

**Standard data element types with associated  
classification scheme for electric components -  
Part 5: Extensions to the EXPRESS dictionary  
schema**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61360-5:2004 sisaldab Euroopa standardi EN 61360-5:2004 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 22.07.2004 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 23.06.2004.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 61360-5:2004 consists of the English text of the European standard EN 61360-5:2004.

This standard is ratified with the order of Estonian Centre for Standardisation dated 22.07.2004 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 23.06.2004.

The standard is available from Estonian standardisation organisation.

ICS 31.020

Võtmesõnad:

### Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

**Standard data element types  
with associated classification scheme for electric components  
Part 5: Extensions to the EXPRESS dictionary schema  
(IEC 61360-5:2004)**

Types normalisés d'éléments de données  
avec plan de classification  
pour composants électriques  
Partie 5: Extensions pour le schéma  
d'un dictionnaire EXPRESS  
(CEI 61360-5:2004)

Genormte Datenelementtypen mit  
Klassifikationsschema für elektrische  
Bauteile  
Teil 5: Erweiterung des EXPRESS-  
Datenmodells  
(IEC 61360-5:2004)

This European Standard was approved by CENELEC on 2004-06-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

## CENELEC

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 3D/128/FDIS, future edition 1 of IEC 61360-5, prepared by SC 3D, Data sets for libraries, of IEC TC 3, Information structures, documentation and graphical symbols, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61360-5 on 2004-06-01.

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) 2005-03-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2007-06-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61360-5:2004 was approved by CENELEC as a European Standard without any modification.

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## 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 Where 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 61360-1        | 2002        | Standard data element types with associated classification scheme for electric components<br>Part 1: Definitions - Principles and methods                       | EN 61360-1       | 2002        |
| IEC 61360-2        | 2002        | Part 2: EXPRESS dictionary schema                                                                                                                               | EN 61360-2       | 2002        |
| IEC 61360-4        | 1997        | Part 4: IEC reference collection of standard data element types, component classes and terms                                                                    | EN 61360-4       | 1997        |
| ISO 10303-11       | 1994        | Industrial automation systems and integration - Product data representation and exchange<br>Part 11: Description methods: The EXPRESS language reference manual | ENV ISO 10303-11 | 1995        |
| ISO 13584-1        | 2001        | Industrial automation systems and integration<br>Parts library -- Part 1: Overview and fundamental principles                                                   | -                | -           |
| ISO 13584-24       | 2003        | Part 24: Logical resources: Logical model of supplier library                                                                                                   | -                | -           |
| ISO 13584-25       | 2004        | Part 25: Logical resource: Logical model of supplier library with aggregate values and explicit content                                                         | -                | -           |
| ISO 13584-42       | 1998        | Part 42: Description methodology: Methodology for structuring part families                                                                                     | -                | -           |

# INTERNATIONAL STANDARD

**IEC**  
**61360-5**

First edition  
2004-04

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**Standard data element types with associated  
classification scheme for electric components –**

**Part 5:  
Extensions to the EXPRESS dictionary schema**



Reference number  
IEC 61360-5:2004(E)

## Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

## Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

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This summary of recently issued publications ([http://www.iec.ch/online\\_news/justpub/jp\\_entry.htm](http://www.iec.ch/online_news/justpub/jp_entry.htm)) is also available by email. Please contact the Customer Service Centre (see below) for further information.
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# INTERNATIONAL STANDARD

**IEC**  
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First edition  
2004-04

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## **Standard data element types with associated classification scheme for electric components –**

### **Part 5: Extensions to the EXPRESS dictionary schema**

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International Electrotechnical Commission  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# STANDARD DATA ELEMENT TYPES WITH ASSOCIATED CLASSIFICATION SCHEME FOR ELECTRIC COMPONENTS –

## Part 5: Extensions to the EXPRESS dictionary schema

### 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
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International Standard IEC 61360-5 has been prepared by subcommittee 3D: Data sets for libraries, of IEC technical committee 3: Information structures, documentation and graphical symbols

The text of this standard is based on the following documents:

|             |                  |
|-------------|------------------|
| FDIS        | Report on voting |
| 3D/128/FDIS | 3D/129/RVD       |

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 61360 consists of the following parts, under the general title *Standard data element types with associated classification scheme for electric components*:

- Part 1: Definitions – Principles and methods
- Part 2: EXPRESS dictionary schema
- Part 3: Maintenance and validation procedures
- Part 4: IEC reference collection of standard data element types, component classes and terms.
- Part 5: Extensions to the EXPRESS dictionary schema.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

A bilingual edition of this standard may be issued at a later date.

## INTRODUCTION

To understand the generic resources used in this part of the IEC 61360 series knowledge of EXPRESS as defined in ISO 10303-11:1994 is required. Basic knowledge of ISO 13584-24:2003, and ISO 13584-42:1998 is also required.

