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High-voltage switchgear and controlgear -- Part 207: Seismic qualification for gas-insulated switchgear assemblies for rated voltages above 52 kV (IEC 62271-207:2007)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 207: Erdbebenqualifikation für gasisolierte Schaltgerätekombinationen mit Bemessungsspannungen über 52 kV (IEC 62271-207:2007)

Appareillage a haute tension -- Partie 207: Qualification sismique pour ensembles d'appareillage a isolation gazeuse pour des niveaux de tension assignée supérieurs a 52 kV (IEC 62271-207:2007)

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High-voltage switchgear and controlgear - Part 207: Seismic qualification for gas-insulated switchgear assemblies for rated voltages above 52 kV

(IEC 62271-207:2007)

Appareillage à haute tension -
Partie 207: Qualification sismique
pour ensembles d'appareillages
à isolation gazeuse pour des niveaux
de tension assignée supérieurs à 52 kV
(CEI 62271-207:2007)

Hochspannungs-Schaltgeräte
und -Schaltanlagen -
Teil 207: Erdbebenqualifikation für
gasisolierte Schaltgerätekombinationen
mit Bemessungsspannungen über 52 kV
(IEC 62271-207:2007)

This European Standard was approved by CENELEC on 2007-10-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

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Foreword

The text of document 17C/407/FDIS, future edition 1 of IEC 62271-207, prepared by SC 17C, High-voltage switchgear and controlgear assemblies, of IEC TC 17, Switchgear and controlgear, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62271-207 on 2007-10-01.

This European Standard supersedes EN 62271-2:2003.

The change from EN 62271-2:2003 is as follows:

– the minimum voltage rating was changed from “72,5 kV” to “above 52 kV”.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-07-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62271-207:2007 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 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 60068-2-47	– [1]	Environmental testing - Part 2-47: Tests - Mounting of specimens for vibration, impact and similar dynamic tests	EN 60068-2-47	2005 [2]
IEC 60068-2-57	– [1]	Environmental testing - Part 2-57: Tests - Test Ff: Vibration - Time-history method	EN 60068-2-57	2000 [2]
IEC 60068-3-3	1991	Environmental testing - Part 3: Guidance - Seismic test methods for equipments	EN 60068-3-3	1993
IEC 60694	– [1]	Common specifications for high-voltage switchgear and controlgear standards	EN 60694 + corr. May	1996 [2] 1999
IEC 62271-203	– [1]	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV	EN 62271-203	2004 [2]

[1] Undated reference.

[2] Valid edition at date of issue.

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NORME INTERNATIONALE

High-voltage switchgear and controlgear – Part 207: Seismic qualification for gas-insulated switchgear assemblies for rated voltages above 52 kV

Appareillage à haute tension – Partie 207: Qualification sismique pour ensembles d'appareillages à isolation gazeuse pour des niveaux de tension assignée supérieurs à 52 kV

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 207: Seismic qualification for gas-insulated switchgear assemblies for rated voltages above 52 kV

FOREWORD

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International Standard IEC 62271-207 has been prepared by subcommittee 17C: High-voltage switchgear and controlgear assemblies, of IEC technical committee 17: Switchgear and controlgear.

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

FDIS	Report on voting
17C/407/FDIS	17C/415/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 first edition of IEC 62271-207 cancels and replaces the first edition of IEC 62271-2 and constitutes a technical revision.

The change from IEC 62271-2 is as follows:

– the minimum voltage rating was changed from 72,5 kV to above 52 kV;

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

A list of all the parts in the IEC 62271 series, under the general title *High-voltage switchgear and controlgear*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 207: Seismic qualification for gas-insulated switchgear assemblies for rated voltages above 52 kV

1 Scope and object

This International Standard applies to switchgear assemblies for alternating current of rated voltages above 52 kV for indoor and outdoor installations, including their supporting structure rigidly connected to the ground, and does not cover the seismic qualification of live tank circuit breakers. Switchgear assemblies do have typically low centers of gravity, e.g. gas-insulated switchgear (GIS).

For switchgear with higher gravity levels, e.g. live tank circuit breakers, the IEC 62271-300 is applicable.

Where switchgear assemblies are not ground-mounted, e.g. in a building, conditions for applications are subject to agreement between users and manufacturers.

The seismic qualification of the switchgear assemblies takes into account any auxiliary and control equipment either directly mounted or as a separate structure.

This standard provides procedures to seismically qualify ground-mounted switchgear assemblies for rated voltages above 52 kV.

The seismic qualification of the switchgear assemblies is only performed upon request.

This standard specifies seismic severity levels and gives a choice of methods that may be applied to demonstrate the performance of high-voltage switchgear assemblies for which seismic qualification is required.

The final seismic analysis shall be performed by assuming that the switchgear is installed on firm ground.

2 Normative references

The following referenced documents are indispensable for the application 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 60068-2-47, *Environmental testing – Part 2-47: Test – Mounting of specimens for vibration, impact and similar dynamic tests*

IEC 60068-2-57, *Environmental testing – Part 2-57: Tests – Test Ff: Vibration – Time-history method*

IEC 60068-3-3:1991, *Environmental testing – Part 3: Guidance – Seismic test methods for equipments*