
Nizkonapetostne stikalne naprave – 6-1. del: Večfunkcijska oprema – Oprema za samodejno predajanje stikanja (IEC 60947-6-1:2005)

(istoveten EN 60947-6-1:2005)

Low-voltage switchgear and controlgear – Part 6-1: Multiple function equipment – Transfer switching equipment (IEC 60947-6-1:2005)

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EUROPEAN STANDARD

EN 60947-6-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2005

ICS 29.130.20

Supersedes EN 60947-6-1:1991 + A1:1994 + A2:1997

English version

**Low-voltage switchgear and controlgear
Part 6-1: Multiple function equipment –
Transfer switching equipment
(IEC 60947-6-1:2005)**

Appareillage à basse tension
Partie 6-1: Matériels à fonctions multiples -
Matériels de connexion de transfert
(CEI 60947-6-1:2005)

Niederspannungsschaltgeräte
Teil 6-1: Mehrfunktionsschaltgeräte -
Netzumschalter
(IEC 60947-6-1:2005)

STANDARD PREVIEW
This European Standard was approved by CENELEC on 2005-10-01. 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.

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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, 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/1418/FDIS, future edition 2 of IEC 60947-6-1, 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 60947-6-1 on 2005-10-01.

This European Standard supersedes EN 60947-6-1:1991 + A1:1994 + A2:1997.

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) 2006-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2008-10-01

This part of EN 60947 shall be used in conjunction with EN 60947-1:2004 (IEC 60947-1:2004), General rules.

The provisions of the general rules dealt with in IEC 60947-1 are applicable to this part of EN 60947, where specifically called for. Clauses and subclauses, tables, figures and annexes of the general rules thus applicable are identified by reference to IEC 60947-1 (e.g. 1.2.3 of IEC 60947-1, Table 4 of IEC 60947-1 or Annex A of IEC 60947-1, etc.).

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 89/336/EEC. See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60947-6-1:2005 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 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 60695-11-10	1999	Fire hazard testing Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	1999
A1	2003		A1	2003
IEC 60947-1	2004	Low-voltage switchgear and controlgear Part 1: General rules	EN 60947-1 + corr. November	2004 2004
IEC 60947-2	2003	Part 2: Circuit-breakers	EN 60947-2	2003
IEC 60947-3	1999	Part 3: Switches, disconnectors, switch- disconnectors and fuse-combination units	EN 60947-3	1999
A1	2001		A1	2001
IEC 60947-4-1	2000	Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor- starters	EN 60947-4-1	2001
A1	2002		A1	2002
IEC 60947-4-2	1999	Part 4-2: Contactors and motor-starters - AC semiconductor motor controllers and starters	EN 60947-4-2	2000
A1	2001		A1	2002
IEC 60947-4-3	1999	Part 4-3: Contactors and motor-starters - AC semiconductor controllers and contactors for non-motor loads	EN 60947-4-3	2000
IEC 60947-6-2	2002	Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)	EN 60947-6-2	2003
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	2002	Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2002
A1	2002		A1	2002

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-4	1995	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	1995
A1	2000		A1	2001
A2	2001		A2	2001
IEC 61000-4-5	1995	Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	1995
A1	2000		A1	2001
IEC 61000-4-6	2003	Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	-	-
A1	2004		-	-
CISPR 11	2003	Industrial scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement	-	-
A1	2004		-	-

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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 4 of the EC Directive 89/336/EEC.

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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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60947-6-1

Deuxième édition
Second edition
2005-08

Appareillage à basse tension–

**Partie 6-1:
Matériels à fonctions multiples –
Matériels de connexion de transfert**

iTeh STANDARD PREVIEW

Low-voltage switchgear and controlgear –

Part 6-1: SIST EN 60947-6-1:2006

<https://standards.iteh.ai/catalog/standards/sist/b6-286e1-4f18-4cd1-ab63-cae6ed29d9f3/sist-en-60947-6-1-2006>

**Multiple function equipment –
Transfer switching equipment**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

X

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 6-1: Multiple function equipment –
Transfer switching equipment

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60947-6-1 has been prepared by subcommittee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

This second edition cancels and replaces the first edition published in 1989, amendment 1 (1994), and amendment 2 (1997). This edition incorporates Amendment 3 which was not published separately.

