SVENSK STANDARD SS-EN IEC 62271-101

Fastställd	Utgåva	Sida	Ansvarig kommitté
2022-01-26	3	1 (1+157)	SEK TK 17AC

Kopplingsapparater för spänning över 1 kV – Del 101: Syntetisk provning

High-voltage switchgear and controlgear –
Part 101: Synthetic testing

Som svensk standard gäller europastandarden EN IEC 62271-101:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62271-101:2021.

Nationellt förord

Europastandarden EN IEC 62271-101:2021*)

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
- **IEC 62271-101, Third edition, 2021*) - High-voltage switchgear and controlgear - Part 101: Synthetic testing**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN IEC 62271-100, utgåva 3, 2021.

Tidigare fastställd svensk standard SS-EN 62271-101, utgåva 2, 2013 med ändring SS-EN 62271-101/A1:2018, gäller ej fr o m 2024-08-31.

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*)Corrigendum EN IEC 62271-101:2021/AC:2021-11 ingår i standarden. Corrigendum No 1, October 2021 till IEC 62271-101:2021 är inarbetat i standarden

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Denna standard är fastställd av SEK Svensk Elstandard,
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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SEK är Sveriges röst i standardiseringsarbetet inom elområdet

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SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

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Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62271-101

September 2021

ICS 29.130.10

Supersedes EN 62271-101:2013 and all of its amendments and corrigenda (if any)

English Version

High-voltage switchgear and controlgear - Part 101: Synthetic testing (IEC 62271-101:2021)

Appareillage à haute tension - Partie 101: Essais synthétiques
(IEC 62271-101:2021)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 101: Synthetische Prüfung
(IEC 62271-101:2021)

This European Standard was approved by CENELEC on 2021-08-31. 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 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.

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

CENELEC

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 62271-101:2021 E

European foreword

The text of document 17A/1312/FDIS, future edition 3 of IEC 62271-101, prepared by SC 17A "Switching devices" of IEC/TC 17 "High-voltage switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62271-101:2021.

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)	2022-05-31
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2024-08-31

This document supersedes EN 62271-101:2013 and all of its amendments and corrigenda (if any).

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62271-101:2021 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 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 Where 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 62271-100	2021	High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers	EN IEC 62271-100	2021

IEC 62271-101

Edition 3.0 2021-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour
inside

High-voltage switchgear and controlgear –
Part 101: Synthetic testing

Appareillage à haute tension –
Partie 101: Essais synthétiques

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 101: Synthetic testing

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 62271-101 has been prepared by subcommittee 17A: Switching devices, of IEC technical committee 17: High-voltage switchgear and controlgear.

This third edition cancels and replaces the second edition published in 2012 and Amendment 1:2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the second edition:

a) alignment with the third edition of IEC 62271-100:2021;
b) update this document with the last methods and techniques used for synthetic tests;

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

FDIS	Report on voting
17A/1312/FDIS	17A/1315/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

This publication shall be read in conjunction with IEC 62271-100:2021, to which it refers. The numbering of the subclauses of Clause 7 is the same as in IEC 62271-100. However, not all subclauses of IEC 62271-100 are addressed; merely those where synthetic testing has introduced changes.

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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The contents of the corrigendum of October 2021 have been included in this copy.

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.

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 101: Synthetic testing

1 Scope

This part of IEC 62271 mainly applies to AC circuit-breakers within the scope of IEC 62271-100. It provides the general rules for testing AC circuit-breakers, for making and breaking capacities over the range of test duties described in 7.102 to 7.111 of IEC 62271-100:2021, by synthetic methods.

It has been proven that synthetic testing is an economical and technically correct way to test high-voltage AC circuit-breakers according to the requirements of IEC 62271-100 and that it is equivalent to direct testing.

The methods and techniques described are those in general use. The purpose of this document is to establish criteria for synthetic testing and for the proper evaluation of results. Such criteria will establish the validity of the test method without imposing restraints on innovation of test circuitry.

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 62271-100:2021, *High-voltage switchgear and controlgear – Part 100: Alternating-current circuit-breakers*

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