

<b>STN</b>	<b>Všeobecná špecifikácia informácie o produktoch pomocou vlastností Časť 1: Princípy a metódy</b>	<b>STN EN 62569-1</b>  01 3725
------------	--	--

Generic specification of information on products by properties - Part 1: Principles and method

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/18

Obsahuje: EN 62569-1:2017, IEC 62569-1:2017

**126615**

EUROPEAN STANDARD

**EN 62569-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2017

ICS 01.110; 29.020

English Version

Generic specification of information on products by properties -  
Part 1: Principles and method  
(IEC 62569-1:2017)

Spécification générique relative aux informations sur les  
produits données par les propriétés - Partie 1: Principes et  
méthodes  
(IEC 62569-1:2017)

Allgemeine Regeln zur Erstellung von  
Produktspezifikationen - Teil 1: Grundsätze und Methoden  
(IEC 62569-1:2017)

This European Standard was approved by CENELEC on 2017-08-16. 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.

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



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN 62569-1:2017****European foreword**

The text of document 3/1310/FDIS, future edition 1 of IEC 62569-1, 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 62569-1:2017.

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) 2018-05-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-08-16

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

**Endorsement notice**

The text of the International Standard IEC 62569-1:2017 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 (series)	NOTE	Harmonized as EN 60027 (series).
IEC 61360-6:2016	NOTE	Harmonized as EN 61360-6:2017.
IEC 61987-10:2009	NOTE	Harmonized as EN 61987-10:2009.
IEC 62264 (series)	NOTE	Harmonized as EN 62264 (series).
IEC 81346-1	NOTE	Harmonized as EN 81346-1.
IEC 82079-1:2012	NOTE	Harmonized as EN 82079-1:2012.
IEC 80000 (series)	NOTE	Harmonized as EN 80000 (series).
ISO 80000 (series)	NOTE	Harmonized as EN ISO 80000 (series).
ISO 14040:2006	NOTE	Harmonized as EN ISO 14040:2006.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61360-1	-	Standard data element types with associated classification scheme - Part 1: Definitions - Principles and methods	EN 61360-1	-
IEC/TS 62720	-	Identification of units of measurement for computer-based processing		-



IEC 62569-1

Edition 1.0 2017-07

# INTERNATIONAL STANDARD



HORIZONTAL STANDARD

**Generic specification of information on products by properties –  
Part 1: Principles and methods**



**THIS PUBLICATION IS COPYRIGHT PROTECTED**  
**Copyright © 2017 IEC, Geneva, Switzerland**

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
Fax: +41 22 919 03 00  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

#### **About the IEC**

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

#### **About IEC publications**

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

#### **IEC Catalogue - [webstore.iec.ch/catalogue](http://webstore.iec.ch/catalogue)**

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

#### **IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)**

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

#### **IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

#### **Electropedia - [www.electropedia.org](http://www.electropedia.org)**

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

#### **IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)**

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

#### **IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [csc@iec.ch](mailto:csc@iec.ch).



IEC 62569-1

Edition 1.0 2017-07

# INTERNATIONAL STANDARD



HORIZONTAL STANDARD

---

**Generic specification of information on products by properties –  
Part 1: Principles and methods**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

