SLOVENSKI STANDARD
SIST EN 62271-109:2009

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SIST EN 62271-109:2007

Visokonapetostne stikalne in krmilne naprave - 109. del: Stikala z zaporednimi kondenzatorji na izmeniļ ni tok (IEC 62271-109:2008)

High-voltage switchgear and controlgear - Part 109: Alternating current series capacitor by-pass switches (IEC 62271-109:2008)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 109: Wechselstrom-Überbrückungsschalter für Reihenkondensatoren (IEC 62271-109:2008)

Appareillage à haute tension - Partie 109: Interrupteurs de contournement pour condensateurs série à courant alternatif (CEI 62271-109:2008)

Ta slovenski standard je istoveten z: **EN 62271-109:2009**

ICS:

29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear

SIST EN 62271-109:2009 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62271-109

April 2009

ICS 29.130.10

Supersedes EN 62271-109:2006

English version

High-voltage switchgear and controlgear - Part 109: Alternating-current series capacitor by-pass switches

(IEC 62271-109:2008)

Appareillage à haute tension - Partie 109: Interrupteurs de contournement pour condensateurs série à courant alternatif (CEI 62271-109:2008)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 109: Wechselstrom-Überbrückungsschalter für Reihenkondensatoren (IEC 62271-109:2008)

This European Standard was approved by CENELEC on 2009-03-01. 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 62271-109:2009 E

Foreword

The text of document 17A/837/FDIS, future edition 2 of IEC 62271-109, 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 62271-109 on 2009-03-01.

This European Standard supersedes EN 62271-109:2006.

This standard is to be read in conjunction with EN 62271-100 and EN 62271-1:2008, to which it refers and which is applicable, unless otherwise specified in this standard. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in EN 62271-1. Amendments to these clauses and subclauses are given under the same references 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)	2009-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62271-109:2008 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 60071-1	NOTE	Harmonized as EN 60071-1:2006 (not modified).
IEC 60071-2	NOTE	Harmonized as EN 60071-2:1997 (not modified).
IEC 60137	NOTE	Harmonized as EN 60137:2008 (not modified).
IEC 62271-200	NOTE	Harmonized as EN 62271-200:2004 (not modified).
IEC 62271-203	NOTE	Harmonized as EN 62271-203:2004 (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 60050-151	2001	International Electrotechnical Vocabulary (IEV) - Part 151: Electrical and magnetic devices	-	-
IEC 60050-436	1990	International Electrotechnical Vocabulary (IEV) - Chapter 436: Power capacitors	-	-
IEC 60050-441	1984	International Electrotechnical Vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60050-604	1987	International Electrotechnical Vocabulary (IEV) - Chapter 604: Generation, transmission and distribution of electricity - Operation	-	-
IEC 60060	Series	High-voltage test techniques	EN 60060	Series
IEC 60143-1	2004	Series capacitors for power systems - Part 1: General	EN 60143-1	2004
IEC 60143-2	1994	Series capacitors for power systems - Part 2: Protective equipment for series capacitor banks	EN 60143-2	1994
IEC 60296	- [1)]	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296 + corr. September	2004 [2)] 2004
IEC 60376	- [1)]	Specification of technical grade sulfur hexafluoride (SF_6) for use in electrical equipment	EN 60376	2005 [2)]
IEC 60480	- [1)]	Guidelines for the checking and treatment of sulphur hexafluoride (SF_6) taken from electrical equipment and specification for its re-use	EN 60480	2004 [2)]
IEC 60529	- [1)]	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 [2)] 1993
IEC 62271-1	2007	High-voltage switchgear and controlgear - Part 1: Common specifications	EN 62271-1	2008
IEC 62271-100	2008	High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers	EN 62271-100	2009

[1)] Undated reference.

[2)] Valid edition at date of issue.

Publication	Year	Title	EN/HD	Year
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/TR 62271-303	- [1)]	High-voltage switchgear and controlgear - Part 303: Use and handling of sulphur hexafluoride (SF_6)	-	-

IEC 62271-109

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

High-voltage switchgear and controlgear –
Part 109: Alternating-current series capacitor by-pass switches

Appareillage à haute tension –
Partie 109: Interrupteurs de contournement pour condensateurs série à courant alternatif

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 109: Alternating-current series capacitor by-pass switches

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 62271-109 has been prepared by subcommittee 17A: High-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

This second edition cancels and replaces the first edition, published in 2006, and constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

– By-passing test duty has been split with operations at rated by-pass making current I_{BP} and operations at capacitor bank discharge current $I_{DISCHARGE}$.
– Equivalence regarding applicability of test parameters (current peak and frequency) during by-pass making tests in relation with service conditions have been reviewed and changed accordingly.
– Recovery voltage waveshape during insertion test duty has been recalculated and optimized. An explanatory note on the calculation of the recovery voltage is given in Annex F.

– Withdrawal of the electrical endurance class BP2. Such devices are now covered in informative Annex E

– Addition of Annex D which gives examples of typical by-pass switch ratings.

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

FDIS	Report on voting
17A/837/FDIS	17A/844/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.

A list of all parts of the IEC 62271 series can be found, under the general title *High-voltage switchgear and controlgear*, on the IEC website.

This standard is to be read in conjunction with IEC 62271-100 and IEC 62271-1 (2007), to which it refers and which is applicable, unless otherwise specified in this standard. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in IEC 62271-1. Amendments to these clauses and subclauses are given under the same references whilst additional subclauses are numbered from 101.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.