SVENSK STANDARD SS-EN 62271-104

Fastställd	Utgåva	Sida	Ansvarig kommitté
2010-02-22	1	1 (1+48)	SEK TK 17AC

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

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

Som svensk standard gäller europastandarden EN 62271-104:2009. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62271-104:2009.

Nationellt förord

Europastandarden EN 62271-104:2009

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62271-104, First edition, 2009 - High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages of 52 kV and above**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 62271-1, utgåva 1, 2009, SS-EN 62271-100, SS-EN 62271-102, utgåva 1, 2003 och SS-EN 62271-110, utgåva 1, 2005.

Tidigare fastställd svensk standard SS-EN 60265-2, utgåva 1, 1994, SS-EN 60265-2/A1, utgåva 1, 1996, SS-EN 60265-2/A2, utgåva 1, 1999 och SS-IEC 265-2, utgåva 1, 1991, gäller ej fr o m 2012-06-01.

ICS 29.130.10; 29.130.99

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

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Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

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Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62271-104

July 2009

ICS 29.130.10; 29.130.99

Supersedes EN 60265-2:1993 + A1:1995 + A2:1998

English version

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

(IEC 62271-104:2009)

Appareillage à haute tension -
Partie 104: Interrupteurs à courant alternatif pour tensions assignées égales ou supérieures à 52 kV
(CEI 62271-104:2009)

Hochspannungs-Schaltgeräte und -Schaltanlagen -
Teil 104: Wechselstrom-Lastschalter für Bemessungsspannungen über 52 kV
(IEC 62271-104:2009)

This European Standard was approved by CENELEC on 2009-06-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62271-104:2009 E

SEK Svensk Elstandard

Foreword

The text of document 17A/857/FDIS, future edition 1 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 was approved by CENELEC as EN 62271-104 on 2009-06-01.

This European Standard supersedes EN 60265-2:1993 + A1:1995 + A2:1998.

The main changes with respect to EN 60265-2 are as follows:

– alignment with EN 62271-1 and EN 62271-100;

– requirements for capacitive current switching aligned with those in EN 62271-100: classes C1 and C2 are introduced.

This standard is to be read in conjunction with EN 62271-1:2008, EN 62271-100, EN 62271-102:2002 and EN 62271-110:2005. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in EN 62271-1. Modifications to these clauses and subclauses are given under the same numbering, whilst additional subclauses are numbered from 101.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2010-03-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62271-104:2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60137 NOTE Harmonized as EN 60137:2008 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-441	1984	International Electrotechnical Vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60059	- [1)]	IEC standard current ratings	EN 60059	1999 [2)]
IEC 60071	Series	Insulation co-ordination	EN 60071	Series
IEC 60071-1	- [1)]	Insulation co-ordination - Part 1: Definitions, principles and rules	EN 60071-1	2006 [2)]
IEC 60270	- [1)]	High-voltage test techniques - Partial discharge measurements	EN 60270	2001 [2)]
IEC 62271-1	2007	High-voltage switchgear and controlgear - Part 1: Common specifications	EN 62271-1	2008
IEC 62271-100	- [1)]	High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers	EN 62271-100	2009 [2)]
IEC 62271-101	- [1)]	High-voltage switchgear and controlgear - Part 101: Synthetic testing	EN 62271-101	2006 [2)]
IEC 62271-102 + corr. April + corr. May	2001 2002 2003	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	EN 62271-102 + corr. March	2002 2005
IEC 62271-110	2005	High-voltage switchgear and controlgear - Part 110: Inductive load switching	EN 62271-110	2005

[1)] Undated reference.

[2)] Valid edition at date of issue.

CONTENTS

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 104: Alternating current switches for rated voltages of 52 kV and above

1 General

1.1 Scope

This part of IEC 62271 is applicable to three-pole alternating current switches for rated voltages 52 kV and above, 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 shall 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, shall be 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 referenced documents are indispensable for the application 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 – Chapter 441: Switchgear, controlgear and fuses*

IEC 60059, *IEC standard current ratings*

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

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

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

IEC 62271-110:2005, *High-voltage switchgear and controlgear – Part 110: Inductive load switching*