
Samoozdravljivi vzporedni energetski kondenzatorji za izmenične tokovne sisteme z naznačeno napetostjo nad 1000 V (IEC 63210:2021)

Shunt power capacitors of the self-healing type for AC systems having a rated voltage above 1 000 V (IEC 63210:2021)

Selbstheilende Leistungs-Parallelkondensatoren für Wechselstromanlagen mit einer Nennspannung über 1 kV (IEC 63210:2021)

Condensateurs-shunt de puissance autoregénérateurs destinés aux réseaux à courant alternatif de tension assignée supérieure à 1 000 V (IEC 63210:2021)

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Ta slovenski standard je istoveten z: EN IEC 63210:2021

ICS:

31.060.70 Močnostni kondenzatorji Power capacitors

SIST EN IEC 63210:2021

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 63210

April 2021

ICS 31.060.70; 29.120.99

English Version

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having a rated voltage above 1 000 V
(IEC 63210:2021)**

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(IEC 63210:2021)

This European Standard was approved by CENELEC on 2021-04-15. 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.

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SIST EN IEC 63210:2021

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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 63210:2021 (E)**European foreword**

The text of document 33/651/FDIS, future edition 1 of IEC 63210, prepared by IEC/TC 33 "Power capacitors and their applications" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63210:2021.

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) 2022-01-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-04-15

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The text of the International Standard IEC 63210:2021 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60071-2:2018	NOTE	Harmonized as EN IEC 60071-2:2018 (not modified)
IEC 60831-1	NOTE	Harmonized as EN 60831-1
IEC 60871-1	NOTE	Harmonized as EN 60871-1
IEC 60038	NOTE	Harmonized as EN 60038
IEC 60099 (series)	NOTE	Harmonized as EN 60099 (series)

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 60060-1	-	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	-
IEC 60071-1	2019	Insulation co-ordination - Part 1: Definitions, principles and rules	EN IEC 60071-1	2019
IEC 60071-2	1996	Insulation co-ordination - Part 2: Application guide	EN 60071-2	1997
IEC 60549	-	High-voltage fuses for the external protection of shunt capacitors	EN 60549	-

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IEC 63210

Edition 1.0 2021-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Shunt power capacitors of the self-healing type for AC systems having a rated voltage above 1 000 V

(standards.iteh.ai)

Condensateurs-shunt de puissance autorégénérateurs destinés aux réseaux à courant alternatif de tension assignée supérieure à 1 000 V

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.120.99; 31.060.70

ISBN 978-2-8322-9464-2

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CONTENTS

FOREWORD	6
1 Scope	8
2 Normative references	8
3 Terms and definitions	9
4 Service conditions	13
4.1 Normal service conditions	13
4.2 Unusual service conditions	14
5 Quality requirements and tests	14
5.1 General	14
5.2 Test conditions	14
6 Classification of tests	15
6.1 Routine tests	15
6.2 Type tests and design tests	15
6.3 Acceptance tests	16
7 Capacitance measurement	16
7.1 Measuring procedure	16
7.2 Capacitance tolerances	17
8 Measurement of the tangent of the loss angle ($\tan \delta$) of the capacitor	17
8.1 Measuring procedure	17
8.2 Loss requirements	17
9 Voltage tests between terminals	17
9.1 General for routine test	17
9.2 AC test	17
9.3 DC test	18
9.4 Type test	18
10 Voltage tests between terminals and container	18
10.1 Routine test	18
10.2 Type test	19
11 Test of internal discharge device	19
12 Sealing test	19
13 Thermal stability test (type test)	20
13.1 General	20
13.2 Measuring procedure	20
14 Measurement of the tangent of the loss angle ($\tan \delta$) of the capacitor at elevated temperature (type test)	21
14.1 Measuring procedure	21
14.2 Requirements	21
15 Lightning impulse test between terminals and container (type test)	21
16 Overvoltage test (design test)	22
16.1 General	22
16.2 Conditioning of the sample before the test	22
16.3 Test procedure	23
16.4 Acceptance criteria	23
16.5 Validity of test	23
16.5.1 General	23

