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STN	**Nízkonapäťové spínacie a riadiace zariadenia. Časť 1: Všeobecné pravidlá. Zmena A2**	**STN EN 60947-1/A2** 35 4101

Low-voltage switchgear and controlgear. Part 1: General rules

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. 05/15

STN EN 60947-1 z júna 2008 sa bez zmeny A2 môže používať do 14. 10. 2017.

Obsahuje: EN 60947-1:2007/A2:2014, IEC 60947-1:2007/A2:2014

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60947-1:2007/A2

November 2014

ICS 29.130.20

English Version

Low-voltage switchgear and controlgear - Part 1: General rules (IEC 60947-1:2007/A2:2014)

Appareillage à basse tension - Partie 1: Règles générales (CEI 60947-1:2007/A2:2014)

Niederspannungsschaltgeräte - Teil 1: Allgemeine Festlegungen (IEC 60947-1:2007/A2:2014)

This amendment A2 modifies the European Standard EN 60947-1:2007; it was approved by CENELEC on 2014-10-14. 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.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 121A/15/FDIS, future IEC 60947-1:2007/A2, 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 60947-1:2007/A2:2014.

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)	2015-07-14
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2017-10-14

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 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.

For the relationship with EU Directive see informative Annex ZZ, which is an integral part of this document.

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

Endorsement notice

The text of the International Standard IEC 60947-1:2007/A2:2014 was approved by CENELEC as a European Standard without any modification.

In the Bibliography of EN 60947-1:2007, the following notes have to be **added** for the standards indicated:

IEC 60695-11-5	NOTE	Harmonized as EN 60695-11-5.
IEC 60947-3:2008	NOTE	Harmonized as EN 60947-3:2009 (not modified).
IEC 60947-3:2008/A1:2012	NOTE	Harmonized as EN 60947-3:2009/A1:2012 (not modified).
IEC 60947-4-1:2009	NOTE	Harmonized as EN 60947-4-1:2010 (not modified).
IEC 60947-4-1:2009/A1:2012	NOTE	Harmonized as EN 60947-4-1:2010/A1:2012 (not modified).
IEC 60947-4-2:2011	NOTE	Harmonized as EN 60947-4-2:2012 (not modified).
IEC 60947-4-3:1999	NOTE	Harmonized as EN 60947-4-3:2000 [1)] (not modified).
IEC 60947-4-3:1999/A1:2006	NOTE	Harmonized as EN 60947-4-3:2000/A1:2006 [1)] (not modified).
IEC 60947-4-3:1999/A2:2011	NOTE	Harmonized as EN 60947-4-3:2000/A2:2011 [1)] (not modified).
IEC 60947-5-2:2007	NOTE	Harmonized as EN 60947-5-2:2007 (not modified).
IEC 60947-5-2:2007/A1:2012	NOTE	Harmonized as EN 60947-5-2:2007/A1:2012 (not modified).
IEC 60947-6-1:2005	NOTE	Harmonized as EN 60947-6-1:2005 (not modified).
IEC 60947-6-1:2005/A1:2013	NOTE	Harmonized as EN 60947-6-1:2005/A1:2014 (not modified).

[1)] Superseded by EN 60947-4-3:2014 (IEC 60947-4-3:2014).

IEC 60947-6-2:2002	NOTE	Harmonized as EN 60947-6-2:2003 (not modified).
IEC 60947-6-2:2002/A1:2007	NOTE	Harmonized as EN 60947-6-2:2003/A1:2007 (not modified).
IEC 61095:2009	NOTE	Harmonized as EN 61095:2009 (not modified).
IEC 61439 Series	NOTE	Harmonized as EN 61439 Series (not modified).
IEC 61508-6	NOTE	Harmonized as EN 61508-6.
CISPR 22	NOTE	Harmonized as EN 55022.
ISO 50001	NOTE	Harmonized as EN ISO 50001.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

Annex ZA of EN 60947-1:2007 applies, except as follows:

Publication	Year	Title	EN/HD	Year

Delete *from the Annex ZA of EN 60947-1:2007 "IEC 60439-1:1999 and its amendment A1:2004".*

