SLOVENSKI STANDARD
SIST EN 62271-101:2006/A1:2010

01-november-2010

Visokonapetostne stikalne in krmilne naprave - 101. del: Sintetično preskušanje (IEC 62271-101:2006/A1:2010)

High-voltage switchgear and controlgear - Part 101: Synthetic testing (IEC 62271-101:2006/A1:2010)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 101: Synthetische Prüfung (IEC 62271-101:2006/A1:2010)

Appareillage à haute tension - Partie 101: Essais synthétiques (CEI 62271-101:2006/A1:2010)

Ta slovenski standard je istoveten z: **EN 62271-101:2006/A1:2010**

ICS:

29.130.10	Visokonapetostne stikalne in krmilne naprave	High voltage switchgear and controlgear

SIST EN 62271-101:2006/A1:2010 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62271-101/A1

September 2010

ICS 29.130.10

English version

High-voltage switchgear and controlgear - Part 101: Synthetic testing

(IEC 62271-101:2006/A1:2010)

Appareillage à haute tension - Partie 101: Essais synthétiques (CEI 62271-101:2006/A1:2010)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 101: Synthetische Prüfung (IEC 62271-101:2006/A1:2010)

This amendment A1 modifies the European Standard EN 62271-101:2006; it was approved by CENELEC on 2010-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 17A/907/FDIS, future amendment 1 to IEC 62271-1010:2006, 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 amendment A1 to EN 662271-101:2006 on 2010-09-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2011-06-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2013-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 1:2010 to the International Standard IEC 62271-101:2006 was approved by CENELEC as an amendment to the European Standard without any modification.

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 62271-100	2001	High-voltage switchgear and controlgear - Part 100: High-voltage alternating-current circuit-breakers	EN 62271-100	2001[1)]
IEC 62271-100	2008	High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers	EN 62271-100	2009
IEC/TR 62271-308	2002	High-voltage switchgear and controlgear - Part 308: Guide for asymmetrical short-circuit breaking test duty T100a	-	-

[1)] EN 62271-100 is superseded by EN 62271-100:2009, which is based on IEC 62271-100:2008.

IEC 62271-101

Edition 1.0 2010-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

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

Appareillage à haute tension – Partie 101: Essais synthétiques

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX P

ICS 29.130.10

ISBN 978-2-88910-928-9

FOREWORD

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

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

FDIS	Report on voting
17A/907/FDIS	17A/919/RVD

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

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

INTRODUCTION

This amendment cancels and replaces IEC 61633.

The original edition of IEC 62271-101 (2006) makes extensive reference to IEC 62271-100:2001. Since then, a new edition of IEC 62271-100 has been published (2008). Within this amendment, references are made to IEC 62271-100:2008. Unless they are explicitly mentioned in this amendment, all of the references in the original edition of IEC 62271-101 (2006) still make reference to IEC 62271-100:2001. A second amendment to IEC 62271-101, which will update all cross-references to the new IEC 62271-100:2008, is under consideration.

Change *"Tables I.1a through I.2d" to "Tables 15 through 22 of IEC 62271-100:2008" in the whole document.*

2 Normative references

Delete reference to IEC 61633.

Add the following new reference (and footnote) to the existing list:

IEC 62271-100:2008, *High-voltage switchgear and controlgear – Part 100: Alternating-current circuit-breakers* [1]

4.2.4 Other synthetic test methods

In the second paragraph, replace "IEC 61633" by "Annex O of IEC 62271-100:2008".

6 Specific requirements for synthetic tests for making and breaking performance related to the requirements of 6.102 through 6.111 of IEC 62271-100

Add the following text at the end on the first paragraph:

Annex O of IEC 62271-100:2008 gives guidelines for the testing of metal-enclosed and dead tank circuit breakers.

Add the following subclause:

6.102.4.2 Unit testing

For the application of the synthetic test methods to one or more units of a circuit breaker, the requirements of 6.102.4.2 of IEC 62271-100:2008 are applicable. In the case of metal-enclosed or dead tank circuit-breakers, Annex N gives details of some typical test circuits and Annex O of IEC 62271-100:2008 outlines appropriate testing guidelines.

6.111 Capacitive current switching tests

Add the following text:

For metal-enclosed and dead tank circuit-breakers, typical test circuits are given in Annex N and additional guidelines are given in Annex O of IEC 62271-100:2008.