16.5.2	Element design.....	23
16.5.3	Test unit design.....	23
16.5.4	Waveform of overvoltage.....	24
17	Short-circuit discharge test (type test).....	24
18	Self-healing test (type test).....	25
18.1	General.....	25
18.2	Test setup.....	25
18.3	Acceptance criteria.....	25
19	Destruction test (design test).....	25
19.1	General.....	25
19.2	Test setup for capacitors without actively monitored safety device (internally protected).....	26
19.3	Acceptance criteria.....	26
19.4	Test setup for capacitors with actively monitored safety device (externally protected).....	27
19.5	Acceptance criteria.....	27
20	Insulation levels.....	27
20.1	Standard insulation values.....	27
20.2	General requirements.....	28
20.2.1	General.....	28
20.2.2	Adjacent insulating components and equipment.....	28
20.2.3	Capacitors insulated from ground.....	28
20.2.4	Capacitors with neutral connected to ground.....	29
20.3	Test between terminals and container of capacitor units.....	29
20.4	Capacitors in single-phase systems.....	29
21	Overloads – Maximum permissible voltage.....	32
21.1	Long duration voltages.....	32
21.2	Switching overvoltages.....	32
22	Overloads – Maximum permissible current.....	32
23	Safety requirements for discharge devices.....	33
24	Safety requirements for container connections.....	33
25	Safety requirements for protection of the environment.....	33
26	Other safety requirements.....	33
27	Markings of the capacitor unit.....	34
27.1	Rating plate.....	34
27.2	Standardized connection symbols.....	34
27.3	Warning plate.....	35
28	Markings of the capacitor bank.....	35
28.1	Instruction sheet or rating plate.....	35
28.2	Warning plate.....	35
29	Guide for installation and operation.....	35
29.1	General.....	35
29.2	Choice of the rated voltage.....	36
29.3	Operating temperature.....	36
29.3.1	General.....	36
29.3.2	Installation.....	37
29.3.3	High ambient air temperature.....	37
29.4	Special service conditions.....	37

29.5	Overvoltages	38
29.5.1	General	38
29.5.2	Restriking of switches	38
29.5.3	Lightning	38
29.5.4	Motor self-excitation	38
29.5.5	Star-delta starting	38
29.5.6	Capacitor unit selection	38
29.6	Overload currents	39
29.6.1	Continuous overcurrents	39
29.6.2	Transient overcurrents	39
29.7	Switching and protective devices	39
29.7.1	Withstand requirements	39
29.7.2	Restrike-free circuit-breakers	40
29.7.3	Relay settings	40
29.8	Choice of insulation levels	41
29.8.1	General	41
29.8.2	Altitudes exceeding 1 000 m	41
29.8.3	Influence of the capacitor itself	41
29.8.4	Overhead ground wires	43
29.9	Choice of creepage distances and air clearance	43
29.9.1	Creepage distance	43
29.9.2	Air clearances	44
29.10	Capacitors connected to systems with audio-frequency remote control	46
Annex A (normative)	Requirements regarding comparable element design and test unit design	47
A.1	Test element design criteria	47
A.2	Test unit design	47
Annex B (informative)	Self-healing breakdown test equipment that may be used	49
Annex C (normative)	Test requirements and application guide for external fuses and units to be externally fused	50
C.1	General	50
C.2	Performance requirements	50
C.3	Tests on fuses	50
C.4	Guide for coordination of fuse protection	50
C.4.1	General	50
C.4.2	Protection sequence	51
C.5	Choice of fuses	52
C.5.1	General	52
C.5.2	Non current-limiting fuses	52
C.5.3	Current-limiting fuses	52
C.6	Information needed by the user of the fuses	52
Annex D (informative)	Formulae for capacitors and installations	53
D.1	Computation of the output of three-phase capacitors from three single-phase capacitance measurements	53
D.2	Resonant frequency	53
D.3	Voltage increase	53
D.4	Inrush transient current	54
D.4.1	Switching in of single capacitor bank	54
D.4.2	Switching on of a bank in parallel with energized bank(s)	54

D.5 Discharge resistance in single-phase unit	54
D.6 Discharge time to 10 % of rated voltage	55
Bibliography	56
Figure 1 – Time and amplitude limits for an overvoltage period	24
Figure 2 – Bank isolated from ground	42
Figure 3 – Bank isolated from ground (containers connected to ground)	42
Figure 4 – Bank connected to ground	43
Figure 5 – Air clearance versus AC withstand	46
Figure B.1 – Example of self-healing detection equipment	49
Table 1 – Letter symbols for upper limit of temperature range	14
Table 2 – Ambient air temperature for the thermal stability test	20
Table 3 – Standard insulation levels for range I ($1 \text{ kV} < U_m \leq 245 \text{ kV}$)	30
Table 4 – Standard insulation levels for range II ($U_m > 245 \text{ kV}$)	31
Table 5 – Admissible voltage levels in service	32
Table 6 – Insulation requirements	41
Table 7 – Specific creepage distances	43
Table 8 – Correlation between standard lightning impulse withstand voltages and minimum air clearances (Table A.1 from IEC 60071-2:1996)	45