---

ICS 01.110 ; 29.020

ISBN 978-2-8322-4428-9

**Warning! Make sure that you obtained this publication from an authorized distributor.**

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	10
2 Normative references .....	10
3 Terms, definitions and abbreviated terms .....	10
3.1 Terms and definitions.....	10
3.2 Abbreviated terms.....	15
4 Specifications .....	15
5 Properties.....	16
5.1 Object properties versus dictionary properties.....	16
5.2 Sets of properties for specific purposes .....	18
5.3 Properties of components .....	18
6 Property qualifiers .....	19
6.1 General.....	19
6.2 Life cycle qualifier.....	20
6.2.1 General .....	20
6.2.2 SPE .....	20
6.2.3 INQ.....	20
6.2.4 OFF .....	21
6.2.5 CON .....	21
6.2.6 SUP.....	21
6.2.7 BUILT .....	21
6.2.8 OP.....	21
6.2.9 DECOM .....	21
6.2.10 Example of the use of the life cycle qualifier .....	21
6.2.11 Example of the use of life cycle qualifier associated with a single property within a transaction applying the XML notation.....	22
6.3 Applicability qualifier .....	22
6.3.1 General .....	22
6.3.2 AVP .....	23
6.3.3 AVN.....	23
6.3.4 AVA .....	23
6.3.5 NA .....	23
6.3.6 Application example – Method A (implicit marking) .....	23
6.3.7 Application example – Method B (explicit marking) .....	24
6.4 Value origin qualifier .....	24
6.4.1 General .....	24
6.4.2 EST .....	25
6.4.3 CAL .....	25
6.4.4 MEA .....	25
6.4.5 SET .....	25
6.4.6 Example of the use of the value origin qualifier.....	25
6.5 Value processing qualifier .....	25
6.5.1 General .....	25
6.5.2 ARITHM.....	26
6.5.3 MED .....	26

6.5.4	MOD .....	26
6.5.5	WARITHM .....	27
6.5.6	GEOM .....	27
6.5.7	WGEOM .....	27
6.5.8	HARM.....	28
6.5.9	RMS .....	28
6.6	Multiple qualifiers .....	28
6.7	When to use a qualifier .....	28
6.8	Example of the use of multiple qualifiers associated with a single property within a transaction applying, for example, the XML notation based on the example shown in 6.6 .....	29
7	Property values .....	29
7.1	General.....	29
7.2	How to deal with special values .....	29
7.3	How to use the level type concept.....	30
7.4	Availability of values associated with (dictionary) properties .....	30
7.5	Application of unit systems .....	30
7.6	Use of units in software applications .....	30
8	Data reliability and quality .....	31
8.1	General.....	31
8.2	Description of inaccuracies of quantitative values .....	31
8.3	Intended design tolerances on products .....	32
Annex A (normative)	(Dictionary) property definitions.....	33
A.1	General.....	33
A.2	Source definitions of (dictionary) properties and classes of (dictionary) properties in this document .....	33
A.2.1	Definitions of class of (dictionary) properties .....	33
A.2.2	Definition of (dictionary) properties to class AAB001:.....	34
Bibliography	.....	36
Figure 1	– Context of generic specification for information on products .....	8
Figure 2	– Business scenario between parties .....	9
Figure 3	– Import and export possibilities using tagged formats .....	9
Figure 4	– Relation between the properties of a product type and the (dictionary) properties of a data dictionary used for their expression .....	17
Figure 5	– Inclusion of sets of properties .....	18
Figure 6	– Relation between the components of a product type and the product type used for their implementation.....	19
Figure 7	– Development of life cycle qualifier over time.....	22
Table 1	– Example of the use of the life cycle qualifier.....	21
Table 2	– Example of the use of the value origin qualifier .....	25
Table 3	– Example of the use of multiple qualifiers .....	28
Table 4	– Tolerance concept.....	32

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GENERIC SPECIFICATION OF INFORMATION  
ON PRODUCTS BY PROPERTIES –****Part 1: Principles and methods****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.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62569-1 has been prepared by IEC technical committee 3: Information structures and elements, identification and marking principles, documentation and graphical symbols.

This first edition cancels and replaces IEC PAS 62569-1:2009. This edition constitutes a technical revision.

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

FDIS	Report on voting
3/1310/FDIS	3/1314/RVD

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

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

Terms which are defined in Clause 3 are *italicized* when they occur in definitions of other terms in Clause 3.

A list of all parts in the IEC 62569 series, published under the general title *Generic specification of information on products by properties*, can be found on the IEC website.

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

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

A bilingual version of this publication may be issued at a later date.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## INTRODUCTION

This document establishes general principles and methods required for all parts of IEC 62569, to manage the product-related information as described in the following parts along the life cycle of an object, e.g. a product during its operational use.

