

<b>STN</b>	<b>Vysokonapäťové spínacie a riadiacie zariadenia. Časť 104: Spínače na striedavý prúd a na menovité napätia vyššie ako 52 kV.</b>	<b>STN EN 62271-104</b>  35 4220
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High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages higher than 52 kV

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/15

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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)

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-03-12

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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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**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**





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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**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**

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## CONTENTS

FOREWORD.....	6
1 General.....	8
1.1 Scope.....	8
1.2 Normative references.....	9
2 Normal and special service conditions.....	9
3 Terms and definitions.....	9
3.1 General terms.....	9
3.2 Assemblies.....	9
3.3 Parts of assemblies.....	9
3.4 Switching devices.....	10
3.6 Operation.....	11
3.7 Characteristic quantities.....	11
4 Ratings.....	13
4.1 Rated voltage ( $U_r$ ).....	13
4.2 Rated insulation level.....	13
4.3 Rated frequency ( $f_r$ ).....	13
4.4 Rated normal current and temperature rise ( $I_r$ ).....	13
4.5 Rated short-time withstand current ( $I_k$ ).....	13
4.6 Rated peak withstand current ( $I_p$ ).....	13
4.7 Rated duration of short-circuit ( $t_k$ ).....	13
4.8 Rated supply voltage of closing and opening devices and of auxiliary and control circuits ( $U_a$ ).....	13
4.9 Rated supply frequency of closing and opening devices and of auxiliary circuits.....	13
4.10 Rated pressure of compressed gas supply for controlled pressure systems.....	14
4.11 Rated filling levels for insulation and/or operation.....	14
4.101 Rated earth fault breaking current.....	14
4.102 Rated short-circuit making current.....	14
4.103 Rated mainly active load-breaking current.....	14
4.104 Rated closed-loop breaking current.....	14
4.105 Rated capacitive switching currents.....	14
4.105.1 Rated line-charging breaking current.....	14
4.105.2 Rated cable-charging breaking current.....	14
4.105.3 Rated single capacitor bank breaking current.....	14
4.105.4 Rated back-to-back capacitor bank breaking current.....	14
4.105.5 Single capacitor bank inrush making current.....	15
4.105.6 Rated back-to-back capacitor bank inrush making current.....	15
4.105.7 Rated cable and line-charging breaking current under earth fault conditions.....	15
4.106 Inductive load switching.....	15
4.106.1 Shunt reactor breaking current.....	15
4.106.2 Rated no-load transformer breaking current.....	15
4.107 Rated mechanical terminal load.....	15
4.108 Coordination of rated values for a general-purpose switch.....	15
4.109 Coordination of rated values for limited-purpose and special-purpose switches.....	16



5	Design and construction .....	16
5.1	Requirements for liquids in high-voltage switches .....	16
5.2	Requirements for gases in high-voltage switches .....	16
5.3	Earthing of high-voltage switches .....	17
5.4	Auxiliary and control equipment.....	17
5.5	Dependent power operation.....	17
5.6	Stored energy operation .....	17
5.7	Independent manual or power operation (independent unlatched operation) .....	17
5.8	Operation of releases .....	17
5.9	Low- and high-pressure interlocking and monitoring devices .....	17
5.10	Nameplates.....	17
5.11	Interlocking devices .....	18
5.12	Position indication.....	19
5.13	Degree of protection provided by enclosures.....	19
5.14	Creepage distances for outdoor insulators .....	19
5.15	Gas and vacuum tightness .....	19
5.16	Liquid tightness.....	19
5.17	Fire hazard (flammability).....	19
5.18	Electromagnetic compatibility (EMC).....	19
5.19	X-ray emission .....	19
5.20	Corrosion.....	19
5.101	Closing mechanism .....	19
5.102	Mechanical strength .....	19
5.103	Position of the movable contact system and its indicating or signalling device .....	19
5.103.1	Securing the position .....	19
5.103.2	Indication of position .....	20
5.103.3	Auxiliary contacts for signalling .....	20
6	Type tests .....	20
6.1	General.....	20
6.2	Dielectric tests .....	21
6.3	Radio interference voltage (r.i.v.) tests .....	22
6.4	Measurement of the resistance of circuits .....	22
6.5	Temperature rise tests .....	22
6.6	Short-time withstand current and peak withstand current tests .....	22
6.7	Verification of the protection .....	22
6.8	Tightness tests.....	22
6.9	Electromagnetic compatibility tests (EMC) .....	22
6.10	Additional tests on auxiliary and control circuits .....	22
6.11	X-radiation test procedure for vacuum interrupters .....	22
6.101	Mechanical operation tests.....	22
6.101.1	Arrangement of the switch for tests .....	22
6.101.2	Tests for general-purpose switches .....	23
6.101.3	Tests for limited-purpose and special-purpose switches .....	24
6.101.4	Condition of switch during and after mechanical operation tests .....	24
6.101.5	Operation under severe ice conditions .....	24
6.101.6	Static terminal load tests .....	24
6.102	Miscellaneous provision for making and breaking tests .....	25
6.102.1	Arrangement of the switch for tests .....	25