Replace *the existing references of the following list by the following new references:*

IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007
IEC 61000-3-3	2013	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	EN 61000-3-3	2013
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 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
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
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

***Add**, to the existing references the new amendments as follows:*

IEC 60947-5-1	2003	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	EN 60947-5-1 + corr. November + corr. July	2004 2004 2005
+A1	2009		+A1	2009
IEC 61000-3-2	2005	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN 61000-3-2	2006
+A1	2008		+A1	2009
+A2	2009		+A2	2009
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+A1	2007		+A1	2008
+A2	2010		+A2	2010
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

***Add** the following new references as follows:*

IEC 60092-504	2001	Electrical installations in ships - Part 504: Special features - Control and instrumentation	-	-
IEC 60300-3-5	2001	Dependability management - Part 3-5: Application guide - Reliability test conditions and statistical test principles	-	-
IEC 61508	Series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	Series
IEC 61649	2008	Weibull analysis	EN 61649	2008
IEC 62061	2005	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	EN 62061 + corr. February	2005 2010
IEC 62430	2009	Environmentally conscious design for electrical and electronic products	EN 62430	2009
IEC 62474	2012	Material declaration for products of and for the electrotechnical industry	EN 62474	2012
ISO 13849-1	2006	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	2008

Replace *Annex ZZ by the following new one:*

Annex ZZ
(informative)

Coverage of Essential Requirements of EU Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers protection requirements of Annex I Article 1 of the EU Directive 2004/108/EC.

Compliance with this standard provides presumption of conformity with the specified essential requirements of the Directives concerned.

NOTE: Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

IEC 60947-1

Edition 5.0 2014-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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AMENDMENT 2
AMENDEMENT 2

Low-voltage switchgear and controlgear – Part 1: General rules

Appareillage à basse tension – Partie 1: Règles générales

IEC 60947-1:2007-06/AMD2:2014-09(en-fr)

IEC 60947-1

Edition 5.0 2014-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

AMENDMENT 2
AMENDEMENT 2

Low-voltage switchgear and controlgear – Part 1: General rules

Appareillage à basse tension – Partie 1: Règles générales

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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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:

FDIS	Report on voting
121A/15/FDIS	121A/21/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 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

1.1 Scope and object

Replace the existing text of this subclause by the following new text:

This standard applies, when required by the relevant product standard, to low-voltage switchgear and controlgear hereinafter referred to as "equipment" or "device" and intended to be connected to circuits the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c.

This standard states the general rules and common safety requirements for low-voltage switchgear and controlgear, including:

– definitions;
– characteristics;
– information supplied with the equipment;
– normal service, mounting and transport conditions;
– constructional and performance requirements;
– verification of characteristics and performance;
– environmental aspects.

This standard does not apply to low-voltage switchgear and controlgear assemblies which are dealt with in IEC 61439 series, as applicable.

1.2 Normative references

*Delete the existing reference to "*IEC 60439-1:1999" and its Amendment 1.

Replace the existing references by the following new references:

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 61000-3-3:2013, *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 61000-4-4:2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-6:2013, *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*

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

Add, to the existing references, the new amendments as follows:

IEC 60947-5-1:2003, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*
Amendment 1 (2009)

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 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*
Amendment 1 (2007)
Amendment 2 (2010)

IEC 61000-4-13:2002, *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)

Add the following new normative references as follows:

IEC 60092-504:2001, *Electrical installations in ships – Part 504: Special features – Control and instrumentation*

IEC 60300-3-5:2001, *Dependability management – Part 3-5: Application guide – Reliability test conditions and statistical test principles*

IEC 61508 (all parts), *Functional safety of electrical/electronic/programmable electronic safety-related systems*

IEC 61649:2008, *Weibull analysis*

IEC 62061:2005, *Safety of machinery – Functional safety of safety-related electrical, electronic and programmable electronic control systems*

IEC 62430:2009, *Environmentally conscious design for electrical and electronic products*

IEC 62474:2012, *Material declaration for products of and for the electrotechnical industry*

ISO 13849-1:2006, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design*