properties were developed during the preparation of IEC 61346-1 Ed. 1, and accepted by vote by the national committees.

NOTE 1 These required properties concern the development of the letter code classification system in this standard and not its application. They are therefore not normative vis-à-vis the application of this standard.

- This standard shall not contain rules and restrictions that prohibit its use within a technical area.
- This standard shall cover all its foreseeable applications within all technical areas.
- This standard shall support addressing of information to objects at all phases in their life time.
- This standard shall allow construction of designations at any time from the currently available information.
- This standard shall support the identification of objects based on a constituency principle.
- This standard shall contain rules that enable the formulation of unambiguous designations.
- This standard shall be open and allow a designation to be extended.
- This standard shall support modularity and reusability of objects.
- This standard shall support the description of different users' views on the object
- This standard shall provide rules for the interpretation of designations where needed.

Figure 1 provides an overview on international standards providing a consistent system for designation, documentation and presentation of information.

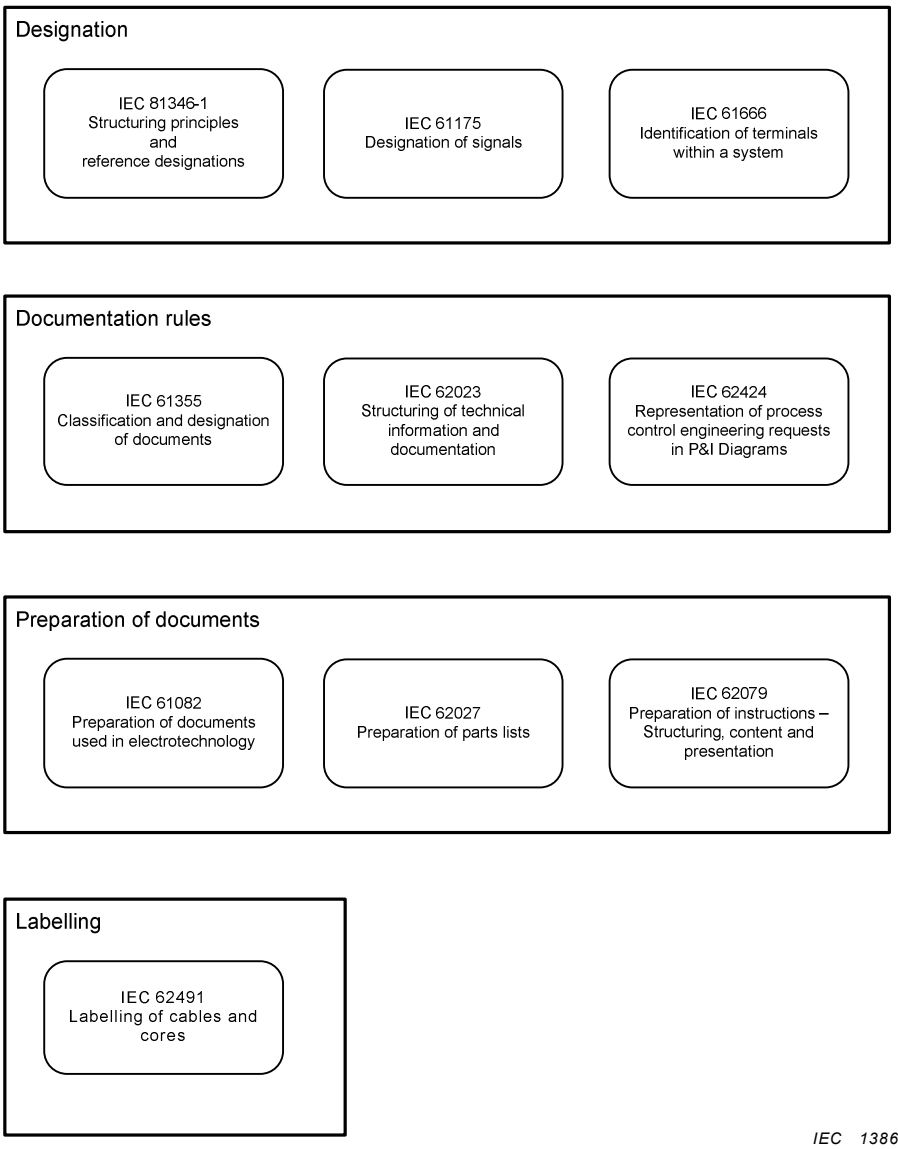

Figure 1 – International standards providing a consistent system for designation, documentation and presentation of information

NOTE 2 The titles of the publications shown in Figure 1 are not complete.

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

Part 1: Basic rules

1 Scope

This part of IEC 81346, published jointly by IEC and ISO, establishes general principles for the structuring of systems including structuring of the information about systems.

Based on these principles, rules and guidance are given for the formulation of unambiguous reference designations for objects in any system.

The reference designation identifies objects for the purpose of creation and retrieval of information about an object, and where realized about its corresponding component.

A reference designation labelled at a component is the key to find information about that object among different kinds of documents.

The principles are general and are applicable to all technical areas (for example mechanical engineering, electrical engineering, construction engineering, process engineering). They can be used for systems based on different technologies or for systems combining several technologies.

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.

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