6.102.2	Behaviour of switch during breaking tests .....	26
6.102.3	Condition of switch after breaking tests .....	26
6.102.4	Condition of switch during and after short-circuit making tests.....	26
6.103	Test circuits for making and breaking tests .....	27
6.103.1	General .....	27
6.103.2	Earthing of test circuit and switch .....	27
6.103.3	Mainly active load circuit (test duty 1 and test duty 3) .....	28
6.103.4	Closed-loop circuits (test duty 2) .....	31
6.103.5	Test circuits for short-circuit making tests (test duty 6).....	35
6.103.6	Test circuits for breaking tests under earth fault conditions (test duties 7a and 7b).....	37
6.104	Test quantities .....	37
6.104.1	Test frequency .....	37
6.104.2	Test voltage for breaking tests .....	37
6.104.3	Breaking current .....	38
6.104.4	Test voltage for short-circuit making tests.....	39
6.104.5	Short-circuit making current.....	40
6.105	Capacitive current switching tests.....	40
6.105.1	Applicability .....	40
6.105.2	General .....	41
6.105.3	Characteristics of supply circuits .....	41
6.105.4	Earthing of the supply circuit .....	41
6.105.5	Characteristics of the capacitive circuit to be switched .....	41
6.105.6	Waveform of the current.....	41
6.105.7	Test voltage.....	41
6.105.8	Test current .....	42
6.105.9	Test duties.....	42
6.105.10	Tests with specified TRV .....	43
6.105.11	Criteria to pass the test.....	43
6.106	Inductive load switching (test duty 5) .....	43
6.106.1	No-load transformer circuit (test duty 5a).....	43
6.106.2	Shunt-reactor current switching tests (test duty 5b).....	43
6.107	Tests for general-purpose switches .....	44
6.108	Tests for limited-purpose switches.....	45
6.109	Tests for special-purpose switches .....	45
6.110	Type test reports.....	45
7	Routine tests .....	46
7.1	Dielectric tests on main circuit .....	46
7.2	Tests on auxiliary and control circuits .....	46
7.3	Measurement of the resistance of the main circuit.....	46
7.4	Tightness test .....	46
7.5	Design and visual checks .....	46
7.101	Mechanical operating tests.....	46
8	Guide to the selection of high-voltage switches .....	47
8.1	Selection of rated values .....	47
8.2	Continuous or temporary overload due to changed service conditions .....	47
8.101	General.....	47
8.102	Conditions affecting application .....	47

8.103	Insulation coordination .....	47
9	Information to be given with enquiries, tenders and orders.....	48
9.1	Information with enquiries and orders .....	48
9.2	Information with tenders .....	48
10	Transport, storage, installation, operation and maintenance.....	48
11	Safety .....	48
12	Influence of the high-voltage switch on the environment .....	48
	Bibliography .....	49
	Figure 1 – Single-phase test circuit for mainly active load current switching for test duties 1 and 3.....	28
	Figure 2 – Single-phase test circuit for transmission line closed loop and parallel-transformer current switching test, for test duties 2a and 2b.....	28
	Figure 3 – Three-phase test circuit for mainly active load current switching, for test duties 1 and 3.....	29
	Figure 4 – Supply and load side transient for mainly active load current switching tests (see Table 4).....	30
	Figure 5 – Three-phase test circuit for transmission line closed loop and parallel-transformer current switching test for test duties 2a and 2b.....	31
	Figure 6 – Illustration of the transient associated with transmission line closed loop current breaking tests (see Table 5).....	33
	Figure 7 – Three-phase test circuit for short circuit making current test for test duty 6 .....	36
	Figure 8 – Single-phase test circuit for short circuit making current test for test duty 6 .....	36
	Table 1 – Preferred values of line- and cable-charging breaking currents for a general-purpose switch .....	16
	Table 2 – Nameplate information.....	18
	Table 3 – Type tests .....	21
	Table 4 – Supply circuit TRV parameters for mainly active load current breaking tests .....	30
	Table 5 – TRV parameters for transmission line closed loop current breaking tests .....	32
	Table 6 – Test duties for single-phase tests on three-pole switches having a non-simultaneity between poles of 0,25 cycle or less.....	33
	Table 7 – Test duties for single-phase tests on three-pole switches having more than 0,25 cycle non-simultaneity and switches operated pole after pole.....	34
	Table 8 – TRV parameters for parallel transformer current breaking tests.....	35
	Table 9 – Test duties for three-phase tests on three-pole switches .....	37

## 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

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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.

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**