

SLOVENSKI STANDARD

SIST EN IEC 62271-200:2021

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SIST EN 62271-200:2012

SIST EN 62271-200:2012/AC:2015

Visokonapetostne stikalne in krmilne naprave - 200. del: Stikalne in krmilne naprave v kovinskih ohišjih za naznačene izmenične napetosti nad 1 kV in do vključno 52 kV (IEC 62271-200:2021)

High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV (IEC 62271-200:2021)

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Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil 200: Metallgekapselte Wechselstrom-Schaltanlagen für Bemessungsspannungen über 1 kV bis einschließlich 52 kV (IEC 62271-200:2021)

Appareillage à haute tension - Partie 200: Appareillage sous enveloppe métallique pour courant alternatif de tensions assignées supérieures à 1 kV et inférieures ou égales à 52 kV (IEC 62271-200:2021)

Ta slovenski standard je istoveten z: EN IEC 62271-200:2021

ICS:

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

EN IEC 62271-200

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2021

ICS 29.130.10

Supersedes EN 62271-200:2012 and all of its
amendments and corrigenda (if any)

English Version

High-voltage switchgear and controlgear - Part 200: AC metal-
enclosed switchgear and controlgear for rated voltages above 1
kV and up to and including 52 kV
(IEC 62271-200:2021)

Appareillage à haute tension - Partie 200: Appareillage
sous enveloppe métallique pour courant alternatif de
tensions assignées supérieures à 1 kV et inférieures ou
égales à 52 kV
(IEC 62271-200:2021)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil
200: Metallgekapselte Wechselstrom-Schaltanlagen für
Bemessungsspannungen über 1 kV bis einschließlich 52 kV
(IEC 62271-200:2021)

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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 62271-200:2021 (E)**European foreword**

The text of document 17C/782/FDIS, future edition 3 of IEC 62271-200, prepared by SC 17C “Assemblies” of IEC/TC 17 “High-voltage switchgear and controlgear” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62271-200:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-04-01 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-07-01 document have to be withdrawn

This document supersedes EN 62271-200:2012 and all of its amendments and corrigenda (if any).

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The text of the International Standard IEC 62271-200:2021 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 62271-214:2019	NOTE Harmonized as EN IEC 62271-214:2019 (not modified)
IEC 60059:1999	NOTE Harmonized as EN 60059:1999 (not modified)
IEC 60243-1:2013	NOTE Harmonized as EN 60243-1:2013 (not modified)
IEC/TR 62271-307:2015	NOTE Harmonized as CLC IEC/TR 62271-307:2019 (not modified)
IEC 60909-0:2016	NOTE Harmonized as EN 60909-0:2016 (not modified)

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 60050-151	-	International Electrotechnical Vocabulary - Part 151: Electrical and magnetic devices	-	-
IEC 60050-441	-	International Electrotechnical Vocabulary. Switchgear, controlgear and fuses	-	-
IEC 60060-1	2010	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	2010
IEC 60270	2000	High-voltage test techniques - Partial discharge measurements	EN 60270	2001
+ A1	2015		+ A1	2016
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
-	-		+ corrigendum May 1993	
+ A1	1999		+ A1	2000
+ A2	2013		+ A2	2013
IEC 62262	2002	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	EN 62262	2002
IEC 62271-1	2017	High-voltage switchgear and controlgear - Part 1: Common specifications for alternating current switchgear and controlgear	EN 62271-1	2017
IEC 62271-100	2021	High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers	EN IEC 62271-100	2021
IEC 62271-102	2018	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	EN IEC 62271-102	2018
IEC 62271-103	2021	High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV	-	-

EN IEC 62271-200:2021 (E)

