



SLOVENSKI STANDARD SIST EN IEC 62271-110:2018

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Visokonapetostne stikalne in krmilne naprave - 110. del: Preklapljanje induktivnega bremena (IEC 62271-110:2017)

High-voltage switchgear and controlgear - Part 110: Inductive load switching (IEC 62271-110:2017)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 110: Schalten induktiver Lasten (IEC 62271-110:2017)

Appareillage à haute tension - Partie 110: Manoeuvre de charges inductives (IEC 62271-110:2017)

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Ta slovenski standard je istoveten z: EN IEC 62271-110:2018

ICS:

29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear
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EUROPEAN STANDARD

EN IEC 62271-110

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February 2018

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High-voltage switchgear and controlgear - Part 110: Inductive load switching (IEC 62271-110:2017)

Appareillage à haute tension - Partie 110: Manoeuvre de charges inductives
(IEC 62271-110:2017)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 110: Schalten induktiver Lasten
(IEC 62271-110:2017)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62271-110:2018 (E)**European foreword**

The text of document 17A/1151/FDIS, future edition 2 of IEC 62271-110, prepared by SC17A "Switching devices" of IEC/TC 17 "High-voltage switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62271-110:2018.

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) 2018-08-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-11-09

This document supersedes EN 62271-110:2012.

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Endorsement notice

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-441	-	International Electrotechnical Vocabulary (IEV) -- Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 62271-1	2017	High-voltage switchgear and controlgear -- Part 1: Common specifications	EN 62271-1	2017
IEC 62271-100	2008	High-voltage switchgear and controlgear -- Part 100: Alternating current circuit-breakers	EN 62271-100	2009
+ A1	2012		+ A1	2012
IEC 62271-106	2011	High-voltage switchgear and controlgear -- Part 106: Alternating current contactors, contactor-based controllers and motor-starters	EN 62271-106	2011

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IEC 62271-110

Edition 4.0 2017-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

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

INTERNATIONAL
ELECTROTECHNICAL
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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: Switching devices, of IEC technical committee 17: High-voltage switchgear and controlgear.

This fourth edition cancels and replaces the third edition published in 2012 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- all switching devices are now covered, not only circuit-breakers;
- a limited number of T10 tests no longer covers shunt-reactor switching tests below 52 kV;
- evaluation and reporting of a re-ignition-free arcing time window has been added.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
17A/1151/FDIS	17A/1155/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document 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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The contents of the corrigendum of December 2017 have been included in this copy.

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 110: Inductive load switching

1 Scope

This part of IEC 62271 is applicable to AC switching devices designed for indoor or outdoor installation, for operation at frequencies of 50 Hz and 60 Hz on systems having voltages above 1 000 V and applied for inductive current switching. It is applicable to switching devices (including 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 as covered by IEC 62271-106.

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

- a) Owing 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 IEC TR 62271-306, the characteristics of this duty are usually less severe than any other inductive current switching duty. Such a duty may produce severe overvoltages within the transformer winding(s) depending on the re-ignition behaviour of the switching device and transformer winding resonance frequencies.

NOTE 1 The switching of tertiary reactors from the high-voltage side of the transformer is not covered by this document.

NOTE 2 The switching of shunt reactors earthed through neutral reactors is not covered by this document. However, the application of test results according to this document, on the switching of neutral reactor earthed reactors (4-leg reactor scheme), is discussed in IEC TR 62271-306.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *International Electrotechnical Vocabulary – Chapter 441: Switchgear, controlgear and fuses* (available at www.electropedia.org)

IEC 62271-1:2017, *High-voltage switchgear and controlgear – Part 1: Common specifications for alternating current switchgear and controlgear*

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

IEC 62271-100:2008/AMD1:2012

IEC 62271-106:2011, *High-voltage switchgear and controlgear – Part 106: Alternating current contactors, contactor-based controllers and motor-starters*