# SLOVENSKI STANDARD
# SIST EN 62708:2015

**01-september-2015**

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**Vrste dokumentov za električne in instrumentalne projekte v procesni industriji (IEC 62708:2015)**

Document kinds for Electrical and Instrumentation Projects in the Process Industry (IEC 62708:2015)

Dokumente für die Elektro- und Leittechnik-Planung in Projekten der verfahrenstechnischen Industrie (IEC 62708:2015)



Types de documents pour les projets relatifs aux systèmes électriques et aux instruments de fonctionnement dans l'industrie de transformation (IEC 62708:2015)



**Ta slovenski standard je istoveten z:** **EN 62708:2015**

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**ICS:**

| | | |
|---|---|---|
| 25.040.40 | Merjenje in krmiljenje industrijskih postopkov | Industrial process measurement and control |

**SIST EN 62708:2015** **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

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**EN 62708**

April 2015

ICS 01.110; 25.040.40

English Version

# Document kinds for Electrical and Instrumentation Projects in the Process Industry (IEC 62708:2015)

Types de documents pour les projets relatifs aux systèmes électriques et aux instruments de fonctionnement dans l'industrie de transformation (IEC 62708:2015)

Dokumente für die Elektro- und Leittechnik-Planung in Projekten der verfahrenstechnischen Industrie (IEC 62708:2015)

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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.



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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**



Ref. No. EN 62708:2015 E

## Foreword

The text of document 65/580/FDIS, future edition 1 of IEC 62708, prepared by IEC TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62708:2015.

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) | 2016-01-01 |
| • latest date by which the national standards conflicting with the document have to be withdrawn | (dow) | 2018-04-01 |

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## Endorsement notice

The text of the International Standard IEC 62708:2015 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:



| | |
|---|---|
| ISO 7200 | NOTE Harmonized as EN ISO 7200. |
| IEC 81346-1 | NOTE Harmonized as EN 81346-1. |

# Annex ZA
(normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60079-10-1 | - | Explosive atmospheres -- Part 10-1: Classification of areas - Explosive gas atmospheres | EN 60079-10-1 | - |
| IEC 60079-11 | - | Electrical apparatus for explosive gas atmospheres -- Part 11: Intrinsic safety "i" | - | - |
| IEC 60617 | - | Standard data element types with associated classification scheme for electric components -- Part 4: IEC reference collection fo standard data element types and component classes | - | - |
| IEC 61082-1 | - | Preparation of documents used in electrotechnology - Part 1: Rules | EN 61082-1 | - |
| IEC 61131-3 | - | Programmable controllers - Part 3: Programming languages | EN 61131-3 | - |
| IEC 61355 | series | Classification and designation of documents for plants, systems and equipment | EN 61355 | series |
| IEC 61355-1 | 2008 | Classification and designation of documents for plants, systems and equipment -- Part 1: Rules and classification tables | EN 61355-1 | 2008 |
| IEC 61511 | series | Functional safety - Safety instrumented systems for the process industry sector -- Part 2: Guidelines for the application of IEC 61511-1 | EN 61511 | series |
| IEC 61987-10 | - | Industrial-process measurement and control - Data structures and elements in process equipment catalogues -- Part 10: Lists of properties (LOPs) for industrial-process measurement and control for electronic data exchange - Fundamentals | EN 61987-10 | - |
| - | - | | +AC | - |
| IEC 62337 | - | Commissioning of electrical, instrumentation and control systems in the process industry - Specific phases and milestones | EN 62337 | - |
| IEC 62381 | - | Automation systems in the process industry - Factory acceptance test (FAT), site acceptance test (SAT) and site integration test (SIT) | EN 62381 | - |

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|---|---|---|---|---|
| IEC 62424 | - | Representation of process control engineering - Requests in P&I diagrams and data exchange between P&ID tools and PCE-CAE tools | EN 62424 | - |
| IEC 82079-1 | - | Preparation of instructions for use - Structuring, content and presentation -- Part 1: General principles and detailed requirements | EN 82079-1 | - |
| ISO 10006 | - | Quality management systems_- Guidelines for quality management in projects | - | - |
| ISO 10628 | - | Flow diagrams for process plants -- General rules | EN ISO 10628 | - |

# IEC 62708

Edition 1.0 2015-02

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

colour inside

## Document kinds for electrical and instrumentation projects in the process industry



## Types de documents pour les projets relatifs aux systèmes électriques et aux instruments de fonctionnement dans l'industrie de transformation



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# DOCUMENT KINDS FOR ELECTRICAL AND INSTRUMENTATION PROJECTS IN THE PROCESS INDUSTRY

## 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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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 62708 has been prepared by IEC technical committee 65: Industrial-process measurement, control and automation.

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

| FDIS | Report on voting |
|---|---|
| 65/580/FDIS | 65/583/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.

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.

**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

The engineering in the process industry is driven by international cooperation. Due to economic reasons, special know-how, special licence, authorization or simply capacity utilisation the work is split between partners. They will arrange their cooperation for each individual project differently. This requires well defined split of work and responsibilities. Documents are the basis for these definitions since they are the result of any engineering work.

If there is only the name of a document without further description of form and content, it will be likely that each partner develops their own view of the result of their efforts. Therefore, for each project the definition of deliverable documents is a major issue. The name of a document is often used for similar but in detail different documents. This standard will take the most commonly used name from synonymous names as the document kind name, intending to make other alternatives obsolete.

