

SLOVENSKI STANDARD

SIST EN 60947-5- 3:2000/A1:2005

september 2005

Nizkonapetostne stikalne in krmilne naprave – 5-3. del: Krmilne naprave in stikalni elementi – Zahteve za približevalne naprave z določenim obnašanjem ob okvarnih razmerah (PDF) – Dopolnilo 1 (IEC 60947-5-3:1999/A1:2005)

Low-voltage switchgear and controlgear - Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions (PDF); Amendment 1 (IEC 60947-5-3:1999/A1:2005)

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[SIST EN 60947-5-3:2000/A1:2005
https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-65da99b5e3e6/sist-en-60947-5-3-2000-a1-2005](https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-65da99b5e3e6/sist-en-60947-5-3-2000-a1-2005)

ICS 29.130.20

Referenčna številka
SIST EN 60947-5-3:2000/A1:2005(en)

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SIST EN 60947-5-3:2000/A1:2005

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Low-voltage switchgear and controlgear
Part 5-3: Control circuit devices and switching elements –
Requirements for proximity devices with defined behaviour
under fault conditions (PDF)
(IEC 60947-5-3:1999/A1:2005)

Appareillage à basse tension
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Prescriptions pour dispositifs de détection
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(CEI 60947-5-3:1999/A1:2005)

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mit definiertem Verhalten
unter Fehlerbedingungen (PDF)
(IEC 60947-5-3:1999/A1:2005)

[SIST EN 60947-5-3:2000/A1:2005](https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-954a705c3c03/sist-en-60947-5-3-2000-a1-2005)

[https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-](https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-954a705c3c03/sist-en-60947-5-3-2000-a1-2005)

This amendment A1 modifies the European Standard EN 60947-5-3:1999; it was approved by CENELEC on 2005-03-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 17B/1388/FDIS, future amendment 1 to IEC 60947-5-3:1999, prepared by SC 17B, Low-voltage switchgear and controlgear, of IEC TC 17, Switchgear and controlgear, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60947-5-3:1999 on 2005-03-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2005-12-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2008-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 1:2005 to the International Standard IEC 60947-5-3:1999 was approved by CENELEC as an amendment to the European Standard without any modification.

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SIST EN 60947-5-3:2000/A1:2005

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Replace annex ZA of EN 60947-5-3:1999 by:

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

The following referenced documents are indispensable for the application 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 Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-191	1990	International Electrotechnical Vocabulary (IEV) Chapter 191: Dependability and quality of service	-	-
A1	1999		-	-
A2	2002		-	-
IEC 60068-2-1	1990	Environmental testing Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
A1	1993		A1	1993
A2	1994		A2	1994
IEC 60068-2-2	1974	Part 2: Tests - Tests B: Dry heat	EN 60068-2-2	1993
A1	1993		A1	1993
A2	1994		A2	1994
IEC 60204-1	1997	Safety of machinery - Electrical equipment of machines Part 1: General requirements	EN 60204-1 + corr. September	1997 1998
A1	1999		-	-
IEC 60249-2-X	Series	Base materials for printed circuits Part 2: Specifications	EN 60249-2-X	Series
IEC 60446	1999	Basic and safety principles for man-machine interface, marking and identification - Identification of conductors by colours or numerals	EN 60446	1999
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
A1	1999		A1	2000
IEC 60664-1 + A1 + A2	1992 2000 2002	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	EN 60664-1	2003
IEC 60812	1985	Analysis techniques for system reliability - Procedure for failure mode and effects analysis (FMEA)	HD 485 S1	1987

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60947-1	2004	Low-voltage switchgear and controlgear Part 1: General rules	EN 60947-1 + corr. November	2004 2004
IEC 60947-5-1	2003	Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	EN 60947-5-1 + corr. November	2004 2004
IEC 60947-5-2 (mod)	1997	Part 5-2: Control circuit devices and switching elements - Proximity switches	EN 60947-5-2	1998
A1	1999		A1	1999
A2	2003		A2	2004
IEC 61000-3-2 (mod)	2000	Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)	EN 61000-3-2	2000
A1 + A2	2001 2004		A2	2005
IEC 61000-3-3	1994	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	EN 61000-3-3 + corr. July	1995 2003
A1	2001		A1	2001
IEC 61000-4-2	1995	Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	1995
A1	1998		A1	1998
A2	2000		A2	2001
IEC 61000-4-3	2002	Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2002
A1	2002		A1	2002
IEC 61000-4-4	2004	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2004
IEC 61000-4-6	2003	Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	-	-
IEC 61000-4-8	1993	Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	1993
A1	2000		A1	2001