The text of this standard is based on first edition, amendment 1, amendment 2 and the following documents:

FDIS	Report on voting
17B/1418/FDIS	17B/1424/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 part of IEC 60947 shall be used in conjunction with IEC 60947-1: General rules.

The provisions of the general rules dealt with in IEC 60947-1 are applicable to this part of IEC 60947, where specifically called for. Clauses and subclauses, tables, figures and annexes of the general rules thus applicable are identified by reference to IEC 60947-1 (e.g. 1.2.3 of IEC 60947-1, Table 4 of IEC 60947-1 or Annex A of IEC 60947-1, etc.).

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

IEC 60947 consists of the following parts, under the general title *Low-voltage switchgear and controlgear*:

- Part 1: General rules
- Part 2: Circuit-breakers
- Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units
- Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters
- Part 4-2: Contactors and motor-starters – AC semiconductor motor controllers and starters
- Part 4-3: Contactors and motor-starters – AC semiconductor controllers and contactors for non-motor loads
- Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices
- Part 5-2: Control circuit devices and switching elements – Proximity switches
- Part 5-3: Control circuit devices and switching elements – Requirements for proximity devices with defined behaviour under fault conditions (PDF)
- Part 5-4: Control circuit devices and switching elements – Method of assessing the performance of low-energy contacts – Special tests
- Part 5-5: Control circuit devices and switching elements – Electrical emergency stop device with mechanical latching function
- Part 5-6: Control circuit devices and switching elements – DC interface for proximity sensors and switching amplifiers (NAMUR)
- Part 5-7: Control circuit devices and switching elements – Requirements for proximity devices with analogue output
- Part 5-8: Control circuit devices and switching elements – Three-position enabling switches¹
- Part 5-9: Control circuit devices and switching elements – Flow rate switches¹
- Part 6-1: Multiple function equipment – Automatic transfer switching equipment
- Part 6-2: Multiple function equipment – Control and protective switching devices (or equipment) (CPS)

¹ Under consideration.

Part 7-1: Ancillary equipment – Terminal blocks for copper conductors

Part 7-2: Ancillary equipment – Protective conductor terminal blocks for copper conductors

Part 7-3: Ancillary equipment – Safety requirements for fuse terminal blocks

Part 7-3: Ancillary equipment – Safety requirements for fuse terminal blocks

Part 8: Control units for built-in thermal protection (PTC) for rotating electrical machines

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
- amended.

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 6-1: Multiple function equipment – Transfer switching equipment

1 Scope and object

This part of IEC 60947 applies to transfer switching equipment (TSE) to be used in power systems with interruption of the supply to the load during transfer, the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c.

It covers:

- manually operated transfer switching equipment (MTSE);
- remote operated transfer switching equipment (RTSE);
- automatic transfer switching equipment (ATSE).

It covers TSE provided with or without an enclosure.

Devices necessary for the control (e.g. control switches, etc.) and the protection (e.g. circuit-breakers, etc.) of a TSE are covered by the relevant IEC standards.

NOTE TSE used only for emergency lighting may be subject to specific rules and/or legal requirements and are not, therefore, covered by this standard.

The object of this part of IEC 60947 is to state:

- 1) The characteristics of the equipment:
 - a) specific equipment;
 - b) equipment the main part of which being devices covered by other IEC 60947 product standards.
- 2) The conditions of the equipment with respect to:
 - a) operation for which the equipment is intended;
 - b) operation and behaviour in case of specified abnormal conditions, for example, short-circuit;
 - c) dielectric properties.
- 3) The tests intended to confirm that these conditions have been met and the methods for performing these tests.
- 4) The data to be marked on the equipment and provided by the manufacturer.