IEC 62271-105	2021	High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV	-	-
IEC 62271-106	2021	High-voltage switchgear and controlgear - Part 106: Alternating current contactors, contactor-based controllers and motor- starters	EN IEC 62271-106	2021
IEC 62271-107	2019	High-voltage switchgear and controlgear - Part 107: Alternating current fused circuit- switchers for rated voltages above 1 kV up to and including 52 kV	EN IEC 62271-107	2019
IEC 62271-201	2014	High-voltage switchgear and controlgear - Part 201: AC solid-insulation enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	EN 62271-201	2014
IEC 62271-203	2011	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV	EN 62271-203	2012
IEC 62271-213	2021	High-voltage switchgear and controlgear - Part 213: Voltage detecting and indicating system	EN IEC 62271-213	2021
IEC 62271-215	2021	High-voltage switchgear and controlgear - Part 215: Phase comparator used with VDIS	EN IEC 62271-215	2021
IEC IEEE 62271-37-013	2015	High-voltage switchgear and controlgear - Part 37-013: Alternating current generator circuit breakers		

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INTERNATIONAL STANDARD



**High-voltage switchgear and controlgear –
Part 200: AC metal-enclosed switchgear and controlgear for rated voltages
above 1 kV and up to and including 52 kV**

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CONTENTS

FOREWORD.....	6
INTRODUCTION.....	9
1 Scope.....	10
2 Normative references	10
3 Terms and definitions	11
3.1 General terms and definitions	11
3.2 Assemblies of switchgear and controlgear	13
3.3 Parts of assemblies	13
3.4 Switching devices	13
3.5 Parts of switchgear and controlgear	13
3.6 Operational characteristics of switchgear and controlgear.....	16
3.7 Characteristic quantities	18
3.8 Index of definitions.....	19
4 Normal and special service conditions	20
5 Ratings.....	21
5.1 General.....	21
5.2 Rated voltage (U_r)	21
5.3 Rated insulation level (U_d , U_p , U_s)	21
5.4 Rated frequency (f_r)	21
5.5 Rated continuous current (I_r)	21
5.6 Rated short-time withstand currents (I_k , I_{ke})	21
5.7 Rated peak withstand currents (I_p , I_{pe})	22
5.8 Rated durations of short-circuit (t_k , t_{ke})	22
5.9 Rated supply voltage of auxiliary and control circuits (U_a)	23
5.10 Rated supply frequency of auxiliary and control circuits	23
5.11 Rated pressure of compressed gas supply for controlled pressure systems	23
5.101 Classification of earthing function through main switching device.....	23
5.102 Rated cable test voltages (U_{ct} (AC), U_{ct} (DC))	23
5.103 Ratings of the internal arc classification (IAC).....	23
6 Design and construction	25
6.1 Requirements for liquids in switchgear and controlgear.....	25
6.2 Requirements for gases in switchgear and controlgear	25
6.3 Earthing of switchgear and controlgear	25
6.4 Auxiliary and control equipment and circuits	26
6.5 Dependent power operation	26
6.6 Stored energy operation.....	26
6.7 Independent unlatched operation (independent manual or power operation)	26
6.8 Manually operated actuators	26
6.9 Operation of releases.....	26
6.10 Pressure/level indication	27
6.11 Nameplates	27
6.12 Locking devices	28
6.13 Position indication.....	29

6.14	Degrees of protection provided by enclosures.....	29
6.15	Creepage distances for outdoor insulators	30
6.16	Gas and vacuum tightness	30
6.17	Tightness for liquid systems.....	30
6.18	Fire hazard (flammability)	30
6.19	Electromagnetic compatibility (EMC).....	30
6.20	X-ray emission.....	30
6.21	Corrosion.....	30
6.22	Filling levels for insulation, switching and/or operation.....	30
6.101	General requirements for assemblies.....	31
6.102	Metal enclosure	31
6.103	High-voltage compartments	33
6.104	Removable parts.....	37
6.105	Provisions for dielectric tests on cables	37
6.106	Internal arc fault.....	38
7	Type tests	38
7.1	General.....	38
7.2	Dielectric tests	39
7.3	Radio interference voltage (RIV) test	43
7.4	Resistance measurement.....	43
7.5	Continuous current tests	43
7.6	Short-time withstand current and peak withstand current tests	45
7.7	Verification of the protection	47
7.8	Tightness tests	47
7.9	Electromagnetic compatibility tests (EMC).....	48
7.10	Additional tests on auxiliary and control circuits.....	48
7.11	X-radiation test for vacuum interrupters	48
7.101	Verification of making and breaking capacities.....	48
7.102	Mechanical operation tests	50
7.103	Pressure withstand test for gas-filled compartments	51
7.104	Tests to verify the protection of persons against dangerous electrical effects.....	52
7.105	Internal arc test.....	53
8	Routine tests	57
8.1	General.....	57
8.2	Dielectric test on the main circuit	57
8.3	Tests on auxiliary and control circuits	57
8.4	Measurement of the resistance of the main circuit.....	58
8.5	Tightness test	58
8.6	Design and visual checks.....	58
8.101	Partial discharge measurement.....	58
8.102	Mechanical operation tests	58
8.103	Pressure tests of gas-filled compartments.....	59
8.104	Tests after erection on site.....	59
8.105	Measurement of fluid condition after filling on site.....	59
9	Guide to the selection of switchgear and controlgear (informative)	59
9.1	General.....	59
9.2	Selection of rated values.....	60
9.3	Cable-interface considerations.....	60

