IEC 61360-7

Edition 1.0 2024-01

INTERNATIONAL STANDARD

HORIZONTAL PUBLICATION

Standard data element types with associated classification scheme – Part 7: Data dictionary of cross-domain concepts

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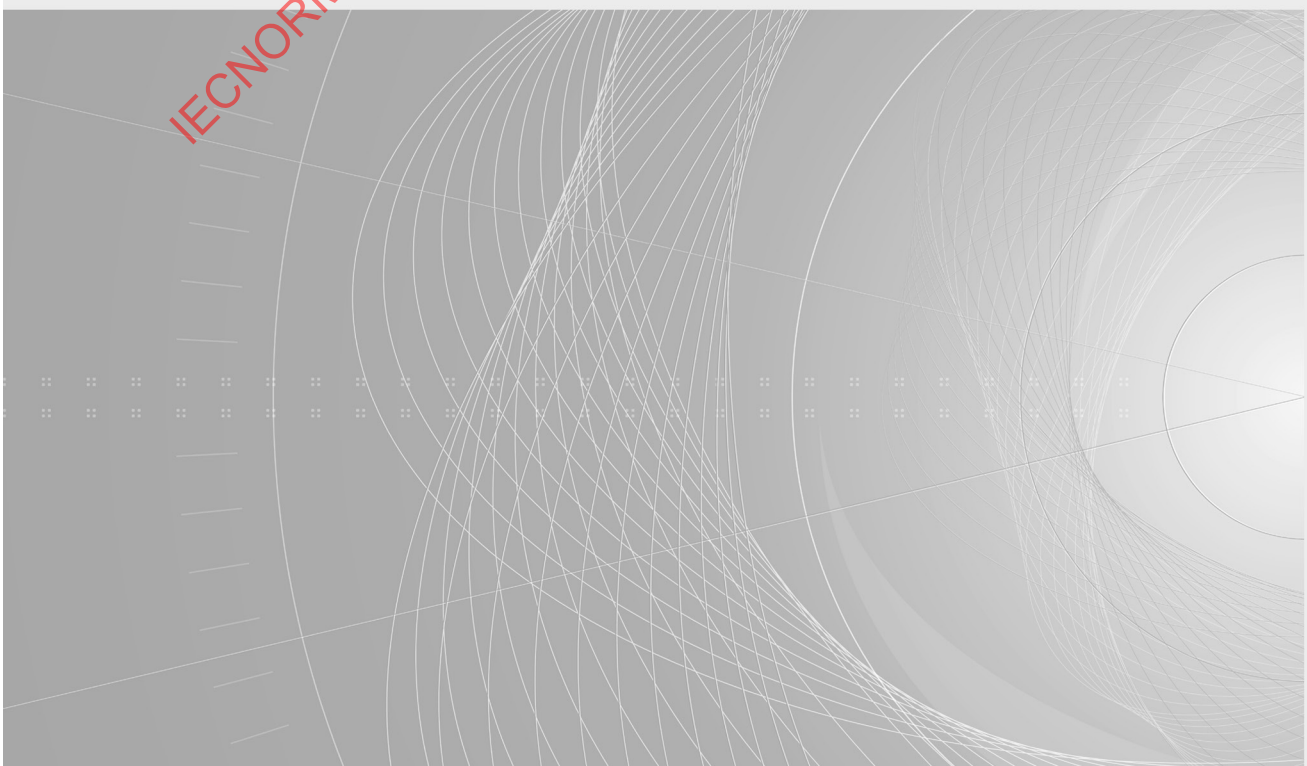

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IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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STANDARD DATA ELEMENT TYPES WITH ASSOCIATED CLASSIFICATION SCHEME –

Part 7: Data dictionary of cross-domain concepts

FOREWORD

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IEC 61360-7 has been prepared by subcommittee 3D: Classes, Properties and Identification of products – Common Data Dictionary (CDD), of IEC technical committee 3: Documentation, graphical symbols and representations of technical information. It is an International Standard.

This document has the status of a horizontal publication in accordance with IEC Guide 108.

IEC 61360-7 is a standard in DB format and published in IEC CDD.

This document specifies the new data dictionary (domain) "IEC 61360-7 – General items" including its generic concepts.

Further development and maintenance of this document shall be published in IEC CDD according to the procedures defined in the ISO/IEC Directives Part 1 – IEC Supplement ANNEX SK. These procedures are named SDB content procedure – ANNEX SK, SK.4.4.

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

Draft	Report on voting
3D/397/CDV	3D/401/RVC

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

- reconfirmed,
- withdrawn, or
- revised.

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INTRODUCTION

The IEC 61360 series as a whole specifies a general-purpose dictionary of technical terms covering the field of electrotechnology, electronics and related domains. The dictionary is structured in data dictionaries (domains) and specified in a computer-sensible form as a reference dictionary. By using the dictionary, applications can interact and share data in an unambiguous way with clear semantic meaning.

This document specifies the new data dictionary (domain) "IEC 61360-7 – General items" including its generic concepts. This data dictionary is intended for cross-domain use and is published in IEC CDD.