IEC 62569-2 provides a generally applicable structure of a generic specification of information on products presenting those common clauses which are independent of any specific equipment, component and device. It serves as a guide for the preparation of technical specifications for various objects. Due to its generic type, particular issues referring to specific product groups are excluded. These need to be obtained from the specific product descriptions within product standards.

IEC 62569-3 provides a collection of generally applicable object properties used in conjunction with the predefined structure in IEC 62569-2, being the basis for, for example, an XML-based electronic template, serving as generic template for the development of product-specific specifications of information by product committees within IEC and ISO, industrial consortia or other industrial organizations.

Figure 1 provides an overview of the intention of this standard. The generic specification for information of objects represents an overall approach for those mainly technical information issues which are generally required by users of an object, and being independent of any specific product class, such as identification, classification or accessibility information for logical or physical interconnection to other products. It provides sets of object properties which may contain quantitative, non-quantitative or conditional types, containing predefined value sets for the non-quantitative, or units for the quantitative types.

The next step is the application of the available generic information on a specific product class such as motor, transformer or resistor. In this step the previously available generic information is aggregated by additional information focusing on that information which is typically applicable for the considered specific class. The result is applicable only for that considered class, and named product-class-specific blank detail specification. For each further class, such a step is repeated. The object properties contained in a blank detail specification for a specific product class are either of the quantitative or non-quantitative type and also foreseen with predefined value sets for the non-quantitative, or units for the quantitative types.

These blank detail specifications should be made available (e.g. as a web-based collection), allowing users to establish the detail specifications (instantiate or populate with data) for automated and controlled use by industry in the business process.

The next step is the application of blank detail specifications in daily practice in industry, when a user populates the object properties of the blank detail specification with required values for his specific application. Depending on the needs, further object properties may be added, marked as not applicable or complemented by qualifiers, etc.

The result may be used, for example, as a functional specification for a specific object within a system or plant, or used for an inquiry.

From this perspective it is easy to deduce that a prerequisite for an economic implementation of the above specifications is the existence of an internationally available data dictionary with public access, providing internationally standardized collections of (dictionary) properties following common methods as defined in the IEC 61360 series.

Referring from object descriptions to previously defined standardized semantic (dictionary) property descriptions is the key issue of an effective, reliable and secure electronic business. For the relations among (dictionary) properties, the associated data dictionary and the different specifications, see Figure 1.

Within this document two main concepts are differentiated:

- A. a specification concept for “real or abstract” objects;
- B. a data dictionary containing predefined information elements, each described by a rigorous set of attributes and unambiguously identified, so that its information elements can be used as a reference when preparing the concept A. Such a data dictionary is an optional tool to make the descriptions for concept A. It is of course a “real world” object but a quite different one and separated from the “real world” intended to be described.

