ICS 29.130.20 SLOVENSKÁ TECHNICKÁ NORMA Január 2020

STN	**Nízkonapäťové spínacie a riadiace zariadenia Časť 5-4: Prístroje riadiacich obvodov a spínacie prvky Metódy stanovenia prevádzkových vlastností slaboprúdových kontaktov Osobitné skúšky Zmena A1**	**STN EN 60947-5-4/A1** 35 4101

Low-voltage switchgear and controlgear. Part 5-4: Control circuit devices and switching elements. Method of assessing the performance of low-energy contacts. Special tests

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/19

STN EN 60947-5-4 z decembra 2004 sa bez zmeny A1 môže používať do 26. 6. 2022.

Obsahuje: EN 60947-5-4:2003/A1:2019, IEC 60947-5-4:2002/AMD1:2019

130031

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60947-5-4:2003/A1

August 2019

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English Version

Low-voltage switchgear and controlgear - Part 5-4: Control circuit devices and switching elements - Method of assessing the performance of low-energy contacts - Special tests (IEC 60947-5-4:2002/A1:2019)

Appareillage à basse tension - Partie 5-4: Appareils et éléments de commutation pour circuits de commande - Méthode d'évaluation des performances des contacts à basse énergie - Essais spéciaux (IEC 60947-5-4:2002/A1:2019)

Niederspannungsschaltgeräte - Teil 5-4: Steuergeräte und Schaltelemente - Verfahren zur Abschätzung der Leistungsfähigkeit von Schwachstromkontakten - Besondere Prüfungen (IEC 60947-5-4:2002/A1:2019)

This amendment A1 modifies the European Standard EN 60947-5-4:2003; it was approved by CENELEC on 2019-06-26. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

Ref. No. EN 60947-5-4:2003/A1:2019 E

EN 60947-5-4:2003/A1:2019 (E)

European foreword

The text of document 121A/284/FDIS, future IEC 60947-5-4/A1, 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 60947-5-4:2003/A1:2019.

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) 2020-03-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-06-26

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 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 Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60947-5-4:2002/A1:2019 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.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-1	2013	Environmental testing - Part 1: General and guidance	EN 60068-1	2014
IEC 60068-2	series	Environmental testing - Part 2: Tests	EN 60068-2	series
IEC 60605-6	2007	Equipment reliability testing - Part 6: Tests for the validity and estimation of the constant failure rate and constant failure intensity	-	-
IEC 60947-1	2007	Low-voltage switchgear and controlgear - Part 1: General rules	EN 60947-1	2007
+ A1	2010		+ A1	2011
+ A2	2014		+ A2	2014
IEC 60947-5-1	2016	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	EN 60947-5-1	2017

Annex ZZ
(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 ZZ.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 ZZ.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, Annex A	
1 b)	1, 2, 3, Annex A	
1 c)	1, 2, 3, 5, 6 Also refer to 2 a) to 2 d) and 3 a) to 3 c) in this table	
2 a)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard
2 b)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard
2 c)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard
2 d)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard
3 a)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard
3 b)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/note
3 c)	-	This standard does not cover any of the essential requirements 2 a) to 3 c), while functional safety is excluded in this standard

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.

IEC 60947-5-4

Edition 2.0 2019-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Low-voltage switchgear and controlgear – Part 5-4: Control circuit devices and switching elements – Method of assessing the performance of low-energy contacts – Special tests

Appareillage à basse tension – Partie 5-4: Appareils et éléments de commutation pour circuits de commande – Méthode d'évaluation des performances des contacts à basse énergie – Essais spéciaux

IEC 60947-5-4:2002-10/AMD1:2019-05(en-fr)

IEC 60947-5-4

Edition 2.0 2019-05

INTERNATIONAL STANDARD

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AMENDMENT 1
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Low-voltage switchgear and controlgear – Part 5-4: Control circuit devices and switching elements – Method of assessing the performance of low-energy contacts – Special tests

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INTERNATIONAL
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COMMISSION

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INTERNATIONALE

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FOREWORD

This amendment has been prepared by subcommittee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage.

The text of this amendment is based on the following documents:

FDIS	Report on voting
121A/284/FDIS	121A/301/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

Replace the existing first paragraph by the following:

General usage of control switches may not be suitable for use at very low voltages and therefore it is recommended to seek the advice of the manufacturer concerning any application with a low value of operational voltage, for example, below 100 V a.c. or d.c. (see IEC 60947-5-1:2016, note of 4.3.2.2).

Add, at the end of existing introduction, the following two new paragraphs:

The objective of this document is to ensure the availability of contacts used in this area, including normally-open contacts.

This document shall be used as a complement of IEC 60947-5-1 for low-energy contacts applications.

1 Scope and object

Replace the existing first sentence of second paragraph, without modifying items a) and b), by the following:

This standard takes into consideration two typical rated voltage areas:

Replace the existing third paragraph by the following:

This standard does not apply to contacts used in:

– functional safety area. In case of contacts used in functional safety area, Annex N of IEC 60947-5-1:2016 applies;
– very low energy area of measurement, for example, sensor or thermocouple systems.

2 Normative references

Replace the following existing references (including footnotes) by the following updated references:

IEC 60068-1:2013*, Environmental testing – Part 1: General and guidance*

IEC 60605-6:2007, *Equipment reliability testing – Part 6: Tests for the validity and estimation of the constant failure rate and constant failure intensity*

IEC 60947-1:2007, *Low-voltage switchgear and controlgear – Part 1: General rules*
Amendment 1 (2010)
Amendment 2 (2014)

IEC 60947-5-1:2016, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

Delete the existing reference to IEC 61131-2.