



**SLOVENSKI STANDARD**  
**SIST EN 62271-110:2009**

**01-julij-2009**

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**Visokonapetostne stikalne in krmilne naprave - 110. del: Preklapljanje induktivnega bremena (IEC 62271-110:2009)**

High-voltage switchgear and controlgear - Part 110: Inductive load switching (IEC 62271-110:2009)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 110: Schalten induktiver Lasten (CEI 62271-110:2009)

Appareillage à haute tension - Partie 110: Manoeuvre de charges inductives (IEC 62271-110:2009)

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**Ta slovenski standard je istoveten z: EN 62271-110:2009**

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29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 62271-110**

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Supersedes EN 62271-110:2005

English version

**High-voltage switchgear and controlgear -  
Part 110: Inductive load switching  
(IEC 62271-110:2009)**

Appareillage à haute tension -  
Partie 110: Manoeuvre  
de charges inductives  
(CEI 62271-110:2009)

Hochspannungs-Schaltgeräte  
und -Schaltanlagen -  
Teil 110: Schalten induktiver Lasten  
(IEC 62271-110:2009)

This European Standard was approved by CENELEC on 2009-04-01. 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**

## Foreword

The text of document 17A/843/FDIS, future edition 2 of IEC 62271-110, 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 62271-110 on 2009-04-01.

This European Standard supersedes EN 62271-110:2005.

The main changes from EN 62271-110:2005 are that all references to EN 60694 have been replaced with EN 62271-1.

This standard is to be read in conjunction with EN 62271-1:2008 and with EN 62271-100:2009 to which it refers and which are 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 62271-1 and EN 62271-100. 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) 2010-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-04-01

Annex ZA has been added by CENELEC.

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### Endorsement notice

SIST EN 62271-110:2009

The text of the International Standard IEC 62271-110:2009 was approved by CENELEC as a European Standard without any modification. <https://standards.iteh.ai/catalog/standards/sist-en-62271-110-2009>

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

IEC 60470

NOTE Harmonized as EN 60470:2000 (not modified).

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**Annex ZA**  
(normative)**Normative references to international publications  
with their corresponding European publications**

**Addition** to Annex ZA of EN 62271-100:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62271-100	2008	High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers	EN 62271-100	2009

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IEC 62271-110

Edition 2.0 2009-01

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

High-voltage switchgear and controlgear –  
Part 110: Inductive load switching

Appareillage à haute tension –  
Partie 110: Manœuvre de charges inductives

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

## Part 110: Inductive load switching

## FOREWORD

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International Standard IEC 62271-110 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 dated 2005 and constitutes an editorial revision. The main changes from the first edition are that all references to IEC 60694 have been replaced with IEC 62271-1.

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

FDIS	Report on voting
17A/843/FDIS	17A/856/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, first edition, published in 2007, and with IEC 62271-100, second edition, published in 2008, to which it refers and which are 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 62271-1 and IEC 62271-100. Additional subclauses are numbered from 101.

A list of all the parts in the IEC 62271 series, 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 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.

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# HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

## Part 110: Inductive load switching

### 1 General

#### 1.1 Scope

This International Standard is applicable to a.c. circuit-breakers designed for indoor or outdoor installation, for operation at frequencies of 50 Hz and 60 Hz on systems having voltages above 1000 V and applied for inductive current switching with or without additional short-circuit current breaking duties. The standard is applicable to circuit-breakers in accordance with IEC 62271-100 that are used to switch high-voltage motor currents and shunt reactor currents and also to high-voltage contactors used to switch high-voltage motor currents [2].

Switching unloaded transformers, i.e. breaking transformer magnetizing current, is not considered in this standard. The reasons for this are as follows:

- a) due to the non-linearity of the transformer core, it is not possible to correctly model the switching of transformer magnetizing current using linear components in a test laboratory. Tests conducted using an available transformer, such as a test transformer, will only be valid for the transformer tested and cannot be representative for other transformers;
- b) as detailed in CIGRE Technical Brochure 305 [1], the characteristics of this duty are usually less severe than any other inductive current switching duty. It should be noted that such a duty may produce severe overvoltages within the transformer winding(s) depending on the circuit-breaker re-ignition behaviour and transformer winding resonance frequencies.

Short-line faults, out-of-phase current making and breaking and capacitive current switching are not applicable to circuit-breakers applied to switch shunt reactors or motors. These duties are therefore not included in this standard.

Subclause 1.1 of IEC 62271-100 is otherwise applicable.

#### 1.2 Normative references

Subclause 1.2 of IEC 62271-100 is applicable with the following addition:

IEC 62271-100:2008, *High-voltage switchgear and controlgear – Part 100: High-voltage alternating-current circuit-breakers*

### 2 Normal and special service conditions

Clause 2 of IEC 62271-1 is applicable.

### 3 Definitions

For the purposes of this document, the definitions of IEC 60050(441) and IEC 62271-1 apply.