The first aim of this standard is to avoid misunderstandings and erroneous elaboration of documents in order to reduce additional corrective works and expenses for clarification between partners.

The second aim is to provide the convenience of document handling by using the IEC 61355 database. This standard will provide document kind names, document kind classification codes specified by IEC 61355, and some templates.

To cover these aims, we specify individual document kind names, but do not specify which documents are mandatory or optional.

# DOCUMENT KINDS FOR ELECTRICAL AND INSTRUMENTATION PROJECTS IN THE PROCESS INDUSTRY

## 1 Scope

This International Standard defines specific documents and their basic content required for electrical and instrumentation projects in the process industry.

This standard specifies the document kind name and the mandatory content of the document kind.

Documents used in the phases of a project from the concept phase to the mechanical completion are covered (see IEC 62337).

Documents for project management and quality assurance are included.

Documents for commercial project administration are excluded.

Examples of documents are provided for easy reference, understanding and usage.



## 2 Normative references



The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60617*, Graphical symbols for diagrams*

IEC 60079-10-1*, Explosive atmospheres – Part 10-1: Classification of areas – Explosive gas atmospheres*

IEC 60079-11*, Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"*

IEC 61082-1, *Preparation of documents used in electrotechnology – Part 1: Rules*

IEC 61131-3*, Programmable controllers – Part 3: Programming languages*

IEC 61355 (all parts), *Classification and designation of documents for plants, systems and equipment*

IEC 61355-1:2008, *Classification and designation of documents for plants, systems and equipment – Part 1: Rules and classification tables*

IEC 61511 (all parts)*, Functional safety – Safety instrumented systems for the process industry sector*

IEC 61987-10, *Industrial-process measurement and control – Data structures and elements in process equipment catalogues – Part 10: Lists of properties (LOPs) for industrial-process measurement and control for electronic data exchange – Fundamentals*

IEC 62337, *Commissioning of electrical, instrumentation and control systems in the process industry – Specific phases and milestones*

IEC 62381, *Automation systems in the process industry – Factory acceptance test (FAT), site acceptance test (SAT), and site integration test (SIT)*

IEC 62424, *Representation of process control engineering – Requests in P&I diagrams and data exchange between P&ID tools and PCE-CAE tools*

IEC 82079-1, *Preparation of instructions for use – Structuring, content and presentation – Part 1: General principles and detailed requirements*

ISO 10006, *Quality management systems – Guidelines for quality management in projects*

ISO 10628, *Flow diagrams for process plants – General rules*

## 3 Terms, definitions, abbreviated terms and acronyms

### 3.1 Terms and definitions

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



**3.1.1**
**activity**
smallest identified item of work in a project

[SOURCE: ISO 10006: 2003, 3.1]



**3.1.2**
**document**
fixed and structured amount of information intended for human perception that can be managed and interchanged as a unit between users and systems

[SOURCE: IEC 61355-1: 2008, 3.2, modified – notes removed for easy understanding.]

**3.1.3**
**document kind**
type of document defined with respect to its specified content of information and form of presentation

[SOURCE: IEC 61355-1: 2008, 3.6, modified – note removed for easy understanding.]

**3.1.4**
**document request**
document which requests to prepare or provide a set of documents

**3.1.5**
**documentation**
collection of documents related to a given subject

[SOURCE: IEC 61355-1: 2008, 3.5, modified – notes removed for easy understanding.]

**3.1.6**
**export permission**
authority permission to transport e.g. embargo goods from the country of origin to its intended country of destination

**3.1.7**
**identifier**
attribute associated with an object to unambiguously distinguish it from other objects within a specified domain

[SOURCE: IEC/ISO 81346-1: 2009, 3.10]

**3.1.8**
**process industry**
industry that uses chemical reactions, separations, or mixing techniques in order to create new products, modify existing products or treat waste and includes the following types of industries: chemical, petrochemical, waste treatment, paper, cement, etc. It does not include such industries as equipment/machine manufacturing or similar industries. Industries which are subject to special requirements and or validation, etc. are also not included

[SOURCE: IEC 62337: 2012, 3.13]

**3.1.9**
**project**
sum of commercial, technical and other activities related to a specific object

[SOURCE: IEC 61355-1: 2008, 3.12 modified – definition adapted to comply with the ISO/IEC Directives, Part 2.]



**3.1.10**
**work package**
subset of a project forming a group of activities having common characteristics such as purpose, theme, object, responsible, time frame, etc.



## 3.2 Abbreviated terms and acronyms

| | |
|---|---|
| DCS | Distributed control system |
| DLOP | Device list of properties |
| E&I | Electrical and instrumentation |
| ESD | Emergency shutdown system |
| Ex-i | Instrinsic safety "i" according to IEC 60079-11 |
| FAT | Factory acceptance test |
| I/O | Input/output |
| ID | Identifier |
| IT | Information technology |
| OLOP | Operating list of properties |
| P&ID | Piping and instrumentation diagram |
| PLC | Programmable logic controller |
| SAT | Site acceptance test |
| SIF | Safety instrumented function |
| SIL | Safety integrity level |
| SIS | Safety instrumented system |
| SIT | Site integration test |
| SRS | Safety requirement specification |