SLOVENSKI STANDARD
SIST EN 62927:2018/A1:2023

01-september-2023

Elektronke za napetostno napajane pretvornike za statični sinhroni kompenzator (STATCOM) - Električno preskušanje - Dopolnilo A1 (IEC 62927:2017/AMD1:2023)

Amendment 1 - Voltage sourced converter (VSC) valves for static synchronous compensator (STATCOM) - Electrical testing (IEC 62927:2017/AMD1:2023)

Ventile von Spannungszwischenkreis-Stromrichtern (VSC) für STATCOM - Elektrische Prüfungen (IEC 62927:2017/AMD1:2023)

Valves de convertisseur source de tension (VSC) pour compensateur synchrone statique (STATCOM) - Essais électriques (IEC 62927:2017/AMD1:2023)

Ta slovenski standard je istoveten z: **EN 62927:2017/A1:2023**

ICS:

19.080	Električno in elektronsko preskušanje	Electrical and electronic testing
29.200	Usmerniki. Pretvorniki. Stabilizirano električno napajanje	Rectifiers. Convertors. Stabilized power supply

SIST EN 62927:2018/A1:2023 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62927:2017/A1

June 2023

ICS 29.200; 29.240.99

English Version

Voltage sourced converter (VSC) valves for static synchronous compensator (STATCOM) - Electrical testing (IEC 62927:2017/AMD1:2023)

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This amendment A1 modifies the European Standard EN 62927:2017; it was approved by CENELEC on 2023-06-15. 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.

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 CEN-CENELEC Management Centre has the same status as the official versions.

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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

European foreword

The text of document 22F/699/CDV, future IEC 62927/AMD1, 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 62927:2017/A1:2023.

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) 2024-03-15
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow) 2026-06-15

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Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 62927:2017/AMD1:2023 was approved by CENELEC as a European Standard without any modification.

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.cencenelec.eu.

The Annex ZA of EN 62927:2017 applies with the following changes:

Publication	Year	Title	EN/HD	Year
Replace the reference IEC 60071-1:2006 with the following new reference:				
IEC 60071-1	2019	Insulation co-ordination - Part 1: Definitions, principles and rules	EN IEC 60071-1	2019

IEC 62927

Edition 1.0 2023-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Voltage sourced converter (VSC) valves for static synchronous compensator (STATCOM) – Electrical testing

Valves de convertisseur source de tension (VSC) pour compensateur synchrone statique (STATCOM) – Essais électriques

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VOLTAGE SOURCED CONVERTER (VSC) VALVES FOR STATIC SYNCHRONOUS COMPENSATOR (STATCOM) – ELECTRICAL TESTING

AMENDMENT 1

FOREWORD

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Amendment 1 to IEC 62927:2017 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:

Draft	Report on voting
22F/699/CDV	22F/721/RVC

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

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications/.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

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2 Normative references

Replace the existing reference "IEC 60071-1:2006" *and its title with the following new reference and title:*

IEC 60071-1:2019, *Insulation co-ordination – Part 1: Definitions, principles and rules*

4.1.5 Evidence in lieu

Add, in the second sentence of the existing paragraph, after the words "performing a type test"*, the words* "or individual parts of it".

4.1.6 Test object

Delete, in the first existing paragraph, the first sentence.

Delete, in the second sentence of the existing paragraph, the words "for those tests".

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

Replace, in the existing table, the header of the first column "Number of valve levels per valve" with *the new header* "Number of valve levels, including redundant levels".

Add, in the third row of the existing second column, after the number "10"*, the word* "valve".

Delete, in item c) of the existing paragraph, in the second sentence, the words "with the agreement of the purchaser and supplier".

Replace, in the item d) of the existing paragraph, the verb "should" *with* "shall".

Add, after item d) of the existing paragraph, the following new paragraph:

Subclause 4.1.6 does not apply to tests on the valve supporting structure and multiple valve unit. The test object for those tests is defined in 7.2 and 8.3.

4.1.10 Conditions to be considered in determination of type test parameters

Replace, in the existing paragraph, the verb "should" *with* "shall".

4.4 Permissible component failures during type testing

Add, at the end of the existing third paragraph, the following new sentence:

Malfunction of valve level and component degrading detected in the routine test after type test are deemed as faults shown by the rightest column of Table 2.

Table 3 – List of type tests

Delete, in the existing seventh row of the first column, the brackets "(optional)".

6.3 Test circuit

Add, after the existing second paragraph, the following new paragraph:

In order to reproduce correct heating effects, the operational test should be performed at the service frequency. When the service frequency is different from the test frequency, then the test conditions shall be adjusted so as to approximately compensate the difference in frequency dependent losses, as necessary to demonstrate the proper stressing of the equipment.

6.4 Maximum continuous operating duty test

Add, in the existing second paragraph, at the start of the third bulleted list item, the words "where snubbers are used,".

Add, in the existing third paragraph, at the start of the second bulleted list item, the words "where snubbers are used,".

Add, at the start of the existing seventh paragraph, starting with "The test voltage U_{tpv1}*", the text* "In principle,".

Add, before the existing last paragraph, the following new note:

NOTE Test voltage for MMC valves can be defined by the operating voltage of the submodule capacitor. A test safety factor of 1,05 is applied to the test voltage for MMC valves.

6.5 Maximum temporary overload operating duty test

Add, after the existing first paragraph, the following new paragraph: