

<b>STN</b>	<b>Normalizovaná registrácia a prenos ontológií pre výrobky pomocou tabuliek Časť 5: Rozhranie na opis aktivity</b>	<b>STN EN 62656-5</b>  01 3705
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Standardized product ontology register and transfer by spreadsheets - Part 5: Interface for activity description

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. 02/18

Obsahuje: EN 62656-5:2017, IEC 62656-5:2017

**126338**

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Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2018  
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

**EN 62656-5**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2017

ICS 01.040.01; 01.110

English Version

Standardized product ontology register  
and transfer by spreadsheets -  
Part 5: Interface for activity description  
(IEC 62656-5:2017)

Enregistrement d'ontologie de produits normalisés  
et transfert par tableurs -  
Partie 5: Interface pour la description des activités  
(IEC 62656-5:2017)

Standardisierte Übertragung und Registrierung  
von Ontologien für Produkte mittels Tabellen -  
Teil 5: Schnittstelle für die Beschreibung von Aktivitäten  
(IEC 62656-5:2017)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

## European foreword

The text of document 3D/257/CDV, future edition 1 of IEC 62656-5, prepared by SC 3D "Product properties and classes and their identification", of 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 62656-5:2017.

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) 2018-04-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-07-24

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IEC 62656-3:2015      NOTE      Harmonized as EN 62656-3:2015 (not modified).

## 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 61360-2	2012	Standard data element types with associated classification scheme for electric components - Part 2: EXPRESS dictionary schema	EN 61360-2	2013
IEC 61360-4	-	Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection of standard data element types and component classes	-	-
IEC 62656-1	-	Standardized product ontology register and transfer by spreadsheets - Part 1: Logical structure for data parcels	EN 62656-1	-
IEC 62264-3	2007	Enterprise-control system integration - Part 3: Activity models of manufacturing operations management	EN 62264-3	2007
ISO 13584-24	-	Industrial automation systems and integration - Parts library - Part 24: Logical resource: Logical model of supplier library	-	-
ISO 13584-42	2010	Industrial automation systems and integration - Parts library - Part 42: Description methodology: Methodology for structuring parts families	-	-



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Standardized product ontology register and transfer by spreadsheets –  
Part 5: Interface for activity description**

**Enregistrement d'ontologie de produits normalisés et transfert par tableurs –  
Partie 5: Interface pour la description des activités**





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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Standardized product ontology register and transfer by spreadsheets –  
Part 5: Interface for activity description**

**Enregistrement d'ontologie de produits normalisés et transfert par tableurs –  
Partie 5: Interface pour la description des activités**

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ICS 01.040.01; 01.110

ISBN 978-2-8322-4369-5

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**STANDARDIZED PRODUCT ONTOLOGY REGISTER  
AND TRANSFER BY SPREADSHEETS –****Part 5: Interface for activity description**

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International Standard IEC 62656-5 has been prepared by subcommittee 3D: Product properties and classes and their identification, of IEC technical committee 3: Information structures and elements, identification and marking principles, documentation and graphical symbols.

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

CDV	Report on voting
3D/257/CDV	3D/287/RVC

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.

A list of all parts in the IEC 62656 series, published under the general title *Standardized product ontology register and transfer by spreadsheets*, can be found 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 website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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## STANDARDIZED PRODUCT ONTOLOGY REGISTER AND TRANSFER BY SPREADSHEETS –

### Part 5: Interface for activity description

#### 1 Scope

This part of IEC 62656 specifies a method for representing activities and relations among the activities by a tabular ontology representation, called “parcellized activity model” or PAM for short, which is a specialized use of a generic tabular ontology data model, known as the parcellized ontology model (POM) defined in Part 1 of the IEC 62656 series. The activities that can be described by this document include part or whole of an enterprise, an organization or a collection of services, a set of events or processes which interact with each other by exchanging physical or non-physical entities. This part of IEC 62656 also defines a method for uniquely identifying activities, or their homologues happenings in a certain sequence. In addition, this document identifies flows of information, objects or materials exchanged among activities, where each of the activities is represented by a class and each flow by a relation.

Consequently, this document enables characterization, classification, and identification of a set of activities as part of a normalized ontology. And this enables registering of a pattern of activities as a set of metadata and uploading it onto the IEC 61360 Common Data Dictionary (CDD), maintained as an online database of the electrotechnical concepts.

Additionally, this part of IEC 62656 provides a method to integrate ontologies of products and activities including services, in a single model. This means a product can be analyzed in its operational context for service. Such an integrated view will help people of different technical backgrounds to see and share knowledge about the extent of an enterprise that requires the products and services as indispensable resources. Such a data representation will also help analyse the key functionalities of an enterprise and its available resources, with clear definitions, limitations and interactions among them, when people are required to respond or react to a new external condition or situation in a short time frame, in particular, at an emergency or natural hazard.

Meanwhile, this part of IEC62656 does not intend to provide a detailed algorithmic description of a flow of information, timing chart of processes, or sequential ordering of events that will be necessary in a software design or programming phase of an information system that handles activities or events. These detailed specifications of the algorithms and associated construction of the data structures are left to the realm of software engineering methodology and tools where there are so many schools and styles already, such as UML (Unified Modelling Language), BPMN, SysML, DFD, IDEF, and other CASE (Computer Aided Software Engineering) tools.

This International Standard neither intends to standardize nor introduce a new method of graphic description for activities or processes. Ideally, an ontology of activities modelled by this International Standard must be expressible by a number of existing graphical presentation tools and process description languages for activities.

Nevertheless, some graphical presentations in the style of such tools or languages are helpful for making the people understand the content of the PAM, and therefore, they are used in this International Standard. In most of the cases, IDEF-0 is preferred for the purpose, because it describes both activities and flows of things among the activities, but any other choices of tools or languages can be made, wherever they are appropriate and relevant.

## 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 61360-2:2012, *Standard data element types with associated classification scheme for electric components - Part 2: EXPRESS dictionary schema*

IEC 61360-4, *Standard data element types with associated classification scheme for electric components – Part 4: IEC reference collection of standard data element types and component classes* (available at <http://cdd.iec.ch/>)

IEC 62656-1, *Standardized product ontology register and transfer by spreadsheets – Part 1: Logical structure for data parcels*

IEC 62264-3:2007, *Enterprise control system integration – Part 3: Activity models of manufacturing operations management*

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

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