9.4	Continuous or temporary overload due to changed service conditions.....	60
9.5	Environmental aspects.....	60
9.101	Selection of design and construction.....	60
9.102	Ratings related to earthing circuits.....	64
9.103	Internal arc fault.....	65
9.104	Summary of technical requirements, ratings and optional tests	71
10	Information to be given with enquiries, tenders and orders (informative).....	73
10.1	General.....	73
10.2	Information with enquiries and orders	73
10.3	Information with tenders.....	74
11	Transport, storage, installation, operating instructions and maintenance	75
11.1	General.....	75
11.2	Conditions during transport, storage and installation	75
11.3	Installation	75
11.4	Operating instructions	75
11.5	Maintenance	76
12	Safety.....	76
12.101	Procedures	76
12.102	Internal arc aspects	76
13	Influence of the product on the environment.....	77
Annex A (normative)	Internal arc fault – Method to verify the internal arc classification (IAC).....	78
A.1	Room simulation	78
A.2	Indicators (for assessing the thermal effects of the gases).....	80
A.3	Tolerances for geometrical dimensions of test arrangements	82
A.4	Test parameters.....	82
A.5	Test procedure.....	83
Annex B (normative)	Partial discharge measurement.....	95
B.1	General.....	95
B.2	Application.....	95
B.3	Test circuits and measuring instruments	95
B.4	Test procedure.....	96
B.5	Maximum permissible partial discharge quantity	97
Annex C (informative)	List of notes concerning certain countries	101
Annex D (normative)	Flowchart categorization procedure for LSC for a given functional unit FU1 with connection compartment	102
Bibliography	103
Figure 1	– LSC1.....	63
Figure 2	– LSC2.....	63
Figure 3	– LSC2.....	63
Figure 4	– LSC2.....	64
Figure 5	– LSC2A	64
Figure 6	– LSC2B	64
Figure 7	– LSC2B	64
Figure 8	– LSC1.....	64

Figure 9 – No LSC assigned	64
Figure A.1 – Mounting frame for vertical indicators	86
Figure A.2 – Horizontal indicator	86
Figure A.3 – Position of the indicators.....	87
Figure A.4 – Room simulation and indicator positioning for accessibility type A, classified rear side, ceiling above 2 000 mm, functional unit of any height	88
Figure A.5 – Room simulation and indicator positioning for accessibility type A, non-accessible rear side, ceiling at 2 000 mm, so functional unit \leq 1 800 mm high.....	89
Figure A.6 – Room simulation and indicator positioning for accessibility type B, classified rear side, functional unit \geq 1 900 mm high	90
Figure A.7 – Room simulation and indicator positioning for accessibility type B, classified rear side, functional unit $<$ 1 900 mm high	91
Figure A.8 – Ceiling height stated from the floor or false floor level where the assembly is actually placed	92
Figure A.9 – Indicator positioning in case of protrusion at $<$ 2 000 mm height, at classified side	93
Figure A.10 – Indicator positioning in case a bottom exhaust duct belonging to the assembly is defined as a walkable integrated part of the false floor	94
Figure B.1 – Partial discharge test circuit (three-phase arrangement)	99
Figure B.2 – Partial-discharge test circuit (system without earthed neutral).....	100
Figure D.1 – Flowchart categorization procedure for LSC for a given functional unit FU1 with connection compartment	102
Table 1 – Nameplate information	27
Table 2 – Locations, causes and examples of measures to decrease the probability of internal arc faults	67
Table 3 – Single-phase-to-earth arc fault current depending on the network neutral earthing	69
Table 4 – Summary of technical requirements, ratings and optional tests for assemblies	71
Table A.1 – Parameters for internal arc test according to compartment construction.....	85
Table B.1 – Test circuits and procedures	98

