



SLOVENSKI STANDARD SIST EN 62271-109:2007

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High-voltage switchgear and controlgear -- Part 109: Alternating-current series capacitor
by-pass switches (IEC 62271-109:2006)

Hochspannungs-Schaltgeräte und -Schaltanlagen -- Teil 109: Wechselstrom-
Überbrückungsschalter für Reihenkapazitoren (IEC 62271-109:2006)

Appareillage a haute tension -- Partie 109: Interrupteurs de contournement pour
condensateurs série a courant alternatif (IEC 62271-109:2006)

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Ta slovenski standard je istoveten z: EN 62271-109:2006

ICS:

29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear
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**High-voltage switchgear and controlgear
Part 109: Alternating-current series capacitor by-pass switches
(IEC 62271-109:2006)**

Appareillage à haute tension
Partie 109: Interrupteurs de
contournement pour condensateurs
série à courant alternatif
(CEI 62271-109:2006)

Hochspannungs-Schaltgeräte
und -Schaltanlagen
Teil 109: Wechselstrom-
Überbrückungsschalter
für Reihenkapazitoren
(IEC 62271-109:2006)

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This European Standard was approved by CENELEC on 2006-11-01. 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, 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: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 17A/759/FDIS, future edition 1 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 2006-11-01.

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) 2007-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-11-01

This standard should be read in conjunction with EN 62271-100:2001 and EN 60694:1996, to which it refers and which is applicable, unless otherwise specified. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in EN 60694. Amendments to these clauses and subclauses are given under the same numbering, whilst additional subclauses are numbered from 101.

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 62271-109:2006 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 60071-1:1995 (not modified).
IEC 60071-2	NOTE	Harmonized as EN 60071-2:1997 (not modified).
IEC 61166	NOTE	Harmonized as EN 61166:1993 (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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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 60137	2003	Insulated bushings for alternating voltages above 1 000 V	EN 60137	2003
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	2003	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296 + corr. September	2004 2004
IEC 60376	2005	Specification of technical grade sulfur hexafluoride (SF ₆) for use in electrical equipment	EN 60376	2005
IEC 60427	2000	Synthetic testing of high-voltage alternating current circuit-breakers	EN 60427 ¹⁾	2000
IEC 60480	2004	Guidelines for the checking and treatment of sulphur hexafluoride (SF ₆) taken from electrical equipment and specification for its re-use	EN 60480	2004

¹⁾ EN 60427 is superseded by EN 62271-101:2006, which is based on IEC 62271-101:2006.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60694	1996	Common specifications for high-voltage switchgear and controlgear standards	EN 60694 + corr. May	1996 1999
IEC/TS 61634	1995	High-voltage switchgear and controlgear - Use and handling of sulphur hexafluoride (SF ₆) in high-voltage switchgear and controlgear	-	-
IEC 62271-100	2001	High-voltage switchgear and controlgear Part 100: High-voltage alternating-current circuit-breakers	EN 62271-100	2001
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

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Partie 109:

Interrupteurs de contournement pour condensateurs série à courant alternatif

iTech STANDARD PREVIEW

High-voltage switchgear and controlgear –

Part 109: SIST EN 62271-109:2007

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Alternating-current series capacitor by-pass switches

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For price, see current catalogue*

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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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- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

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 standard cancels and replaces IEC/PAS 62271-109 published in 2002. This first edition constitutes a technical revision.

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

FDIS	Report on voting
17A/759/FDIS	17A/762/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 62271-100 (2001) and IEC 60694, second edition, published in 1996, to which it refers and which is 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 60694. Amendments to these clauses and subclauses are numbered from 101.

The following standards belong to the same IEC 62271 series, under the title *High-voltage switchgear and controlgear*:¹

- Part 1: Common specifications
- Part 100: High-voltage alternating-current circuit-breakers
- Part 101: Synthetic testing
- Part 102: Alternating current disconnectors and earthing switches
- Part 104: Alternating current switches for rated voltages of 52 kV and above
- Part 105: Alternating current switch-fuse combinations
- Part 107: Alternating current fused circuit-switchers for rated voltages above 1 kV up to and including 52 kV
- Part 108: High voltage alternating current disconnecting circuit-breakers for rated voltages of 72,5 kV and above
- Part 109: Alternating-current series capacitor by-pass switches
- Part 110: Inductive load switching

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.

¹ Some of these parts are still in the process of being developed.

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

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

1 General

1.1 Scope

This International Standard is applicable to a.c. series capacitor by-pass switches designed for outdoor installation and for operation at frequencies of 50 Hz and 60 Hz on systems having voltages above 52 kV.

It is only applicable to by-pass switches for use in three-phase systems.

This standard is also applicable to the operating devices of by-pass switches and to their auxiliary equipment.

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(151):2001, *International Electrotechnical Vocabulary (IEV) – Chapter 151: Electrical and magnetic devices* <http://standards.iteh.ai/catalog/standards/sist/312dc318-2679-4580-bb6e-45a5805ed3b4/sist-en-62271-109-2007>

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 (all parts), *High-voltage test techniques*

IEC 60137:2003, *Insulated bushings for alternating voltages above 1 000 V*

IEC 60143-1:2004, *Series capacitors for power systems – Part 1: General*

IEC 60143-2:1994, *Series capacitors for power systems – Part 2: Protective equipment for series capacitor banks*

IEC 60296:2003, *Fluids for electrotechnical applications – Unused mineral insulating oils for transformers and switchgear*