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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Standard data element types with associated classification scheme for electric components – Part 2: EXPRESS dictionary schema

Types normalisés d'éléments de données avec plan de classification pour composants électriques – Partie 2: Schéma d'un dictionnaire EXPRESS

IEC 61360-2:2012

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 2: 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.
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International Standard IEC 61360-2 has been prepared by subcommittee 3D: Product properties and classes and their identification, of IEC technical committee 3: Information structures, documentation and graphical symbols.

This third edition cancels and replaces the second edition published in 2002, and its Amendment 1 (2003). It is a technical revision.

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

– separation of concepts between characterization class and categorization class;
– introduction of value constraints on classes and properties;
– addition of various new subtypes for data types, including rational_type;
– improvement on the representation of unit of measurement.

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

FDIS	Report on voting
3D/196/FDIS	3D/204/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.

A list of all parts of the IEC 61360 series can be found, under the general title *Standard data elements types with associated classification scheme for electric components*, on the IEC website.

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

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- withdrawn,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

INTRODUCTION

The common ISO/IEC dictionary schema presented here is based on the intersection of the scopes of the following standards:

– IEC 61360-1;
– ISO 13584-42.

Relevant parts of the scope clauses of these standards include the following:

IEC 61360-1:2009

“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 originalconception such as assemblies of components and electrotechnical systems and subsystems.”

ISO 13584-42:2010

“This part of ISO 13584 specifies the principles to be used for defining characterization classes of parts and properties of parts which provide for characterizing a part independently of any particular supplier-defined identification.

The rules and guidelines provided in this part of ISO 13584 are mandatory for the standardization committees responsible for creating standardized characterization hierarchies.

The use of these rules by suppliers and users is recommended as a methodology for building their own hierarchies.”

IEC SC3D and ISO TC184/SC4 agreed NOT to change and/or modify the presented EXPRESS model independent 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 information model

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

Part 2: EXPRESS dictionary schema

1 Scope

This part of IEC 61360 series provides a formal model for data according to the scope as given in IEC 61360-1 and ISO 13584-42, and thus provides a means for the computer-sensible representation and exchange of such data.

The intention is to provide a common information model for the work of IEC SC3D and ISO TC184/SC4, thus allowing for the implementation of dictionary systems dealing with data delivered according to either of the standards elaborated by both committees.

The scope of this part of IEC 61360 is the common ISO/IEC dictionary schema based on the intersection of the scopes of the two base standards IEC 61360-1 and ISO 13584-42.

The presented EXPRESS model represents a common formal model for the two standards and facilitates a harmonization of both.

The IEC 61360-2 forms the master document. ISO 13584-42 contains a copy of the IEC 61360-2 EXPRESS model in an informative annex

In a number of clauses, where the common EXPRESS model allows more freedom, IEC has defined more restrictions which are found in the methodology part of IEC 61360-1.

Two schemas are provided in this part of IEC 61360 defining the two options that may be selected for an implementation. Each of these options is referred to as a conformance class.

– The ISO13584_IEC61360_dictionary_schema2 provides for modelling and exchanging technical data element types with associated classification scheme used in the data element type definitions. It constitutes conformance class 1 of this part of IEC 61360.
– The ISO13584_IEC61360_language_resource_schema provides resources for permitting strings in various languages. It has been extracted from the dictionary schema, since it could be used in other schemata. It is largely based on the support_resource_schema from ISO 10303-41:2000, and can be seen as an extension to that. It allows for the usage of one specific language throughout an exchange context (physical file) without the overhead introduced when multiple languages are used.

When used together with ISO 10303-21, each schema defines one single exchange format. The exchange format defined by conformance class 1 is fully compatible with the ISO 13584 series.

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 61360-1:2009, *Standard data elements types with associated classification scheme for electric items – Part 1: Definitions – Principles and methods*