SLOVENSKI STANDARD
SIST EN 62501:2009/A2:2018

01-junij-2018

Elektronke za pretvornike napetostnih virov (VSC) za enosmerni visokonapetostni prenos električne energije (HVDC) - Električno preskušanje - Dopolnilo A2 (IEC 62501:2009/A2:2017)

Voltage sourced converter (VSC) valves for high-voltage direct curent (HVDC) power transmission - Electrical testing (IEC 62501:2009/A2:2017)

Ventile von Spannungszwischenkreis-Stromrichtern (VSC) für die Hochspannungsgleichstromübertragung (HGÜ) - Elektrische Prüfung (IEC 62501:2009/A2:2017)

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Valves à convertisseur de source de tension (VSC) pour le transport d'énergie en courant continu à haute tension (CCHT) - Essais électriques (IEC 62501:2009/A2:2017)

Ta slovenski standard je istoveten z: **EN 62501:2009/A2:2017**

ICS:

29.200	Usmerniki. Pretvorniki. Stabilizirano električno napajanje	Rectifiers. Convertors. Stabilized power supply
29.240.01	Omrežja za prenos in distribucijo električne energije na splošno	Power transmission and distribution networks in general

SIST EN 62501:2009/A2:2018 **en,fr,de**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62501:2009/A2

December 2017

ICS 29.200; 29.240

English Version

Voltage sourced converter (VSC) valves for high-voltage direct current (HVDC) power transmission - Electrical testing (IEC 62501:2009/A2:2017)

Valves à convertisseur de source de tension (VSC) pour le transport d'énergie en courant continu à haute tension (CCHT) - Essais électriques (IEC 62501:2009/A2:2017)

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This amendment A2 modifies the European Standard EN 62501:2009; it was approved by CENELEC on 2017-10-27. 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 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

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European foreword

The text of document 22F/438/CDV, future edition 1 of IEC 62501:2009/A2:2017, prepared by SC 22F "Power electronics for electrical transmission and distribution systems", of IEC/TC 22 "Power electronic systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62501:2009/A2:2017.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-07-27
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2020-10-27

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

Endorsement notice

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The text of the International Standard IEC 62501:2009/A2:2017 was approved by CENELEC as a European Standard without any modification.

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Modify the bibliography as follows:

SIST EN 62501:2009/A2:2018
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60146-2	NOTE	Harmonized as EN 60146-2.
IEC 61975	NOTE	Harmonized as EN 61975.

SIST EN 62501:2009/A2:2018

Modify the Annex ZA as follows:

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 When 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.

Publication	Year	Title	EN/HD	Year
IEC 60060	series	High-voltage test techniques -- Part 1: General definitions and test requirements	EN 60060	series
IEC 60071	series	Insulation co-ordination -- Part 1: Definitions, principles and rules	EN 60071	series
IEC 60270	-	High-voltage test techniques - Partial discharge measurements	EN 60270	-
IEC 60700-1	2015	Thyristor valves for high voltage direct current (HVDC) power transmission -- Part 1: Electrical testing	EN 60700-1	2015
IEC 62747	-	Terminology for voltage-sourced converters (VSC) for high-voltage direct current (HVDC) systems	EN 62747	-
ISO/IEC 17025	-	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	-

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IEC 62501

Edition 1.0 2017-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2

AMENDEMENT 2

Voltage sourced converter (VSC) valves for high-voltage direct current (HVDC) power transmission – Electrical testing

Valves à convertisseur de source de tension (VSC) pour le transport d'énergie en courant continu à haute tension (CCHT) – Essais électriques

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FOREWORD

This amendment has been prepared by subcommittee 22F: Power electronics for electrical transmission and distribution systems, of IEC technical committee 22: Power electronic systems and equipment.

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

CDV	Report on voting
22F/438/CDV	22F/457/RVC

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 amendment and the base publication will remain unchanged until the stability date indicated on the IEC website 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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1 Scope

Delete the third paragraph, added by IEC 62501:2009/AMD1:2014.

2 Normative references

Delete, in the reference IEC 60270:2000, *High-voltage test techniques – Partial discharge measurements, added by IEC 62501:2009/AMD1:2014, the publication year.*

Replace the existing reference IEC 60700-1 and its footnote by the following new reference:

IEC 60700-1:2015, *Thyristor valves for high voltage direct current (HVDC) power transmission – Part 1: Electrical testing*

Add the following new reference:

IEC 62747, *Terminology for voltage-sourced converters (VSC) for high-voltage direct current (HVDC) systems*

3 Terms and definitions

Replace the existing first sentence by the following new sentence:

SIST EN 62501:2009/A2:2018

For the purposes of this document, the terms and definitions given in IEC 62747 and the following apply

3.5.5
valve base electronics

Delete this term and its definition, modified by IEC 62501:2009/AMD1:2014.

4.1.2 Test object

Replace the existing title of 4.1.2 by the following new title:

4.1.2 Selection of test object

Replace, in letter b) of the first paragraph, the word "tested" *by* "operational type tested".

Table 1 – Minimum number of valve levels to be tested as a function of the number of valve levels per valve

Replace the existing title of Table 1 by the following new title:

Table 1 – Minimum number of valve levels to be operational type tested as a function of the number of valve levels per valve

Add, after Table 1, the following new paragraphs:

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The minimum number of valve levels to be dielectric type tested can be equal to or lower than the number specified for the operational type test.

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The minimum number of valve levels, however, shall be representative to the valve dielectric design. Details can be found in 9.2.

4.1.6 Frequency for testing

Delete the note, added by IEC 62501:2009/AMD1:2014.

4.4.1 General

Add, at the end of the last sentence of the existing paragraph, the words "and providing that the failed valve level permits the rest of the valve or valve section to continue operating without degraded performance".

6.2 Test object

Replace, in the second paragraph, the second existing sentence by the following new sentence:

For the valves with valve surge arrester, a proportionally scaled valve arrester may be included.

6.4 Maximum continuous operating duty test

Replace the paragraph starting with "The test current" by the following new paragraphs:

The test current, in r.m.s., shall be determined taking into account harmonics current and any other additional current through the valve.

The test current value shall incorporate a test safety factor of 1,05.