SLOVENSKI STANDARD
SIST EN 62271-104:2015

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Nadomešča:
SIST EN 62271-104:2009

Visokonapetostne stikalne in krmilne naprave - 104. del: Stikala za izmenični tok za naznačene napetosti 52 kV in več (IEC 62271-104:2015)

High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages of 52 kV and above

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 104: Wechselstrom-Lastschalter für Bemessungsspannungen über 52 kV

Appareillage à haute tension - Partie 104: Interrupteurs à courant alternatif pour tensions assignées égales ou supérieures à 52 kV

Ta slovenski standard je istoveten z: **EN 62271-104:2015**

ICS:

29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear

SIST EN 62271-104:2015 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62271-104

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English Version

High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages higher than 52 kV (IEC 62271-104:2015)

Appareillage à haute tension - Partie 104: Interrupteurs à courant alternatif pour tensions assignées supérieures à 52 kV
(IEC 62271-104:2015)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 104: Wechselstrom-Lastschalter für Bemessungsspannungen über 52 kV
(IEC 62271-104:2015)

This European Standard was approved by CENELEC on 2015-03-12. 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: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 17A/1079/FDIS, future edition 2 of IEC 62271-104, prepared by SC 17A “High-voltage switchgear and controlgear” of IEC TC 17 “Switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62271-104:2015.

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)	2015-12-12
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-03-12

This document supersedes EN 62271-104:2009.

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Endorsement notice

The text of the International Standard IEC 62271-104:2015 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 60137	NOTE	Harmonized as EN 60137.
IEC 60059	NOTE	Harmonized as EN 60059.
IEC 62271-101	NOTE	Harmonized as EN 62271-101.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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) -- Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60071	series	Insulation co-ordination	EN 60071	series
IEC 60071-1	-	Insulation co-ordination -- Part 1: Definitions, principles and rules	EN 60071-1	-
IEC 60270	-	High-voltage test techniques - Partial discharge measurements	EN 60270	-
IEC 62271-1	2007	High-voltage switchgear and controlgear -- Part 1: Common specifications	EN 62271-1	2008
+A1	2011		+A1	2011
IEC 62271-100	2008	High-voltage switchgear and controlgear -- Part 100: Alternating current circuit-breakers	EN 62271-100	2009
+A1	2012		+A1	2012
IEC 62271-102	2001	High-voltage switchgear and controlgear -- Part 102: Alternating current disconnectors and earthing switches	EN 62271-102	2002
			+EN 62271-102:2002/corrigendum Jul. 2008	2008
			+EN 62271-102:2002/corrigendum Mar. 2005	2005
+A1	2011		+A1	2011
+A2	2013		+A2	2013
IEC 62271-110	2012	High-voltage switchgear and controlgear -- Part 110: Inductive load switching	EN 62271-110	2012

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

Appareillage à haute tension – Partie 104: Interrupteurs à courant alternatif pour tensions assignées supérieures à 52 kV

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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: High-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

This second edition replaces and cancels the first edition published in 2009 and constitutes a technical revision.

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

- the title was changed such that the voltage range now is >52 kV instead of ≥52 kV;
- the references have been updated;
- the comments in 17A/1063/RVC have been addressed.

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

FDIS	Report on voting
17A/1079/FDIS	17A/1082/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 standard is to be read in conjunction with IEC 62271-1 (2007), IEC 62271-100 (2008), IEC 62271-102 (2001) and IEC 62271-110 (2012). 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 publication will remain unchanged until the stability 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 104: Alternating current switches for rated voltages higher than 52 kV

1 General

1.1 Scope

Subclause 1.1 of IEC 62271-1:2007 is not applicable, and is replaced as follows:

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 standard 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 standard.

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 standard. Earthing switches forming an integral part of a switch are covered by IEC 62271-102.

The main object of this standard 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 normal current continuously;
– 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 standard 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.

1.2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 – Chapter 441: Switchgear, controlgear and fuses*

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 62271-1:2007, *High-voltage switchgear and controlgear – Part 1: Common specifications*
IEC 62271-1:2007/AMD1:2011

IEC 62271-100:2008, *High-voltage switchgear and controlgear – Part 100: Alternating-current circuit-breakers*
IEC 62271-100:2008/AMD1:2012

IEC 62271-102:2001, *High-voltage switchgear and controlgear – Part 102: Alternating current disconnectors and earthing switches*
IEC 62271-102:2001/AMD1:2011
IEC 62271-102:2001/AMD2:2013

IEC 62271-110:2012, *High-voltage switchgear and controlgear – Part 110: Inductive load switching*

2 Normal and special service conditions

Clause 2 of IEC 62271-1:2007/AMD 1:2011 is applicable.

3 Terms and definitions

Clause 3 of IEC 62271-1:2007 is applicable with the the following additions.

For the purposes of this document, definitions of general terms are based on IEC 60050-441 and IEC 60071-1.

Additional terms and definitions are based solely on IEC 60050-441.

3.1 General terms

Subclause 3.1 of IEC 62271-1:2007 is applicable.

3.2 Assemblies

Subclause 3.2 of IEC 62271-1:2007 is applicable.

3.3 Parts of assemblies

Subclause 3.2 of IEC 62271-1:2007 is applicable.