

SLOVENSKI STANDARD
SIST EN 60947-5-2:2009/A1:2013
01-februar-2013

Nizkonapetostne stikalne in krmilne naprave - 5-2. del: Krmilne naprave in stikalni elementi - Približevalna stikala (IEC 60947-5-2:2007/A1:2012)

Low-voltage switchgear and controlgear - Part 5-2: Control circuit devices and switching elements - Proximity switches (IEC 60947-5-2:2007/A1:2012)

Niederspannungsschaltgeräte - Teil 5-2: Steuergeräte und Schaltelemente - Näherungsschalter (IEC 60947-5-2:2007/A1:2012)

Appareillage à basse tension - Partie 5-2: Appareils et éléments de commutation pour circuits de commande - Détecteurs de proximité (CEI 60947-5-2:2007/A1:2012)

[https://standards.iteh.ai/catalog/standards/sist/a4045ea5-14a2-4bdf-8656-](https://standards.iteh.ai/catalog/standards/sist/a4045ea5-14a2-4bdf-8656-593183bf8cb8/sist-en-60947-5-2-2009-a1-2013)

Ta slovenski standard je istoveten z: EN 60947-5-2:2007/A1:2012

ICS:

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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SIST EN 60947-5-2:2009/A1:2013 **en**

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[SIST EN 60947-5-2:2009/A1:2013](https://standards.iteh.ai/catalog/standards/sist/a4045ea5-14a2-4bdf-8656-593183bf8cb8/sist-en-60947-5-2-2009-a1-2013)

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60947-5-2/A1

November 2012

ICS 29.120.40; 29.130.20

English version

**Low-voltage switchgear and controlgear -
Part 5-2: Control circuit devices and switching elements -
Proximity switches
(IEC 60947-5-2:2007/A1:2012)**

Appareillage à basse tension -
Partie 5-2: Appareils et éléments de
commutation pour circuits de commande -
DéTECTEURS DE PROXIMITÉ
(CEI 60947-5-2:2007/A1:2012)

Niederspannungsschaltgeräte -
Teil 5-2: Steuergeräte und Schaltelemente -
Näherungsschalter
(IEC 60947-5-2:2007/A1:2012)

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This amendment A1 modifies the European Standard EN 60947-5-2:2007; it was approved by CENELEC on 2012-11-01. 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.

<https://standards.iteh.ai/catalog/standards/sist/a4045ea5-14a2-4bdf-8656-11d98c00832f/EN-60947-5-2:2007/A1-13>
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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 17B/1733/CDV, future amendment 1 to edition 3 of IEC 60947-5-2, prepared by SC17B "Low-voltage switchgear and controlgear" of IEC/TC 17 "Switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60947-5-2:2007/A1:2012.

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) 2013-08-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-11-01

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

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.

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Endorsement notice

The text of the International Standard IEC 60947-5-2:2007/A1:2012 was approved by CENELEC as a European Standard without any modification.

SIST EN 60947-5-2:2009/A1:2013
https://standards.iteh.ai/catalog/standards/sist/a4045ca5-14a2-46d1-8056-39518361cc68/sist-en-60947-5-2-2009-a1-2013

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

Replacements and addition in Annex ZA of EN 60947-5-2:2007:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
<i>In Annex ZA of EN 60947-5-2:2007 replace the existing references to the following publications as follows:</i>				
IEC 60068-2-6	2007	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008
IEC 60068-2-14	2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	2009
IEC 60068-2-27	2008	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	2009
IEC 60947-1 + A1	2007 2010	Low-voltage switchgear and controlgear - Part 1: General rules	EN 60947-1 + A1	2007 2011
IEC 61000-3-2 + A1 + A2	2005 2008 2009	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current \leq 16 A per phase)	EN 61000-3-2 + A1 + A2	2006 2009 2009
IEC 61000-3-3	2008	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current \leq 16 A per phase and not subject to conditional connection	EN 61000-3-3	2008
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
IEC 61000-4-6	2008	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2009
IEC 61000-4-8	2009	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	2010

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-13 + A1	2002 2009	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 + A1	2002 2009
CISPR 11 (mod) + A1	2009 2010	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011 + A1	2009 2010

*In Annex ZA of EN 60947-5-2:2007 **replace** IEC 60446:2007 by the following:*

IEC 60445	2010	Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors	EN 60445	2010
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*In Annex ZA of EN 60947-5-2:2007 **replace** ISO 630:1995 by the following:*

ISO 630	Series	Structural steels	-	-
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*In Annex ZA of EN 60947-5-2:2007 **add** the following new reference:*

IEC 61076	Series	Connectors for electronic equipment - Product requirements - Part 2: Circular connectors	EN 61076-2	Series
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IEC 60947-5-2

Edition 3.0 2012-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

**Low-voltage switchgear and controlgear –
Part 5-2: Control circuit devices and switching elements – Proximity switches**

**Appareillage à basse tension –
Partie 5-2: Appareils et éléments de commutation pour circuits de commande –
DéTECTEURS DE PROXIMITÉ**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX



ICS 29.120.40; 29.130.20

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FOREWORD

This amendment has been prepared by subcommittee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

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

CDV	Report on voting
17B/1733/CDV	17B/1774/RVC

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 web site 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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1.2 Normative references

Replace the existing references to the following publications as follows:

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-27:2008, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

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

IEC 61000-3-2:2005, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*
Amendment 1:2008
Amendment 2:2009

IEC 61000-3-3:2008, *Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection*

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

Amendment 1:2007

Amendment 2:2010

IEC 61000-4-6:2008, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8:2009, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

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*
Amendment 1:2009

CISPR 11:2009, *Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement*
Amendment 1:2010

Replace the existing reference IEC 60446:2007 by the following:

IEC 60445:2010, *Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors*

Replace the reference to ISO 630:1995 by the following:

ISO 630 (all parts), *Structural steels*

[SIST EN 60947-5-2:2009/A1:2013](https://standards.iteh.ai/catalog/standards/sist/a4045ea5-14a2-4bdf-8656-593183bf8cb8/sist-en-60947-5-2-2009-a1-2013)

Add the following new references: <https://standards.iteh.ai/catalog/standards/sist/a4045ea5-14a2-4bdf-8656-593183bf8cb8/sist-en-60947-5-2-2009-a1-2013>

IEC 61076-2 (all parts), *Connectors for electronic equipment – Product requirements – Part 2: Circular connectors*

5.3 Instruction for installation, operation and maintenance

Replace the title and the existing text by the following:

5.3 Instructions for installation, operation and maintenance

The manufacturer shall specify the conditions for installation, operation and maintenance of the proximity switch.

He shall also specify the recommended extent and frequency of maintenance, if any.

7.1.7.3 Connection means

Replace the existing subclause by the following:

Subclause 7.1.8.3 of IEC 60947-1 applies with the following additions: