SVENSK STANDARD SS-EN IEC 62271-104

Fastställd	Utgåva	Sida	Ansvarig kommitté
2021-04-21	3	1 (1+54)	SEK TK 17AC

Kopplingsapparater för spänning över 1 kV – Del 104: Kombinationer av högspänningslastbrytare för spänningar över 52 kV

High-voltage switchgear and controlgear – Part 104: Alternating current switches for rated voltages higher than 52 kV

Som svensk standard gäller europastandarden EN IEC 62271-104:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62271-104:2020.

Nationellt förord

Europastandarden EN IEC 62271-104:2020

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62271-104, Third edition, 2020 - High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages higher than 52 kV**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 62271-1, utgåva 2, 2018, SS-EN IEC 62271-100, utgåva 3:202X*), SS-EN IEC 62271-102, utgåva 2, 2018 och SS-EN IEC 62271-110, utgåva 4, 2018.

Tidigare fastställd svensk standard SS-EN 62271-104, utgåva 2, 2015, gäller ej fr o m 2023-09-25.

*) SS-EN IEC 62271-100, utgåva 3, 202X är under bearbetning.

ICS 29.130.99; 29.130.10

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62271-104

October 2020

ICS 29.130.99; 29.130.10

Supersedes EN 62271-104:2015 and all of its amendments and corrigenda (if any)

English Version

High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages higher than 52 kV (IEC 62271-104:2020)

Appareillage à haute tension - Partie 104: Interrupteurs à courant alternatif pour tensions assignées supérieures à 52 kV
(IEC 62271-104:2020)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 104: Wechselstrom-Lastschalter für Bemessungsspannungen über 52 kV
(IEC 62271-104:2020)

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 62271-104:2020 E

European foreword

The text of document 17A/1273/FDIS, future edition 3 of IEC 62271-104, 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 62271-104:2020.

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) 2021-06-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-09-25

This document supersedes EN 62271-104:2015 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.

Endorsement notice

The text of the International Standard IEC 62271-104:2020 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 60059	NOTE	Harmonized as EN 60059
IEC 60137	NOTE	Harmonized as EN 60137

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 60050-441	1984	International Electrotechnical Vocabulary. Switchgear, controlgear and fuses	-	-
+ A1	2000		-	-
IEC 60071	series	Insulation co-ordination	EN IEC 60071	series
IEC 60071-1	-	Insulation co-ordination - Part 1: Definitions, principles and rules	EN IEC 60071-1	-
IEC 60270	-	High-voltage test techniques - Partial discharge measurements	EN 60270	-
IEC 62271-1	2017	High-voltage switchgear and controlgear - Part 1: Common specifications for alternating current switchgear and controlgear	EN 62271-1	2017
IEC 62271-100	—[1]	High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers	prEN IEC 62271-100	—[2]
IEC 62271-101	-	High-voltage switchgear and controlgear - Part 101: Synthetic testing	EN 62271-101	-
IEC 62271-102	2018	High-voltage switchgear and controlgear – Part 102: Alternating current disconnectors and earthing switches	EN IEC 62271-102	2018
IEC 62271-110	2017	High-voltage switchgear and controlgear – Part 110: Inductive load switching	EN IEC 62271-110	2018

[1] Under preparation. Stage at the time of publication: IEC CCDV 62271-100:2020.

[2] Under preparation. Stage at the time of publication: prEN IEC 62271-100:2020.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 104: Alternating current switches for rated voltages higher than 52 kV

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 62271-104 has been prepared by subcommittee 17A: Switching devices, of IEC technical committee 17: High-voltage switchgear and controlgear.

This third edition replaces and cancels the second edition published in 2015. It constitutes a technical revision.

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

– new numbering, following IEC 62271-1:2017.

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

FDIS	Report on voting
17A/1273/FDIS	17A/1278/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

This standard is to be read in conjunction with IEC 62271-1:2017, IEC 62271-100:— [1], IEC 62271-102:2018 and IEC 62271-110:2017. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in IEC 62271-1. Modifications to these clauses and subclauses are given under the same numbering, whilst additional subclauses are numbered from 101.

A list of all parts in the IEC 62271 series, published 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 "http://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.

[1] Under preparation. Stage at the time of publication: IEC CCDV 62271-100:2020.

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 104: Alternating current switches for rated voltages higher than 52 kV

1 Scope

This part of IEC 62271 is applicable to three-pole alternating current switches for rated voltages higher than 52 kV, having making and breaking current ratings, for indoor and outdoor installations, and for rated frequencies up to and including 60 Hz.

This document is also applicable to the operating devices of these switches and to their auxiliary equipment.

NOTE 1 Switches for gas insulated switchgear are covered by this document.

NOTE 2 Switches having a disconnecting function and called switch-disconnectors are also covered by IEC 62271-102.

NOTE 3 Earthing switches are not covered by this document. Earthing switches forming an integral part of a switch are covered by IEC 62271-102.

The main object of this document is to establish requirements for switches used in transmission and distribution systems. General purpose switches for this application are designed to comply with the following service applications:

– carrying rated continuous current;
– carrying short-circuit currents for a specified time;
– switching of mainly active loads;
– switching of no-load transformers;
– switching of the charging current of unloaded cables, overhead lines or busbars;
– switching of closed-loop circuits;
– making short-circuit currents.

A further object of this document is to establish requirements for limited purpose and special purpose switches used in transmission and distribution systems.

Limited purpose switches comply with one or more of the service applications indicated above.

Special purpose switches may comply with one or more of the service applications indicated above and, in addition, are suitable for one or more of the following applications:

– switching single capacitor banks;
– switching back-to-back capacitor banks;
– switching shunt reactors including secondary or tertiary reactors switched from the primary side of the transformer;
– applications requiring an increased number of operating cycles;
– switching under earth fault conditions in non-effectively earthed neutral systems.

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 60050-441:1984, *International Electrotechnical Vocabulary (IEV) – Part 441: Switchgear, controlgear and fuses*
IEC 60050-441:1984/AMD1:2000

IEC 60071 (all parts), *Insulation co-ordination*

IEC 60071-1, *Insulation co-ordination – Part 1: Definitions, principles and rules*

IEC 60270, *High-voltage test techniques – Partial discharge measurements*

IEC 62271-1:2017, *High-voltage switchgear and controlgear – Part 1: Common specifications for alternating current switchgear and controlgear*

IEC 62271-100:— [2], *High-voltage switchgear and controlgear – Part 100: Alternating current circuit-breakers*

IEC 62271-101, *High-voltage switchgear and controlgear – Part 101: Synthetic testing*

IEC 62271-102:2018, *High-voltage switchgear and controlgear – Part 102: Alternating current disconnectors and earthing switches*

IEC 62271-110:2017, *High-voltage switchgear and controlgear – Part 110: Inductive load switching*

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2 Under preparation. Stage at the time of publication: IEC CCDV 62271-100:2020.