Irish Standard
I.S. EN 62068:2013

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

I.S. EN 62068:2013

Incorporating amendments/corrigenda issued since publication:

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EUROPEAN STANDARD

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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)

This European Standard was approved by CENELEC on 2013-04-15. 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.

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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

Ref. No. EN 62068:2013 E

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• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-04-15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

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.

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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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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][1] and IEC/TS 60034-18-42 [2].

[1] 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.

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*

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] [2]

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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2 Figures in square brackets refer to the Bibliography.