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-11	1994	Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11 ¹⁾	1994
A1	2000		A1	2001
IEC 61000-4-13	2002	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
IEC 61025	1990	Fault tree analysis (FTA)	HD 617 S1	1992
IEC 61131-2	2003	Programmable controllers Part 2: Equipment requirements and tests	EN 61131-2 + corr. August	2003 2003
IEC 61496-1	1997	Safety of machinery - Electro-sensitive protective equipment Part 1: General requirements and tests	EN 61496-1	1997
IEC 61508	Seires	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	Series
IEC 61558-1 (mod)	1997	Safety of power transformers, power supply units and similar Part 1: General requirements and tests	EN 61558-1 + corr. April + A11	1997 2003 2003
A1	1998		A1	1998
CISPR 11	2003	Industrial scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement	-	-
A1	2004		-	-
ISO/TR 12100-1	1992	Safety of machinery - Basic concepts, general principles for design Part 1: Basic terminology, methodology	-	-
ISO 13849-1	1999	Safety of machinery - Safety-related parts of control systems Part 1: General principles for design	-	-
ISO/TR 14119	1998	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection	-	-

¹⁾ EN 61000-4-11 is superseded by EN 1000-4-11:2004, which is based on IEC 61000-4-11:2004.

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60947-5-3

1999-03

AMENDEMENT 1
AMENDMENT 1
2005-01

Amendement 1

Appareillage à basse tension –

Partie 5-3:

Appareils et éléments de commutation

pour circuits de commande –

Prescriptions pour dispositifs de détection

de proximité à comportement défini

dans des conditions de défaut (PDF)

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Amendment 1

Low-voltage switchgear and controlgear –

Part 5-3:

Control circuit devices and switching elements –

Requirements for proximity devices with defined

behaviour under fault conditions (PDF)

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International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

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*Pour prix, voir catalogue en vigueur
For price, see current catalogue*

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:

FDIS	Report on voting
17B/1388/FDIS	17B/1398/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 maintenance result 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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<https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-65da99b5e3e6/sist-en-60947-5-3-2000-a1-2005>

CONTENTS

Add the following:

7.6 Electromagnetic compatibility (EMC)

Add, at the end of the contents, the following:

Table 1 – Connection and wiring identification

Table 2 – Acceptance criteria

Table 3 – Immunity tests

Page 7

1 General

Replace the reference “ISO/DIS 13849-1” by “ISO 13849-1”.

1.2 Normative references

Replace the text of the first paragraph by the following:

The following referenced documents are indispensable for the application 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.

Add, after IEC 60050(191):1990, the following references:

Amendment 1 (1999)
Amendment 2 (2002)

Add, after IEC 60068-2-1:1990, the following references:

Amendment 1 (1993)
Amendment 2 (1994)

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Add, after IEC 60068-2-2:1974, the following references:

Amendment 1 (1993)
Amendment 2 (1994)

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Add, after IEC 60204-1:1997, the following reference: (standards.iteh.ai)

Amendment 1 (1999)

[SIST EN 60947-5-3:2000/A1:2005
https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-65da99b5e3e6/sist-en-60947-5-3-2000-a1-2005](https://standards.iteh.ai/catalog/standards/sist/0d1bdbbe-430c-4efa-94f7-65da99b5e3e6/sist-en-60947-5-3-2000-a1-2005)

Replace the reference to IEC 60446:1989 by the following:

IEC 60446:1999, *Basic and safety principles for man-machine interface, marking and identification – Identification of conductors by colours or numerals*

Add, after IEC 60529:1989, the following reference:

Amendment 1 (1999)

Add, after IEC 60664-1:1992, the following references:

Amendment 1 (2000)
Amendment 2 (2002)

Delete the reference to IEC 60664-3:1992