

**SLOVENSKI STANDARD
SIST EN IEC 60947-3:2021****01-maj-2021****Nadomešča:****SIST EN 60947-3:2009****SIST EN 60947-3:2009/A1:2012****SIST EN 60947-3:2009/A2:2016**

Nizkonapetostne stikalne in krmilne naprave - 3. del: Stikala, ločilniki, ločilna stikala in stikalni aparati z varovalkami (IEC 60947-3:2020)

Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units (IEC 60947-3:2020)

Niederspannungsschaltgeräte - Teil 3: Lastschalter, Trennschalter, Lasttrennschalter und Schalter-Sicherungs-Einheiten (IEC 60947-3:2020)

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Appareillage à basse tension - Partie 3: Interrupteurs, sectionneurs, interrupteurs-sectionneurs et combinés-fusibles (IEC 60947-3:2020)

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SIST EN IEC 60947-3:2021**en**

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EUROPEAN STANDARD

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Supersedes EN 60947-3:2009 and all of its amendments
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English Version

Low-voltage switchgear and controlgear - Part 3: Switches,
disconnectors, switch-disconnectors and fuse-combination units
(IEC 60947-3:2020)

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Trennschalter, Lasttrennschalter und Schalter-Sicherungs-
Einheiten
(IEC 60947-3:2020)

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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 60947-3:2021 (E)**European foreword**

The text of document 121A/340/FDIS, future edition 4 of IEC 60947-3, prepared by SC 121A “Low-voltage switchgear and controlgear” of IEC/TC 121 “Switchgear and controlgear and their assemblies for low voltage” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60947-3:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2021–08-19 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024–02-19 document have to be withdrawn

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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annexes ZZA and ZZB, which is an integral part of this document.

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The text of the International Standard IEC 60947-3:2020 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 60364-5-52	NOTE	Harmonized as HD 60364-5-52
IEC 60447:2004	NOTE	Harmonized as EN 60447:2004 (not modified)
IEC 60664-1:2007	NOTE	Harmonized as EN 60664-1:2007 (not modified)
IEC 60898-1:2015	NOTE	Harmonized as EN 60898-1:2019
IEC 60947-2:2016	NOTE	Harmonized as EN 60947-2:2017 (not modified)
IEC 60947-4-1:2018	NOTE	Harmonized as EN IEC 60947-4-1:2019 (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.

Publication	Year	Title	EN/HD	Year
IEC 60050-441	-	Electrotechnical Vocabulary – Switchgear, controlgear and fuses	-	-
IEC 60034-12	2016	Rotating electrical machines - Part 12: Starting performance of single-speed three-phase cage induction motors	EN 60034-12	2017
IEC 60034-30-1	2014	Rotating electrical machines - Part 30-1: Efficiency classes of line operated AC motors (IE code)	EN 60034-30-1	2014
IEC 60068-2-14	2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	2009
IEC 60228	2004	Conductors of insulated cables	EN 60228 +AC	2005 2005
IEC 60269	(all parts)	Low-voltage fuses	EN 60269	(series)
IEC 60417	-	Graphical symbols for use on equipment	-	-
IEC 60695-2-11	2014	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end products (GWEPT)	EN 60695-2-11	2014
IEC 60947-1	2020	Low-voltage switchgear and controlgear - Part 1: General rules	EN IEC 60947-1	2021
IEC 60947-5-1 + CORR 1	2016 2016	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	EN 60947-5-1	2017
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3 +A1 +A2	2006 2007 2010	, Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3 +A1 +A2	2006 2008 2010

EN IEC 60947-3:2021 (E)

