BRITISH STANDARD

BS EN
60947-1:2007
+A1:2011

# Low-voltage switchgear and controlgear —

## Part 1: General rules

ICS 29.130.20

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British Standards

# National foreword

This British Standard is the UK implementation of EN 60947-1:2007+A1:2011. It is identical to IEC 60947-1:2007, incorporating amendment 1:2010. It supersedes BS EN 60947-1:2007, which will be withdrawn on 1 January 2014.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by [A1] 〈A1〉.

The UK participation in its preparation was entrusted by Technical Committee PEL/17, Switchgear, controlgear, and HV-LV co-ordination, to Subcommittee PEL/17/2, Low voltage switchgear and controlgear.

A list of organizations represented on this committee can be obtained on request to its secretary.

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2007

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ISBN 978 0 580 61668 6

**Amendments/corrigenda issued since publication**

| Date | Comments |
|---|---|
| 31 May 2011 | Implementation of IEC amendment 1:2010, with CENELEC endorsement A11:2011 |
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 60947-1+A1

January 2011

ICS 29.130.20

English version

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

(IEC 60947-1:2007)

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

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

This amendment A1 modifies the European Standard EN 60947-1:2007; it was approved by CENELEC on 2011-01-01. 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.

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CENELEC

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

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Ref. No. EN 60947-1:2007 E

## Foreword

The text of document 17B/1550/FDIS, future edition 5 of IEC 60947-1, 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 60947-1 on 2007-07-01.

This European Standard supersedes EN 60947-1:2004.

The main changes with respect to EN 60947-1:2004 are as follows:

– modification and restructuration of 7.1;

– introduction of new figures concerning EMC tests;

– introduction of new Annexes Q, R and S.

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) | 2008-04-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-07-01 |

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 Directives EMC (98/336/EEC) and EMC2 (2004/108/EC). See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

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## Endorsement notice

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

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## Foreword to amendment A1

The text of document 17B/1710/FDIS, future amendment 1 to IEC 60947-1:2007, 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 60947-1:2007 on 2011-01-01.

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

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) | 2011-10-01 |
| – latest date by which the national standards conflicting with the amendment have to be withdrawn | (dow) | 2014-01-01 |

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of amendment 1:2010 to the International Standard IEC 60947-1:2007 was approved by CENELEC as an amendment to the European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|---|---|---|
| [5] IEC 60947-7-1 | NOTE | Harmonized as EN 60947-7-1. |
| [6] IEC 60998-2-2:2002 | NOTE | Harmonized as EN 60998-2-2:2004 (modified). |

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# LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

# Part 1: General rules

## 1 General

The purpose of this standard is to harmonize as far as practicable all rules and requirements of a general nature applicable to low-voltage switchgear and controlgear in order to obtain uniformity of requirements and tests throughout the corresponding range of equipment and to avoid the need for testing to different standards.

All those parts of the various equipment standards which can be considered as general have therefore been gathered in this standard together with specific subjects of wide interest and application, e.g. temperature-rise, dielectric properties, etc.

For each type of low-voltage switchgear and controlgear, only two main documents are necessary to determine all requirements and tests:

1) this basic standard, referred to as "Part 1" in the specific standards covering the various types of low-voltage switchgear and controlgear;
2) the relevant equipment standard hereinafter referred to as the "relevant product standard" or "product standard".

For a general rule to apply to a specific product standard, it shall be explicitly referred to by the latter, by quoting the relevant clause or subclause number of this standard followed by "IEC 60947-1" e.g. "7.2.3 of IEC 60947-1".

A specific product standard may not require, and hence may omit, a general rule (as being not applicable), or it may add to it (if deemed inadequate in the particular case), but it may not deviate from it, unless there is a substantial technical justification.

A1 NOTE The product standards forming the series of IEC standards covering low-voltage switchgear and controlgear are:

IEC 60947-2: Part 2: Circuit-breakers

IEC 60947-3: Part 3: Switches, disconnectors, switch-disconnectors and fuse combination units

IEC 60947-4: Part 4: Contactors and motor-starters

IEC 60947-5: Part 5: Control-circuit devices and switching elements

IEC 60947-6: Part 6: Multiple function equipment

IEC 60947-7: Part 7: Ancillary equipment

IEC 60947-8: Part 8: Control units for built-in thermal protection (PTC) for rotating electrical machines. A1

### 1.1 Scope and object

This standard applies, when required by the relevant product standard, to switchgear and controlgear hereinafter referred to as "equipment" 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.

It does not apply to low-voltage switchgear and controlgear assemblies which are dealt with in IEC 60439.