



SLOVENSKI STANDARD
SIST EN 60947-5-9:2008
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Nizkonapetostne stikalne in krmilne naprave - 5-9. del: Krmilne naprave in stikalni elementi - Stikala za hitrost pretoka (IEC 60947-5-9:2006)

Low-voltage switchgear and controlgear - Part 5-9: Control circuit devices and switching elements - Flow rate switches (IEC 60947-5-9:2006)

Niederspannungsschaltgeräte - Teil 5-9: Steuergeräte und Schaltelemente - Durchflussmengenschalter (IEC 60947-5-9:2006)

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Appareillage à basse tension - (Partie 5-9: Appareils et éléments de commutation pour circuit de commande - Détecteurs de débit (IEC 60947-5-9:2006)

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**Low-voltage switchgear and controlgear -
Part 5-9: Control circuit devices and switching elements -
Flow rate switches
(IEC 60947-5-9:2006)**

Appareillage à basse tension -
Partie 5-9: Appareils et éléments
de commutation pour circuit
de commande -
DéTECTEURS DE DÉBIT
(CEI 60947-5-9:2006)

Niederspannungsschaltgeräte -
Teil 5-9: Steuergeräte und
Schaltelemente -
Durchflussmengenschalter
(IEC 60947-5-9:2006)

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This European Standard was approved by CENELEC on 2007-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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 European Standard 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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/1500/FDIS, future edition 1 of IEC 60947-5-9, 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 EN 60947-5-9 on 2007-09-01.

This standard is to be used in conjunction with EN 60947-1:2004 and EN 60947-5-2:1998.

The provisions of the general rules, EN 60947-1, are applicable to this part of EN 60947, where specifically called for. General rules clauses and subclauses thus applicable, as well as tables, figures and annexes are identified by a reference to IEC 60947-1, for example 1.2.3 or Annex A of IEC 60947-1.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2008-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-09-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive EMC (2004/108/EC). See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

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Endorsement notice

[SIST EN 60947-5-9:2008](http://standards.iteh.ai/catalog/standards/sist-en-60947-5-9-2008)

The text of the International Standard IEC 60947-5-9:2007 was approved by CENELEC as a European Standard without any modification. <http://standards.iteh.ai/catalog/standards/sist-en-60947-5-9-2008>

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 When 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 60446	1999	Basic and safety principles for man-machine interface, marking and identification - Identification of conductors by colours or numerals	EN 60446	1999 ¹⁾
IEC 60947-1	2004	Low-voltage switchgear and controlgear - Part 1: General rules	EN 60947-1 + corr. November	2004 ²⁾ 2004
IEC 60947-5-2 (mod)	1997	Low-voltage switchgear and controlgear - 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	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
IEC 61000-3-3	1994	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 + corr. July	1995 1997
A1	2001		A1	2001
A2	2005		A2	2005
IEC 61000-4-2	1995	Electromagnetic compatibility (EMC) - 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	2006	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
IEC 61000-4-4	2004	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2004

¹⁾ EN 60446:1999 is superseded by EN 60446:2007, which is based on IEC 60446:2007.

²⁾ EN 60947-1:2004 is superseded by EN 60947-1:2007, which is based on IEC 60947-1:2007.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-6 + A1 + A2	2003 2004 2006	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6 + corr. August	2007 2007
IEC 61000-4-8 A1	1993 2000	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8 A1	1993 2001
IEC 61000-4-11	2004	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	2004
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
IEC 61140 A1 (mod)	2001 2004	Protection against electric shock - Common aspects for installation and equipment	EN 61140 A1	2002 2006
IEC 61558-2-6	1997	Safety of power transformers, power supply units and similar - Part 2-6: Particular requirements for safety isolating transformers for general use	EN 61558-2-6	1997
CISPR 11 (mod) + A1	2003 2004	Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement	EN 55011	2007

Annex ZZ
(informative)

Coverage of Essential Requirements of EC 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 all relevant essential requirements as given in Article 1 of Annex I of the EC Directive 2004/108/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

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

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CEI
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60947-5-9

Première édition
First edition
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Appareillage à basse tension –

Partie 5-9:

**Appareils et éléments de commutation
pour circuit de commande –**

Détecteurs de débit

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Low-voltage switchgear and controlgear –

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Part 5-9:

**Control circuit devices and switching elements –
Flow rate switches**

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 5-9: Control circuit devices and switching elements –
Flow rate switches

FOREWORD

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International Standard IEC 60947-5-9 has been prepared by subcommittee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

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

FDIS	Report on voting
17B/1500/FDIS	17B/1525/RVD

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

This International Standard should be used in conjunction with IEC 60947-1 and IEC 60947-5-2.

The provisions of the general rules, IEC 60947-1, are applicable to this standard, where specifically called for. General rules clauses and subclauses thus applicable, as well as tables, figures and annexes are identified by a reference to IEC 60947-1, for example 1.2.3 or Annex A of IEC 60947-1.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60947 series, under the general title *Low-voltage switchgear and controlgear*, can be found on the IEC website.

The committee has decided that the contents of this 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
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