Industrial systems, installations and equipment and industrial products - Designation of signals - Part 1: Basic rules

EESTI STANDARDIKESKUS
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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61175-1:2015 sisaldab Euroopa standardi EN 61175-1:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 61175-1:2015 consists of the English text of the European standard EN 61175-1:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 28.08.2015.	Date of Availability of the European standard is 28.08.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 61175-1

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English Version

Industrial systems, installations and equipment and industrial products - Designation of signals - Part 1: Basic rules (IEC 61175-1:2015)

Systèmes, installations, appareils et produits industriels - Désignation des signaux - Partie 1: Règles de base (IEC 61175-1:2015)

Industrielle Systeme, Anlagen und Ausrüstungen und Industrieprodukte, Kennzeichnung von Signalen - Teil 1: Allgemeine Regeln (IEC 61175-1:2015)

This European Standard was approved by CENELEC on 2015-06-25. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

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European foreword

The text of document 3/1214A/FDIS, future edition 1 of IEC 61175-1, 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 61175-1:2015.

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) 2016-03-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-06-25

This document supersedes EN 61175:2005.

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 61175-1:2015 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 60027	NOTE	Harmonized in EN 60027 series.
IEC 60445	NOTE	Harmonized as EN 60445.
IEC 60447	NOTE	Harmonized as EN 60447.
IEC 60747	NOTE	Harmonized in EN 60747 series.
IEC 61131	NOTE	Harmonized in EN 61131 series.
IEC 61355-1	NOTE	Harmonized as EN 61355-1.
IEC 61360-1	NOTE	Harmonized as EN 61360-1.
IEC 61666	NOTE	Harmonized as EN 61666.
IEC 61850	NOTE	Harmonized in EN 61850 series.
IEC 62491	NOTE	Harmonized as EN 62491.

IEC 62744	NOTE	Harmonized as EN 62744.
IEC 81346-2	NOTE	Harmonized as EN 81346-2.
IEC 80000	NOTE	Harmonized in EN 80000 series.
ISO 21549-7:2007	NOTE	Harmonized as EN ISO 21549-7:2007 (not modified).
ISO 80000	NOTE	Harmonized in EN ISO 80000 series.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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.

Publication	Year	Title	EN/HD	Year
IEC 61082-1	-	Preparation of documents used in electrotechnology - Part 1: Rules	EN 61082-1	-
IEC 81346-1	-	Industrial systems, installations and equipment and industrial products - Structuring principles and reference designations - Part 1: Basic rules	EN 81346-1	-
IEC/TS 62720	-	Identification of units of measurement for computer-based processing	-	-

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INTRODUCTION

The intention of this part of IEC 61175 is to establish rules and requirements for the designation of signals, and furthermore to make recommendations on useful presentations of these.

Basically, a signal designation is associated with the signal over its whole lifetime, which means from the beginning of the design stage until the signal is no longer needed.

The change of medium for the transfer of a signal because of a physical rebuilding of an installation will not cause a change of the identification of this signal if its semantic meaning is maintained. Signals represent information. For communication purposes the information has to be represented as data. The information can be more or less complex. In simple cases, the information can be represented as a single Boolean variable, without internal structure. In more complex cases, like in computer communication via data networks, the information can be packaged in more complex objects, with internal structure, which are transferred with suitable protocols. The implementation can be done in different ways depending on which technology, protocol, etc. is being used. Figure 1 illustrates the terminology.

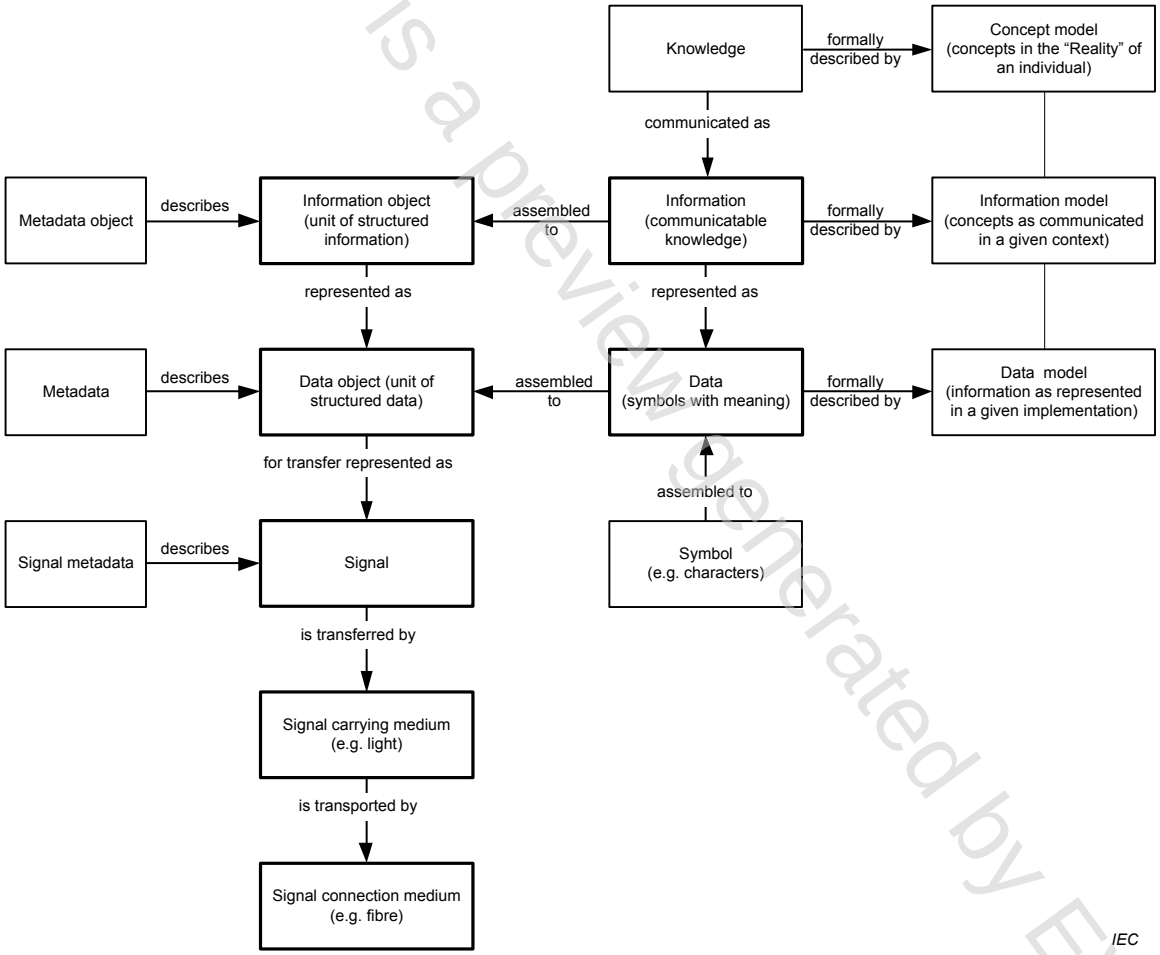

Figure 1 – Illustration of relationship of terminology

The principles described in this part of IEC 61175 are closely related to other International Standards such as IEC 81346-1, IEC 81346-2, IEC 61666 and IEC 81714-3. An information model for the interrelations is provided in IEC TS 62771.