SLOVENSKI STANDARD
SIST EN IEC 62271-112:2021

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SIST EN 62271-112:2014

Visokonapetostne stikalne in krmilne naprave - 112. del: Hitra ozemljitvena stikala na izmenični tok za ugašanje sekundarnega obloka na prenosnih vodih (IEC 62271 -112:2021)

High-voltage switchgear and controlgear - Part 112: Alternating current high-speed earthing switches for secondary arc extinction on transmission lines (IEC 62271-112:2021)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 112: Schnellschaltende Wechselstrom-Erdungsschalter zum Löschen von sekundären Lichtbögen auf Freileitungen (IEC 62271-112:2021)

Appareillage à haute tension - Partie 112: Sectionneurs de terre rapides à courant alternatif pour l'extinction de l'arc secondaire sur les lignes de transport (IEC 62271-112:2021)

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29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62271-112

September 2021

ICS 29.130.10; 29.130.99

Supersedes EN 62271-112:2013 and all of its amendments and corrigenda (if any)

English Version

High-voltage switchgear and controlgear - Part 112: Alternating current high-speed earthing switches for secondary arc extinction on transmission lines (IEC 62271-112:2021)

Appareillage à haute tension - Partie 112: Sectionneurs de terre rapides à courant alternatif pour l'extinction de l'arc secondaire sur les lignes de transport (IEC 62271-112:2021)

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This European Standard was approved by CENELEC on 2021-08-17. 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.

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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

European foreword

The text of document 17A/1311/FDIS, future edition 2 of IEC 62271-112, 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 62271-112:2021.

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) 2022–05–17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024–08–17

This document supersedes EN 62271-112:2013 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 62271-112:2021 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 60050-441	1984	International Electrotechnical Vocabulary-(IEV) - Part 441: Switchgear, controlgear and fuses		-
+ A1	2000		-	-
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	2021	High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers		-
IEC 62271-102	2018	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	EN IEC 62271-102	2018
IEC 62271-200	2011	High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	EN 62271-200	2012

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

High-voltage switchgear and controlgear –
Part 112: Alternating current high-speed earthing switches for secondary arc extinction on transmission lines

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

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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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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.

IEC 62271-112 has been prepared by subcommittee 17A: Switching devices, of IEC technical committee 17: High-voltage switchgear and controlgear. It is an International Standard.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

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

The document has been updated to the second edition of IEC 62271-1:2017.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
17A/1311/FDIS	17A/1314/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 International Standard should be read in conjunction with IEC 62271-1:2017, to which it refers and which is applicable, unless otherwise specified. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in IEC 62271-1:2017. Amendments 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 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.

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 112: Alternating current high-speed earthing switches for secondary arc extinction on transmission lines

1 Scope

This part of IEC 62271 applies to AC high-speed earthing switches (hereinafter termed HSES) designed for indoor and outdoor installation and for operation at service frequencies of 50 Hz and 60 Hz on systems having rated voltages of 550 kV and above.

HSESs described in this document are intended to extinguish the secondary arc remaining after clearing faults on transmission lines by the circuit-breakers.

For more detailed information on HSESs, refer to Annex A.

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

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

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

IEC 62271-200:2011, *High-voltage switchgear and controlgear – Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in Clause 3 of IEC 62271-1:2017, as well as the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

Additional terms and definitions are classified so as to be aligned with the classification used in IEC 60050-441.

3.1 General terms and definitions

3.1.101
secondary arc
arc that remains at the faulted point after interruption of the short-circuit current fed by the network

Note 1 to entry: This secondary arc is supplied by electrostatic or electromagnetic induction from the adjacent live phases.

3.1.102
single-phase auto-reclosing scheme
auto-reclosing scheme in which a faulted phase circuit is opened and automatically re-closed independently from the other phases

3.1.103
multi-phase auto-reclosing scheme
auto-reclosing scheme applied to double circuit overhead lines in which all faulted phase circuits are opened and re-closed independently provided that at least two different phases remain un-faulted

Note 1 to entry: An example of multi-phase auto-reclosing scheme is indicated in Figure 1.