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[1] Unless explicitly otherwise mentioned, all of the references to IEC 62271-100 make reference to IEC 62271-100:2001. A second amendment to IEC 62271-101, which will update all cross-references to the new IEC 62271-100:2008, is under consideration.

Figure 5

Replace the existing Figure 5 by the following new Figure 5:

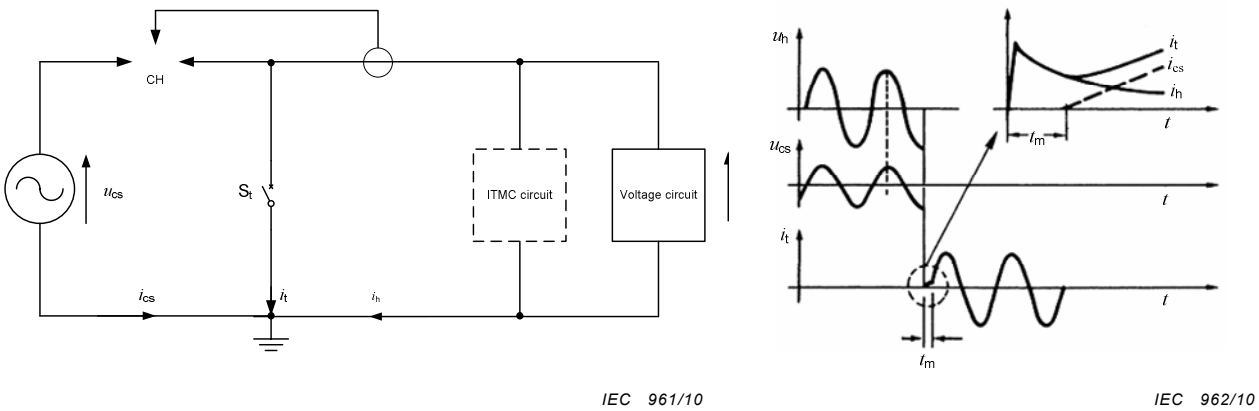

Figure 5a – Synthetic make circuit for terminal fault

Figure 5b – Synthetic make circuit for out-of-phase (ac + dc method)

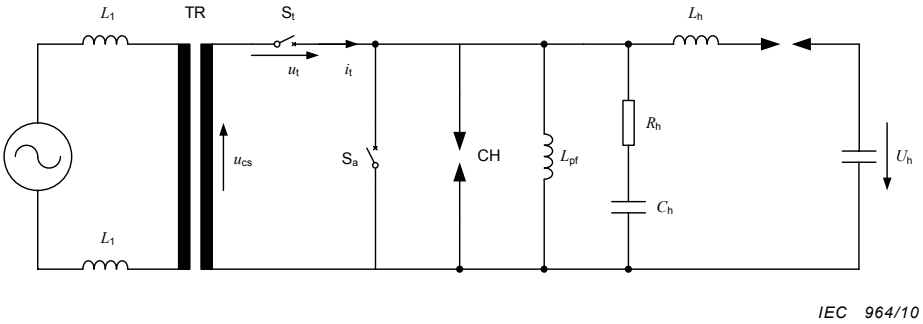

Figure 5c – Synthetic make circuit for out-of-phase (ac + ac method)

Key

S_a	auxiliary circuit-breaker	i_t	current through S_t
S_t	circuit-breaker under test	L_1	inductance of the current circuit
u_{cs}	voltage of the current circuit	L_h	inductance of the voltage circuit
i_{cs}	current of the current circuit	R_h C_h	components of the ITMC circuit
i_h	injected current	L_{pf}	parallel inductance of the voltage circuit
U_h	applied voltage	τ_m	time delay of making device
CH	making device (triggered spark gap)		

Figure 5 – Typical synthetic make circuits for single-phase tests

G.1 Introduction

Add the following new text below the note:

For applicability of the mentioned methods in case of metal-enclosed or dead tank circuit-breakers, see Annex N and Annex O of IEC 62271-100:2008.

G.1.2 Recovery voltage

In the second paragraph, replace "4.3 of IEC 61633" by "O.4.3 of IEC 62271-100:2008".

Annex I

Replace the existing text of Annex I by the following new text:

For the last current loop parameters, refer to Tables 15 through 22 of IEC 62271-100:2008.

Tables I.1a and I.1b cover the last loop di/dt reduction for 50 Hz and 60 Hz, respectively, under three-phase conditions with the first pole-to-clear in phase A and the required asymmetry in phase C.