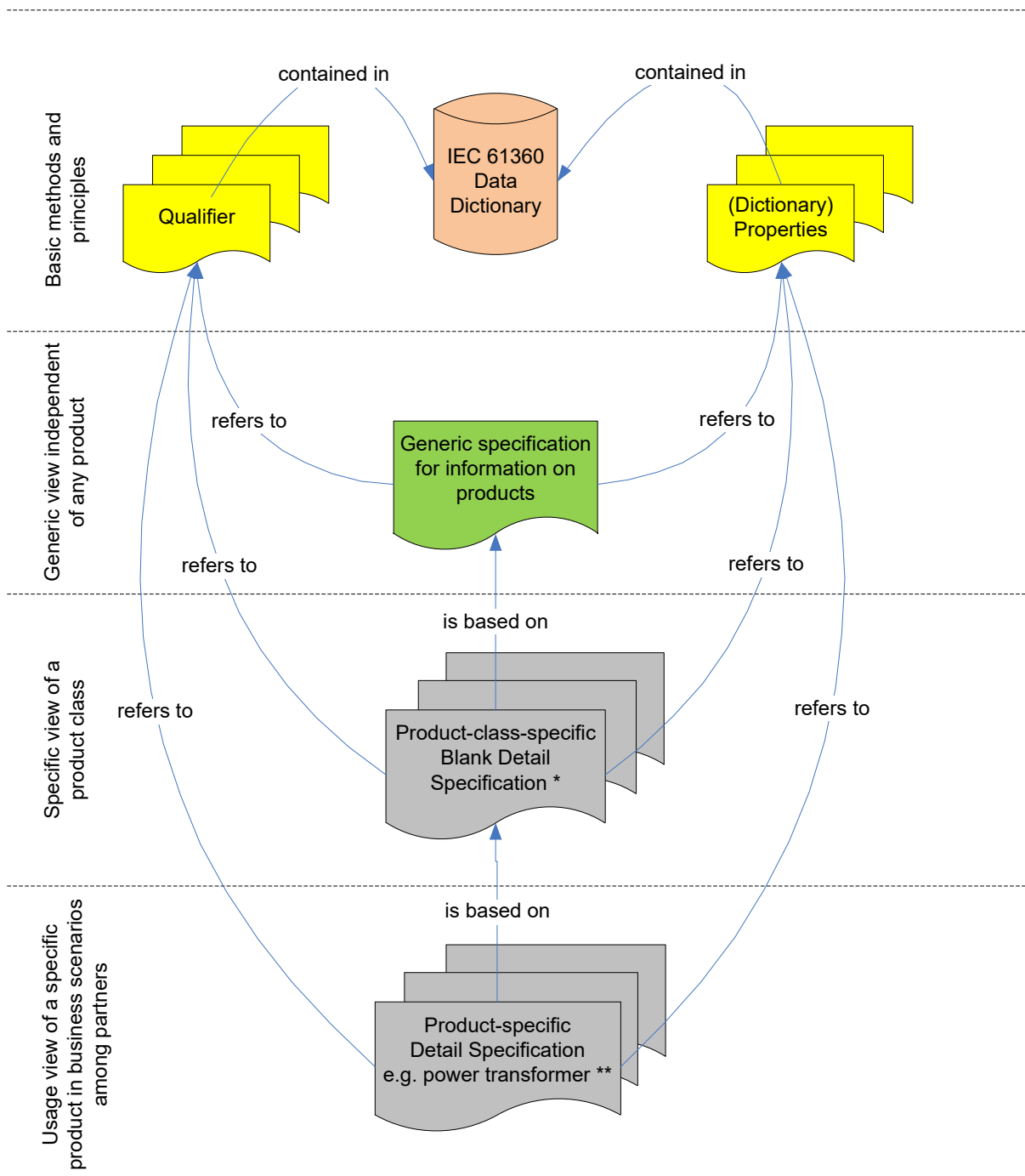
For concept A, the term object property and set of object properties will be applied. For issues relating to concept B, the term (dictionary) property and set of (dictionary) properties will be applied to indicate that here a property or set of properties residing in a data dictionary is meant.

The purpose of this document is to describe how real world specifications or descriptions are to be prepared by making use of the data dictionary defined in IEC 61360.

The IEC 62569 series is a companion standard providing methods of expanding the use of existing standardized (dictionary) properties as provided in the IEC CDD (Common Data Dictionary) along the life cycle periods without the need to define additional (dictionary) properties or to redefine such supporting economic engineering and data management.

NOTE 1 As the referred data dictionary of IEC 61360 is quite different from a dictionary, the term “data dictionary” is consistently used within this document.

NOTE 2 Such a data dictionary is available as a data base application to be found under <http://std.iec.ch/iec61360> [retrieved 2016-05-03].