The generic resources specified in this document were developed as a joint effort of ISO Technical Committee 184/Subcommittee 4/Working Group 2 and IEC Subcommittee 3D. They are intended to be documented both in this part of IEC 61360 and ISO 13584. Both committees agreed not to change and/or modify the EXPRESS schemas independently of each other in order to guarantee the harmonization and the reusability of the work from both committees. Requests for amendments should therefore be sent to both committees. These requests should be adopted by both committees before modifying the EXPRESS schemas.

This document is fully compatible with ISO 13584 parts 42 and 25.

This document contains those extensions to the common ISO13584\_IEC61360\_dictionary\_schema (IEC 61360-2) that are generated in order to fulfil user needs.

The following parts are copied from ISO 13584-25 and appear in IEC 61360-5 as follows:

| ISO 13584-25 | IEC 61360-5           |
|--------------|-----------------------|
| Clause 6     | Annex A (informative) |
| Clause 8     | Annex B (informative) |
| Annex C      | Annex C (informative) |
| Annex D      | Annex D (informative) |
| Annex E      | Annex E (informative) |
| Figure F.1   | Annex F (informative) |

## **STANDARD DATA ELEMENT TYPES WITH ASSOCIATED CLASSIFICATION SCHEME FOR ELECTRIC COMPONENTS –**

### **Part 5: Extensions to the EXPRESS dictionary schema**

#### **1 Scope and object**

The scope of this part of IEC 61360 is the extension of the common ISO/IEC dictionary schema for the definition of concepts which are used in IEC 61360-1 but which are not addressed by the information models specified in IEC 61360-2.

The object of this standard is to provide a formal model for data according to the scope as given above, and thus to provide, with IEC 61360-2, a means for the computer-sensible representation and exchange of all data which comply with IEC 61360-1.

The common ISO/IEC dictionary schema as defined in IEC 61360-2 is the common ISO/IEC dictionary schema based on the intersection of the scopes of the two base standards:

- IEC 61360-1;
- ISO 13584-42.

and facilitates a harmonization of both.

Quotation of a relevant part from the scope and object of IEC 61360-1:

This part of IEC 61360 provides a firm basis for the clear and unambiguous definition of characteristic properties (data element types) of all elements of electrotechnical systems from basic components to subassemblies and full systems. Although originally conceived in the context of providing a basis for the exchange of information on electric/electronic components, the principles and methods of this standard may be used in areas outside the original conception such as assemblies of components and electrotechnical systems and subsystems

Quotation of a relevant part from the introduction of ISO 13584-42:

This part of ISO 13584 provides rules and guidelines for library data suppliers to create hierarchies of families of parts according to a common methodology intended to enable multi-supplier consistency. These rules pertain to the following: the method for grouping parts into families of parts to form a hierarchy; the dictionary elements that describe the families and properties of parts.

IEC 61360-2 provides a common information model for the work of both committees, thus allowing for the implementation of dictionary systems dealing with data delivered according to either of the standards elaborated by both committees.

This part of IEC 61360 provides a Library Integrated Information Model (liim) that, with resources from IEC 61360-2, ISO 13584 and ISO 10303, allows modelling and exchanging dictionary information compliant with IEC 61360-1.

## 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 61360-1:2002, *Standard data element types with associated classification scheme for electric components – Part 1: Definitions – Principles and methods*

IEC 61360-2:2002, *Standard data element types with associated classification scheme for electric components – Part 2: EXPRESS dictionary schema*

IEC 61360-4:1997, *Standard data element types with associated classification scheme for electric components – Part 4: IEC reference collection of standard data element types, component classes and terms*

ISO 10303-11:1994, *Industrial automation systems and integration – Product data representation and exchange – Part 11: Description methods: The EXPRESS language reference manual*

ISO 13584-1:2001, *Industrial automation systems and integration – Parts library – Part 1: Overview and fundamental principles*

ISO 13584-24:2003, *Industrial automation systems and integration – Parts library – Part 24: Logical resource: Logical model of supplier library*

ISO 13584-25, *Industrial automation systems and integration – Parts library – Part 25: Logical resource: Logical model of supplier library with aggregate values and explicit content*<sup>1</sup>

ISO 13584-42:1998, *Industrial automation systems and integration – Parts library – Part 42: Description methodology: Methodology for structuring part families*

## 3 Terms and definitions and abbreviations

For the purposes of this document, the terms and definitions as given in IEC 61360-1, IEC 61360-2, ISO 13584-24 as well as the following apply. Some of these definitions are repeated for convenience.

NOTE Definitions copied verbatim from other standards are followed by a reference to the source standard in brackets. Definitions that have been adapted from other standards are followed by an explanatory note.

### 3.1

#### **applicable property**

a property that is defined for some family of parts and that shall apply to any part that belongs to this family of parts

[ISO 13584-24:2003, definition 3.3]

EXAMPLE For a generic family of screws, the threaded diameter is an applicable property. This characteristic applies to any screw.

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<sup>1</sup> To be published.