



SLOVENSKI STANDARD
SIST EN IEC 60947-6-1:2023

01-julij-2023

Nizkonapetostne stikalne in krmilne naprave - 6-1. del: Večfunkcijska oprema - Oprema za samodejno predajanje stikanja (IEC 60947-6-1:2021)

Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment (IEC 60947-6-1:2021)

Niederspannungsschaltgeräte - Teil 6-1: Mehrfunktionsschaltgeräte - Netzumschalter (IEC 60947-6-1:2021)

Appareillage à basse tension - Partie 6-1: Matériels à fonctions multiples - Matériels de connexion de transfert (IEC 60947-6-1:2021)

Ta slovenski standard je istoveten z: EN IEC 60947-6-1:2023

ICS:

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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EUROPEAN STANDARD

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English Version

**Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment
(IEC 60947-6-1:2021)**

Appareillage à basse tension - Partie 6-1: Matériels à fonctions multiples - Equipement de transfert de source
(IEC 60947-6-1:2021)

Niederspannungsschaltgeräte - Teil 6-1: Mehrfunktionsschaltgeräte - Netzumschalter
(IEC 60947-6-1:2021)

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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 60947-6-1:2023 (E)**European foreword**

The text of document 121A/403/FDIS, future edition 3 of IEC 60947-6-1, 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 60947-6-1:2023.

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) 2023-11-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-05-19

This document supersedes EN 60947-6-1:2005 and all of its amendments and corrigenda (if any).

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.

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

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

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.

<https://standards.iteh.ai/catalog/standards/sist/8e1e896c-54d4-42c6-80c3-95d3ec79a758/sist-en-iec-60947-6-1-2023>

Endorsement notice

The text of the International Standard IEC 60947-6-1:2021 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 standard indicated:

IEC 60034-12:2016	NOTE	Approved as EN 60034-12:2017 (not modified)
IEC 60079 (series)	NOTE	Approved as EN IEC 60079 (series)
IEC 60364-1:2005	NOTE	Approved as HD 60364-1:2008 +A11:2017
IEC 60364-5-56	NOTE	Approved as HD 60364-5-56
IEC 60947-5-1	NOTE	Approved as EN 60947-5-1
IEC 60947-6-2:2020	NOTE	Approved as EN IEC 60947-6-2:2023
IEC 61439 (series)	NOTE	Approved as EN IEC 61439 (series)
IEC 62443 (series)	NOTE	Approved as EN IEC 62443 (series)
IEC/TR 63201	NOTE	Approved as CLC IEC/TR 63201

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-2	2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	2007
IEC 60417	-	Graphical symbols for use on equipment	-	-
IEC 60715	2017	Dimensions of low-voltage switchgear and controlgear - Standardized mounting on rails for mechanical support of switchgear, controlgear and accessories	EN 60715	2017
IEC 60812	-	Failure modes and effects analysis (FMEA and FMECA)	EN IEC 60812	2018
IEC 60947	(all parts)	Low-voltage switchgear and controlgear	EN 60947	- ¹
IEC 60947-1	2020	Low-voltage switchgear and controlgear – Part 1: General rules	EN IEC 60947-1	2021
			+ AC	2023-01
IEC 60947-2	2016	Low-voltage switchgear and controlgear – Part 2: Circuit-breakers	EN 60947-2	2017
+ A1	2019		+ A1	2020
IEC 60947-3	2020	Low-voltage switchgear and controlgear - Part 3: switches, disconnectors, switch-disconnectors and fuse-combination units	EN IEC 60947-3	2021
			+ AC	2021-11
IEC 60947-4-1	2018	Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters	EN IEC 60947-4-1	2019
			+ AC	2020-05
			+ AC	2021-04

¹ Those parts of the EN 60947 series listed in reference are those listed in the rows below.

EN IEC 60947-6-1:2023 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-13	2002	Electromagnetic compatibility (EMC) – Part 4-13: Testing and measurement techniques – Harmonics and interharmonics including mains signalling at a.c. power port, low-frequency immunity tests	EN 61000-4-13	2002
+ A1	2009		+ A1	2009
+ A2	2015		+ A2	2016
CISPR 11 (mod)	2015	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011	2016
+ A1	2016		+ A1	2017
			+ A11	2020

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Annex ZZA (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 standardisation request relating to harmonised 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 harmonisation 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].

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 safety objectives of that Directive, and associated EFTA regulations.

Table ZZA.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)	4, 5, 6, 8	
1 b)	5, 6, 7, 8, 9	
1 c)	4, 5, 6, 7, 8, 9, Annex A,	
2 a)	5, 6, 8, 9, Annex A	
2 b)	5, 6, 8, 9	
2 c)	5, 6, 7, 8	
2 d)	5, 6, 8, 9	
3 a)	5, 6, 7, 8, 9	
3 b)	4, 5, 6, 7, 8, 9	
3 c)	5, 6, 8, 9	

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.

Annex ZZB (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 standardisation request C(2016) 7641 final of 30.11.2016², ('M/552'), as regards harmonised 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 harmonisation 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 ZZB.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 ZZB.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)	8.3.1, 8.3.3, 9.2.8.1, 9.2.8.3	<p>When this standard in subclauses 8.3.3 and 9.2.8.3 normatively references EN 55011 for emission requirements the following applies:</p> <p>With respect to Clause 3.19 of EN 55011 (Type Test), the following shall not be applied if Clause 6 (Limits of electromagnetic disturbances) is applied for the purposes of the presumption of conformity: 'Note 1 to entry: Recognition of a type test as type approval may depend on national or regional regulation, see H.2 in Annex H.'</p> <p>With respect to Clause 7.1 of EN 55011 (General), the following shall not be applied, if Clause 6 of EN 55011 (Limits of electromagnetic disturbances) is applied for the purposes of the presumption of conformity: 'Requirements which relate to measurements at such test sites are type test requirements. A type test may be recognized as type approval if the conditions for the statistical</p>

² 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.

		<p>assessment of measurement results according to Annex H are observed.'</p> <p>With respect to Clause 3.19 of EN 55011 (Type Test), the following shall not be applied, if Clause 7 of EN 55011 (Measurement requirements) is applied for the purposes of the presumption of conformity:</p> <p>'Note 1 to entry: Recognition of a type test as type approval may depend on national or regional regulation, see H.2 in Annex H.'</p> <p>With respect to Clause 7.1 of EN 55011 (General), the following shall not be applied, if Clause 7 of EN 55011 (Measurement requirements) is applied for the purposes of the presumption of conformity:</p> <p>'Requirements which relate to measurements at such test sites are type test requirements. A type test may be recognized as type approval if the conditions for the statistical assessment of measurement results according to Annex H are observed.'</p>
Annex I. 1(b) (electromagnetic immunity)	8.3.1, 8.3.2, 9.2.8.1, 9.2.8.2	

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.



INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Low-voltage switchgear and controlgear –
Part 6-1: Multiple function equipment – Transfer switching equipment**

**Appareillage à basse tension –
Partie 6-1: Matériels à fonctions multiples – Equipement de transfert de source**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 6-1: Multiple function equipment –
Transfer switching equipment**

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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International Standard IEC 60947-6-1 has been prepared by sub-committee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage.

This third edition cancels and replaces the second edition published in 2005, and its Amendment 1:2013. This edition constitutes a technical revision.

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

- clarification of scope and object;
- clarification of terms and definitions;
- removal of unnecessary definitions;
- modification of characteristics;