BS EN IEC 62271-108:2020

BSI Standards Publication

# High-voltage switchgear and controlgear

Part 108: High-voltage alternating current disconnecting circuit-breakers for rated voltages above 52 kV

bsi.

# National foreword

This British Standard is the UK implementation of EN IEC 62271-108:2020. It is identical to IEC 62271-108:2020. It supersedes BS EN 62271-108:2006, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/17, High voltage switchgear, controlgear and assemblies.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.


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**Compliance with a British Standard cannot confer immunity from legal obligations.**

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EUROPEAN STANDARD

NORME EUROPÉENNE

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# EN IEC 62271-108

September 2020

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Supersedes EN 62271-108:2006 and all of its amendments and corrigenda (if any)

English Version

# High-voltage switchgear and controlgear - Part 108: High-voltage alternating current disconnecting circuit-breakers for rated voltages above 52 kV (IEC 62271-108:2020)

Appareillage à haute tension - Partie 108: Disjoncteurs-sectionneurs à courant alternatif à haute tension de tensions assignées supérieures à 52 kV (IEC 62271-108:2020)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 108: Hochspannungs-Wechselstrom-Leistungsschalter mit Trennfunktion für Bemessungsspannungen größer 52 kV (IEC 62271-108:2020)

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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/1269/FDIS, future edition 2 of IEC 62271-108, 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 62271-108:2020.

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) 2021-05-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-08-13

This document supersedes EN 62271-108:2006 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 62271-108:2020 was approved by CENELEC as a European Standard without any modification.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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International Standard IEC 62271-108 has been prepared by subcommittee 17A, Switching devices of IEC technical committee 17: High-voltage switchgear and controlgear.

This second edition cancels and replaces the first edition published in 2005. This edition contains the following significant technical changes with respect to the previous edition:

– The document has been restructured according to IEC 62271-1:2017.
– The document has been adapted to some of the changes introduced in IEC 62271-100:–[1].
– The document has been adapted to some of the changes introduced in IEC 62271-102:2018.
– References have been reviewed and updated.

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

– Some definitions have been reviewed and adapted to the latest IEV editions.
– Rated static terminal load and static terminal load test have been removed and a design requirement for static mechanical loads has been included.
– Additional type tests for auxiliary and control circuits have been included.
– X-radiation test procedure for vacuum interrupters has been included.
– Type test for testing of interlocking device and type test for testing of temporary mechanical locking devices have been included.
– Special requirements for making and breaking tests on class E2 disconnecting circuit-breakers have been removed.

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

| FDIS | Report on voting |
|---|---|
| 17A/1269/FDIS | 17A/1274/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.

This document is to be read in conjunction with IEC 62271-100:– and IEC 62271-102:2018, to which it refers and which are 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 of the IEC 62271 series, under the general title *High-voltage switchgear and controlgear*, can be found on the IEC website.

In Canada, disconnecting circuit-breakers are accepted only when a visible gap is provided.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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 108: High-voltage alternating current disconnecting circuit-breakers for rated voltages above 52 kV

## 1 Scope

This part of IEC 62271 applies to high-voltage alternating current disconnecting circuit-breakers for operation at frequencies of 50 Hz and 60 Hz on systems having voltages above 52 kV.

This document identifies which requirements of IEC 62271-1, IEC 62271-100:– and IEC 62271-102 are applicable. It also gives the additional requirements specific to these devices.

This document covers single switching devices which perform the functions of both a circuit-breaker and a disconnector by means of contacts housed in a single enclosure, and in which the circuit-breaker contacts in the open position satisfy, or contribute to, the isolating requirements of the disconnector function. As there is interaction between the requirements of the separate functions, it is important to consider the standardization of requirements. This document details the requirements for a disconnecting circuit-breaker, identifying where these differ from the separate requirements of a discrete circuit-breaker and a disconnector.

## 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 (available at: http://www.electropedia.org)

IEC 60050-614:2016, *International electrotechnical vocabulary (IEV) – Part 614: Generation, transmission and distribution of electricity – Operation* (available at: http://www.electropedia.org)

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

IEC 62271-100:–, *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*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-441, IEC 60050-614 and the following apply.