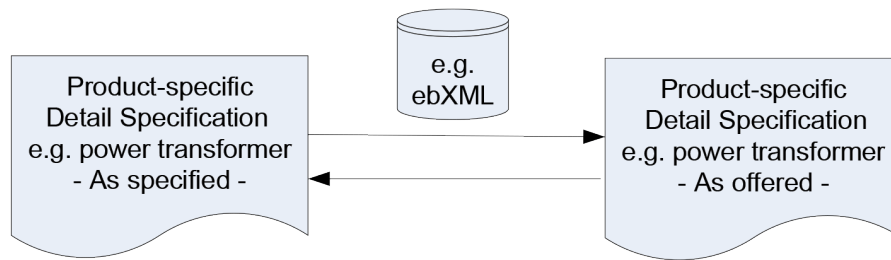


\* Developed by Product Committees, Consortia or other Organizations, e.g. for lifting cranes, capacitors, resistors, power transformers

\*\* Filled with product specific data at a specified time in the life cycle process of a power transformer; used in a defined business scenario among industrial partners, e.g. seller, buyer

Figure 1 – Context of generic specification for information on products

Figure 2 shows a business scenario about the usage of a detail specification (based on the generic specification) for information on products between business parties.



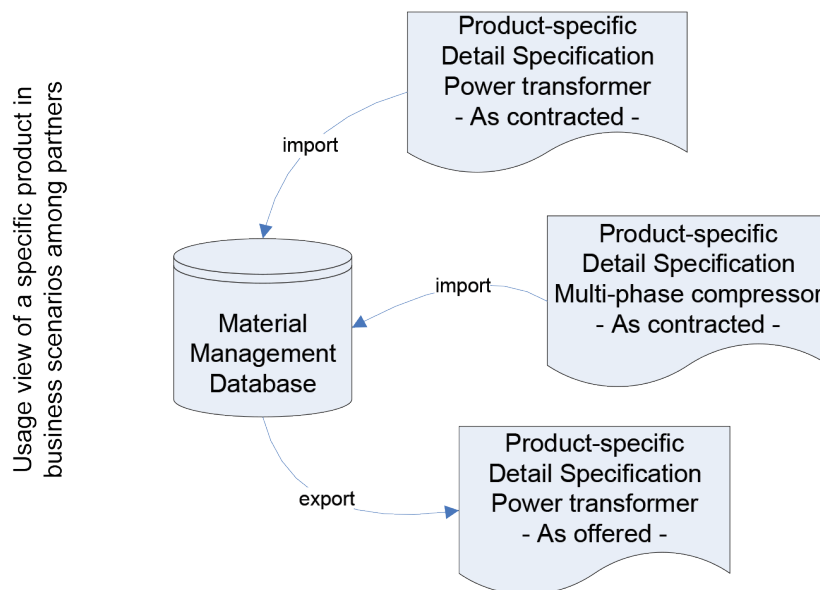
IEC

**Figure 2 – Business scenario between parties**

If a specification for information in the form of an electronic template is associated with a schema for data exchange, for example an XML schema or any other tagged electronic file format, the content of the product-specific detail specification can be easily used for import and export of data values in conjunction with data bases for material management systems. See Figure 3.

A specification template can also be imported for the setting up of the internal structures within a data base without having the need to import associated values.

Conversely, detail specifications can be generated to export data using a predefined template based on the generic specification for information on products.



IEC

**Figure 3 – Import and export possibilities using tagged formats**

# GENERIC SPECIFICATION OF INFORMATION ON PRODUCTS BY PROPERTIES –

## Part 1: Principles and methods

### 1 Scope

The IEC 62569 series defines principles and methods for the specification of objects by object properties, for example in data sheets, by utilizing predefined and internationally standardized (dictionary) properties residing in the data dictionary of IEC 61360.

The IEC 62569 series is being developed to transfer the former paper-based applications of blank detail specifications or product descriptions towards supporting electronic business allowing the evaluation and management of described items by computers.

This part of IEC 62569 specifies several qualifiers to be used with object or (dictionary) properties and their values indicating life cycle and other aspects of the property. It is a prerequisite for the usage of the other parts of IEC 62569.

### 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.

IEC 61360-1:—<sup>1</sup>, *Standard data element types with associated classification scheme for electric components – Part 1: Definitions, principles and methods*

IEC TS 62720, *Identification of units of measurement for computer-based processing*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**