SIST EN IEC 63210:2021

<https://standards.iteh.ai/catalog/standards/sist/1ca81e88-8e0a-41fb-bd9c-98af8deb9f9a/sist-en-iec-63210-2021>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SHUNT POWER CAPACITORS OF THE SELF-HEALING TYPE FOR
AC SYSTEMS HAVING A RATED VOLTAGE ABOVE 1 000 V**

FOREWORD

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IEC 63210 has been prepared by IEC technical committee 33: Power capacitors and their applications. It is an International Standard.

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

Draft	Report on voting
33/651/FDIS	33/653/RVD

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 International Standard 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/standardsdev/publications.

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.

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SHUNT POWER CAPACITORS OF THE SELF-HEALING TYPE FOR AC SYSTEMS HAVING A RATED VOLTAGE ABOVE 1 000 V

1 Scope

This document is applicable to both self-healing capacitor units and self-healing capacitor banks intended to be used, particularly, for power-factor correction of AC power systems having a rated voltage above 1 000 V and fundamental frequencies of 15 Hz to 60 Hz.

The following capacitors are excluded from this document:

- shunt power capacitors of the self-healing type for AC systems having a rated voltage up to and including 1 000 V (IEC 60831-1, -2);
- shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1 000 V (IEC 60931-1, -2 and -3);
- shunt capacitors of the non-self-healing type for AC power systems having a rated voltage above 1 000 V (IEC 60871-1, -2, -3 and -4);
- capacitors for inductive heat-generating plants operating at frequencies between 40 Hz and 24 000 Hz (IEC 60110-1 and -2);
- series capacitors (IEC 60143-1, -2, -3 and -4);
- AC motor capacitors (IEC 60252-1 and -2);
- coupling capacitors and capacitor dividers (IEC 60358-1, -2, -3, -4);
- capacitors for power electronic circuits (IEC 61071);
- small AC capacitors to be used for fluorescent and discharge lamps (IEC 61048 and IEC 61049);
- capacitors for suppression of radio interference;
- capacitors intended to be used in various types of electrical equipment, and thus considered as components;
- capacitors intended for use with DC voltage superimposed on the AC voltage.

Requirements for accessories such as insulators, switches, instrument transformers and external fuses are given in the relevant IEC standards and are not covered by the scope of this document.

The object of this document is to:

- a) formulate uniform rules regarding performances, testing and rating;
- b) formulate specific safety rules;
- c) provide a guide for installation and operation.

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 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

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

IEC 60071-2:1996, *Insulation co-ordination – Part 2: Application guide* ¹

IEC 60549, *High-voltage fuses for the external protection of shunt capacitors*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

capacitor element element

device consisting essentially of two electrodes separated by a dielectric

[SOURCE: IEC 60050-436:1990, 436-01-03]

3.2

capacitor unit

assembly of one or more capacitor elements in the same container with terminals brought out

[SOURCE: IEC 60050-436:1990, 436-01-04]

3.3

capacitor bank bank

number of capacitor units connected so as to act together

[SOURCE: IEC 60050-436:1990, 436-01-06]

3.4

capacitor

two-terminal device characterized essentially by its capacitance

Note 1 to entry: The term "capacitor" is used when it is not necessary to specify whether a capacitor unit or capacitor bank is meant.

[SOURCE: IEC 60050-151:2001, 151-13-28, modified – Note 1 to entry has been added.]

3.5

self-healing capacitor

self-healing metallized dielectric capacitor

capacitor (consisting of elements which have at least one electrode made of a metallic deposit on the dielectric) whose electrical properties, after local breakdown of the dielectric, are rapidly and essentially restored

[SOURCE: IEC 60050-436:1990, 436-03-12, modified – addition of "(metallized dielectric)" and "(consisting of elements whose at least one electrode is made of a metallic deposit on the dielectric)"]

¹ Withdrawn. IEC 60071-2:1996 has been cancelled and replaced by IEC 60071-2:2018.