Publication	Year	Title	EN/HD	Year
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) – Part 4–4: Testing and measurement techniques – Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) – Part 4–5: Testing and measurement techniques	EN 61000-4-5	2014
+A1	2017	– Surge immunity test	+A1	2017
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) – Part 4–6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6 +AC1	2014 2015
IEC 61238-1-1	-	Compression and mechanical connectors for power cables - Part 1–1: Test methods and requirements for compression and mechanical connectors for power cables for rated voltages up to 1 kV (Um = 1,2 kV) tested on non-insulated conductors	EN IEC 61238-1-1	2019
IEC 61545	1996	Connecting devices - Devices for the connection of aluminium conductors in clamping units of any material and copper conductors in aluminium bodied clamping units	-	-
IEC 62208	2011	Empty enclosures for low-voltage switchgear and controlgear assemblies - General requirements	EN 62208	2011
IEC 62475	2010	High-current test techniques - Definitions and requirements for test currents and measuring systems	EN 62475	2010
ISO 2859-1	1999	Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection	-	-
+A1	2011			
CISPR 11	2015	Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement	EN 55011 (modified)	2016
+A1	2016		+A1	2017
CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements	EN 55032 +AC	2015 2016

Annex ZZA (informative)

Relationship between this European standard and the essential requirements of Directive 2014/30/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under the European Commission standardization request C(2016) 7641 final of 30.11.2016¹, ('M/552'), as regards harmonized standards in support of Directive 2014/30/EU relating to electromagnetic compatibility, to provide one voluntary means of conforming to essential requirements of Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

Table ZZA.1 — Correspondence between this European standard and the Essential Requirements set out in Directive 2014/30/EU [2014 OJ L96]

Essential requirements of Directive 2014/30/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Annex I. 1(a) (electromagnetic disturbances)	8.3.3, 9.4.3, D.9.4	
Annex I. 1(b) (electromagnetic immunity)	8.3.2, 9.4.2, D.9.4	

WARNING 1: Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2: Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

¹ COMMISSION IMPLEMENTING DECISION C(2016) 7641 final of 30.11.2016 on a standardisation request to the European Committee for Standardisation, to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards harmonised standards in support of Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.

Annex ZZB (informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

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Table ZZB.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/note
1 a)	1, 2, 3, 6.2, 6.3, Annex D, Annex E	
1 b)	1, 2, 3, 6.2, 6.3, Annex C, Annex D, Annex E	
1 c)	1, 2, 3, 5, 6, 7, A.1, A.2, C.1, D.1, D.2, E.1, E.6.3	Also refer to 2 a) to 2 d) and 3 a) to 3 c) in this table
2 a)	1, 2, 3, 8.1, 8.2, 9.1, 9.3, 9.5, Annex A, Annex C, Annex D	
2 b)	1, 2, 3, 5, 8.1, 8.2.2, 9.3, Annex A, Annex C, Annex D, Annex E	
2 c)	1, 2, 3, 6, 8.1, 8.2, 8.3, 9.1, 9.2, 9.3, Annex A, Annex C, Annex D, Annex E	
2 d)	1, 2, 3, 4.3, 5, 6.2, 6.3, 8.1, 8.2, 9.1, 9.2, 9.3, 9.5, Annex A, Annex C, Annex D, Annex E	
3 a)	1, 2, 3, 5, 6, 8.2, 8.3, 9.1, 9.2, 9.3, 9.5, Annex A, Annex C, Annex D, Annex E	
3 b)	1, 2, 3, 6.2, 6.3, 7, Annex D	
3 c)	1, 2, 3, 6.3, 8.3, 9.3, Annex D, Annex E	

WARNING 1: Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage switchgear and controlgear –
Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination
units**

**Appareillage à basse tension –
Partie 3: Interrupteurs, sectionneurs, interrupteurs-sectionneurs et combinés-
fusibles**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –**Part 3: Switches, disconnectors, switch-disconnectors
and fuse-combination units**

FOREWORD

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

- addition of critical load current tests for DC switches (see 9.3.9);
- addition of requirements for a conditional short-circuit rating for disconnectors, switches, and switch-disconnectors protected by circuit-breakers (see 9.3.7.2);
- addition of new categories for high-efficiency motors switching (see Annex A);