



# SLOVENSKI STANDARD

## SIST EN 62068:2014

01-maj-2014

Nadomešča:  
SIST EN 62068-1:2004

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**Elektroizolacijski materiali in sistemi - Splošna metoda za ocenjevanje električne vzdržljivosti pri ponavljajočih se napetostnih impulzih**

Electrical insulation materials and systems - General method of evaluation of electrical endurance under repetitive voltage impulses

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Matériaux et systèmes d'isolation électriques - Méthode générale d'évaluation de l'endurance électrique soumise à des impulsions de tension appliquées périodiquement

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**Ta slovenski standard je istoveten z: EN 62068:2013**

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**ICS:**

29.080.30	Izolacijski sistemi	Insulation systems
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 62068**

September 2013

ICS 29.080.30

Supersedes EN 62068-1:2003

English version

**Electrical insulating materials and systems -  
General method of evaluation of electrical endurance under repetitive  
voltage impulses  
(IEC 62068:2013)**

Matériaux et systèmes d'isolation  
électriques -  
Méthode générale d'évaluation de  
l'endurance électrique soumise à des  
impulsions de tension appliquées  
périodiquement  
(CEI 62068:2013)

Elektrische Isolierstoffe und  
Isoliersysteme -  
Allgemeines Verfahren zur Bewertung der  
elektrischen Lebensdauer bei  
Beanspruchung mit sich wiederholenden  
Spannungsimpulsen  
(IEC 62068:2013)

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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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**CENELEC**

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**

## Foreword

The text of document 112/234/FDIS, future edition 1 of IEC 62068, prepared by IEC TC 112 "Evaluation and qualification of electrical insulating materials and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62068:2013.

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) 2014-03-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-04-15

This document supersedes EN 62068-1:2003.

EN 62068:2013 includes the following significant technical changes with respect to EN 62068-1:2003:

The main changes with regard to EN 62068-1:2003 concern the terms and definitions which are now aligned, in part, on IEC/TS 61934 and CLC/TS 60034-18-42.

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

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### Endorsement notice

The text of the International Standard IEC 62068:2013 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/TS 60034-18-42:2008 | NOTE Harmonised as CLC/TS 60034-18-42:2011 (not modified). |
| IEC 60505:2011          | NOTE Harmonised as EN 60505:2011 (not modified).           |
| IEC 60270:2000          | NOTE Harmonised as EN 60270:2001 (not modified).           |

## **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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62539	-	Guide for the statistical analysis of electrical insulation breakdown data	-	-

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IEC 62068

Edition 1.0 2013-03

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electrical insulating materials and systems – General method of evaluation of electrical endurance under repetitive voltage impulses**

**Matériaux et systèmes d'isolation électriques – Méthode générale d'évaluation de l'endurance électrique soumise à des impulsions de tension appliquées périodiquement**

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ELECTROTECHNICAL  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# **ELECTRICAL INSULATING MATERIALS AND SYSTEMS – GENERAL METHOD OF EVALUATION OF ELECTRICAL ENDURANCE UNDER REPETITIVE VOLTAGE IMPULSES**

## FOREWORD

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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 62068 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

This first edition of IEC 62068 replaces IEC 62068-1:2003. It has been re-numbered as IEC 62068, as decided at the Plenary Meeting of TC 112 in Prague 2011.

The main changes with regard to IEC 62068-1:2003 concern the terms and definitions which are now aligned, in part, on IEC/TS 61934 [1]<sup>1</sup> and IEC/TS 60034-18-42 [2].

<sup>1</sup> Figures in square brackets refer to the bibliography.

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

FDIS	Report on voting
112/234/FDIS	112/242/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.

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# ELECTRICAL INSULATING MATERIALS AND SYSTEMS – GENERAL METHOD OF EVALUATION OF ELECTRICAL ENDURANCE UNDER REPETITIVE VOLTAGE IMPULSES

## 1 Scope

This International Standard applies to electrical equipment, regardless of voltage, containing an insulation system, which is

- connected to an electronic power supply, and
- requires an evaluation of insulation endurance under repetitive voltage impulses.

This standard proposes a general test procedure to facilitate screening of electrical insulating materials (EIM) and systems (EIS) and to achieve a relative evaluation of insulation endurance under conditions of repetitive impulses.

## 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 62539, *Guide for the statistical analysis of electrical insulation breakdown data*

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## 3 Terms and definitions

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

### 3.1

#### **electrical insulating material**

#### **EIM**

material with negligibly low electric conductivity, used to separate conducting parts at different electrical potentials

[SOURCE: IEC 60505:2011, definition 3.1.2 [3] <sup>2</sup>

### 3.2

#### **electrical insulation system**

#### **EIS**

insulating structure containing one or more electrical insulating materials (EIM) together with associated conducting parts employed in an electrotechnical device

[SOURCE: IEC 60505:2011, definition 3.1.1 [2]

### 3.3

#### **candidate EIS**

EIS under evaluation to determine its electrical endurance when exposed to repetitive voltage impulses

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<sup>2</sup> Figures in square brackets refer to the Bibliography.