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 200: AC metal-enclosed switchgear and controlgear
for rated voltages above 1 kV and up to and including 52 kV**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 62271-200 has been prepared by subcommittee 17C: Assemblies, of IEC technical committee 17: High-voltage switchgear and controlgear. It is an International Standard.

This third edition cancels and replaces the second edition published in 2011. This edition constitutes a technical revision.

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

- a) clause numbering aligned with IEC 62271-1:2017, including the adoption of the subclause names of Clause 3;
- b) in Clause 3 specific definitions are added for "in service", "normal operating condition" and "normal use";
- c) internal arc testing on pole-mounted switchgear is taken out of this document, as it is now covered by the specific standard IEC 62271-214:2019;

- d) a more precise description of earthing circuit is given with the inclusion of ratings and test requirements;
- e) number of mechanical tests on interlocks is reduced for type testing; a more precise description of forces to apply during type testing is given (refer to 7.102);
- f) resistance measuring on main circuit is only needed before continuous current tests (as reference for routine tests) and no longer needed after this continuous current test. Rationale for this deletion is that this measured resistance does not mean anything; as the temperature rise test was just finished, a new temperature rise test will not give new information;
- g) IEC 62271-100:2021, IEC 62271-103:2021, IEC 62271-105:2021 and IEC 62271-106:2021 are referred to in the document;
- h) IEC 62271-107:2019 and IEC IEEE 62271-37-013:2015 are also considered in 7.101.2;
- i) a more precise description of LSC category is given with the inclusion of an explanatory flowchart (Annex D);
- j) examples not covered by the IAC test are transferred from Clause 6 to 9.103;
- k) the term "assembly" is defined in Clause 3 and used as synonym for "metal-enclosed switchgear and controlgear" in this document;
- l) "metallic" is replaced by "metal" where applicable;
- m) 6.105 is now covered by 7.7;
- n) a 1 s rule was introduced for Criterion 4 during IAC tests regarding hot gases versus glowing particles as cause of ignition;
- o) a more precise description of internal arc tests for switchgear with protrusions is given in Annex A.

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

SIST EN IEC 62271-200:2021	
FDIS catalog/standards/sist-en-iec-62271-200-2021-17C/782/FDIS	Report on voting 2021-05-4fa1-bfa3-17C/792/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.

This document should be read in conjunction with IEC 62271-1:2017, to which it refers and which is applicable unless otherwise specified. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in IEC 62271-1:2017. Amendments to these clauses and subclauses are given under the same numbering, whilst additional subclauses, are numbered from 101.

The reader's attention is drawn to the fact that Annex C lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this document.

A list of all parts in the IEC 62271 series, published under the general title *High-voltage switchgear and controlgear*, can be found 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 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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INTRODUCTION

High-voltage (IEC 60050-601:1985, 601-01-27) switchgear refers to rated voltages above 1 kV. However, medium-voltage is commonly used for distribution systems with rated voltages above 1 kV and generally applied up to and including 52 kV; refer to IEC 60050-601:1985, 601-01-28 [1]¹.

Although primarily dedicated to three-phase systems, this document can also be applied to single-phase and two-phase systems.

Switchgear and controlgear assemblies having a solid-insulation enclosure are covered by IEC 62271-201.

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¹ Numbers in square brackets refer to the Bibliography.