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STANDARD DATA ELEMENT TYPES WITH ASSOCIATED CLASSIFICATION SCHEME –

Part 7: Data dictionary of cross-domain concepts

1 Scope

This part of IEC 61360 specifies the new data dictionary (domain) "IEC 61360-7 – General items" including its generic concepts. The IEC 61360-7 data dictionary provides concepts (dictionary elements, e.g. classes, properties) intended for cross-domain use.

This document has the status of a horizontal publication in accordance with IEC Guide 108.

The IEC 61360-7 data dictionary is published in IEC CDD and is available at https://cdd.iec.ch.

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.

ISO/TS 29002-5:2009, *Industrial automation systems and integration – Exchange of characteristic data – Part 5: Identification scheme*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1.1
IEC CDD
IEC Common Data Dictionary
IEC-hosted system that includes a common repository with data dictionaries for all ISO and IEC industrial- or technical-related domains (or both) and that complies with the data model for data dictionaries defined in IEC 61360-2/ISO 13584-42 with an enhancement of its modelling capability adopted from IEC 62656-1

Note 1 to entry: Data dictionaries may include data from electrotechnical and non-electrotechnical domains.

Note 2 to entry: Content published in data dictionaries will become an ISO or IEC standard.

3.1.2
data dictionary
structured collection of dictionary elements that complies with the data model specified in IEC 61360-2/ISO 13584-42 and IEC 61360-1, and that represents product ontologies

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3.1.3
feature
aspect of an item that can be captured by a class structure and set of properties and that cannot exist independently of the item

[SOURCE: ISO 13584-24:2023, 3.41, modified – Examples 1 and 2 are omitted.]

3.1.4
item
thing that can be captured by a structure of class or by a structure of property

Note 1 to entry: Items are considered to reach from a component to assemblies up to systems.

[SOURCE: IEC 62656-1:2014, 3.23, modified – Note to entry added.]

3.2 Abbreviated terms

IEC CDD	IEC Common Data Dictionary available at https://cdd.iec.ch
IRDI	International Registration Data Identifier

4 IEC 61360-7 data dictionary (domain)

4.1 Overview and generic concepts

This document specifies the generic concepts of the new data dictionary (domain) "IEC 61360-7 – General items".

All items are identified by an IRDI according to ISO/TS 29002-5 in machine-sensible form. An IRDI consists of the 3 sections:

- RI – registration authority identifier;
- DI – data identifier;
- VI – version identifier.

The separator (character "#") is used to delimit the 3 sections.

For the DI the following range of CODES is reserved: CAA000 to CAZ999.

The generic structures of the data dictionary with classes and assigned properties are shown in Table 1.

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Table 1 – Generic structures

Classes with properties	Class ID	Property ID
General items	CAA000	
Features	CAA001	
Qualifiers	CAA002	
Applicability qualifier		CBA001
Value origin qualifier		CBA002
Value processing qualifier		CBA003
Life cycle qualifier		CBA004
Operational state qualifier		CBA005
Value quality qualifier		CBA006
Time stamp token (timescale UTC)		CBA007
Time stamp token (timescale TAI)		CBA008

The library of properties used in the data dictionary is shown in Table 2.

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Table 2 – Library of properties with attributes

Property ID	Preferred name	Definition	Source	Unit	Data type	Value format
CBA001	Applicability qualifier	qualifier that waives or restricts the applicability of a property for local or temporal reasons	IEC 62569-1:2017		ENUM_CODE_TYPE(0112/2///61360_7#CEA001)	M..8
CBA002	Value origin qualifier	qualifier that specifies the type of data capturing or generation for the provided value	IEC 62569-1:2017		ENUM_CODE_TYPE(0112/2///61360_7#CEA002)	M..8
CBA003	Value processing qualifier	qualifier that specifies a method of selecting or computing a representative value from more than one value	IEC 62569-1:2017		ENUM_CODE_TYPE(0112/2///61360_7#CEA003)	M..8
CBA004	Life cycle qualifier	qualifier that specifies a product lifecycle stage or phase in which the assigned value is applicable	IEC 62569-1:2017		ENUM_CODE_TYPE(0112/2///61360_7#CEA004)	M..8
CBA005	Operational state qualifier	qualifier that specifies operating stages of an item	IEC 62744:2014		ENUM_CODE_TYPE(0112/2///61360_7#CEA005)	M..35
CBA006	Value quality qualifier	qualifier that specifies the quality of the value of a data element type	IEC 62832-2:2020, 4.33, Table 34		ENUM_CODE_TYPE(0112/2///61360_7#CEA006)	M..17
CBA007	Time stamp token (timescale UTC)	qualifier providing a verifiable binding between a data item's representation and a date and time value based on the timescale coordinated universal time (UTC)	ISO/IEC 18014-1:2008, 3.15, modified		DATE_TIME_TYPE	M..35
CBA008	Time stamp token (timescale TAI)	qualifier providing a verifiable binding between a data item's representation and a date and time value based on the timescale international atomic time (TAI)	ISO/IEC 18014-1:2008, 3.15, modified		STRING_TYPE	B96

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4.2 Further development and maintenance

Users of the data dictionary (domain) "IEC 61360-7 – General items" are requested to refer to the IEC CDD for the future development of this document, available at https://cdd.iec.ch.

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