



SLOVENSKI STANDARD

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Nadomešča:
SIST EN 60519-1:2004

Varnost pri električnih grelnih inštalacijah - 1. del: Splošne zahteve (IEC 60519-1:2010)

Safety in electroheating installations - Part 1: General requirements (IEC 60519-1:2010)

Sicherheit in Elektrowärmeanlagen - Teil 1: Allgemeine Anforderungen (IEC 60519-1:2010)

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Sécurité dans les installations électrothermiques - Partie 1: Exigences générales (CEI 60519-1:2010)

[SIST EN 60519-1:2011](https://standards.iteh.ai/catalog/standards/sist/ce9deba3-c13a-4ec7-ab2a-75ec16cd7975/sist-en-60519-1-2011)

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Ta slovenski standard je istoveten z: EN 60519-1:2011

ICS:

25.180.10 Električne peči Electric furnaces

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60519-1

January 2011

ICS 25.180.10

Supersedes EN 60519-1:2003

English version

**Safety in electroheating installations -
Part 1: General requirements
(IEC 60519-1:2010)**

Sécurité dans les installations
électrothermiques -
Partie 1: Exigences générales
(CEI 60519-1:2010)

Sicherheit in Elektrowärmeanlagen -
Teil 1: Allgemeine Anforderungen
(IEC 60519-1:2010)

This European Standard was approved by CENELEC on 2011-01-03. 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, Croatia, 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

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Foreword

The text of document 27/770/FDIS, future edition 4 of IEC 60519-1, prepared by IEC TC 27, Industrial electroheating, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60519-1 on 2011-01-03.

This European Standard supersedes EN 60519-1:2003.

The main technical changes with respect to EN 60519-1:2003 are as follows:

- scope and object have been modified, voltage limits and classification removed;
- terms/definitions, Annex ZA and bibliography have been updated and completed;
- Clause 4 on classification of equipment according to process frequency has been modified;
- Clause 5 (*General requirements*) has been redrafted and new provisions have been added (e.g. relating to single fault conditions and EMF issues), following the recommendations of IEC Guide 104;
- Clause 8 has been redrafted, the contents of subclauses 8.2 and 8.3 has been moved to a new normative Annex A and 8.4 has been deleted;
- a new Clause 12 (*Protection against other hazards*) has been added;
- clauses dealing with marking and documentation have been amended.

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.

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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) | 2011-10-03 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2014-01-03 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60519-1:2010 was approved by CENELEC as a European Standard without any modification.

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

IEC 60398:1999	NOTE	Harmonized as EN 60398:1999 (not modified).
IEC 61000-3-2	NOTE	Harmonized as EN 61000-3-2.
IEC 61000-3-3	NOTE	Harmonized as EN 61000-3-3.
IEC 61000-3-11	NOTE	Harmonized as EN 61000-3-11.
IEC 61000-6-2	NOTE	Harmonized as EN 61000-6-2.
IEC 62311:2007	NOTE	Harmonized as EN 62311:2008 (modified).
ISO 12100-1:2003	NOTE	Harmonized as EN ISO 12100-1:2003 (not modified).

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.

Publication	Year	Title	EN/HD	Year
IEC 60050-841	2004	International Electrotechnical Vocabulary (IEV) - Part 841: Industrial electroheat	-	-
IEC 60071-1	-	Insulation co-ordination - Part 1: Definitions, principles and rules	EN 60071-1	-
IEC 60110-1	1998	Power capacitors for induction heating installations - Part 1: General	EN 60110-1	1998
IEC 60204-1 (mod) + A1	2005 2008	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1 + corr. February + A1	2006 2010 2009
IEC 60204-11	-	Safety of machinery - Electrical equipment of machines - Part 11: Requirements for HV equipment for voltages above 1 000 V a.c. or 1 500 V d.c. and not exceeding 36 kV	EN 60204-11	-
IEC 60364-1 (mod)	2005	Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions	HD 60364-1	2008
IEC 60364-4-41 (mod)	-	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41	-
IEC 60364-4-42	-	Low voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects	HD 60364-4-42	-
IEC 60364-4-43 (mod)	-	Low voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent	HD 60364-4-43	-
IEC 60364-5-53	-	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control	-	-
IEC 60364-5-54 (mod)	-	Electrical installations of buildings - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements, protective conductors and protective bonding conductors	HD 60364-5-54	-
IEC 60417	-	Graphical symbols for use on equipment	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60446	-	Basic and safety principles for man-machine interface, marking and identification - Identification of conductors by colours or alphanumerics	EN 60446	-
IEC 60529	-	Degrees of protection provided by enclosures - (IP Code)	-	-
IEC 60664-1	-	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	-
IEC 61140	-	Protection against electric shock - Common aspects for installation and equipment	EN 61140	-
IEC 61936-1 (mod)	-	Power installations exceeding 1 kV a.c. - Part 1: Common rules	EN 61936-1	-
CISPR 11 (mod)	-	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011	-
ISO 3864-1	-	Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs in workplaces and public areas	-	-
ISO 7000	-	Graphical symbols for use on equipment - Index and synopsis	-	-

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Edition 4.0 2010-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Safety in electroheating installations –
Part 1: General requirements**

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**Sécurité dans les installations électrothermiques –
Partie 1: Exigences générales**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY IN ELECTROHEATING INSTALLATIONS –**Part 1: General requirements**

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 60519-1 has been prepared by IEC technical committee 27: Industrial electroheating.

This fourth edition cancels and replaces the third edition published in 2003. It constitutes a technical revision.

The main technical changes with respect to the previous edition are as follows:

- scope and object have been modified, voltage limits and classification removed;
- terms/definitions, normative references and bibliography have been updated and completed;
- Clause 4 on classification of equipment according to process frequency has been modified;
- Clause 5 (*General requirements*) has been redrafted and new provisions have been added (e.g. relating to single fault conditions and EMF issues), following the recommendations of IEC Guide 104;

- Clause 8 has been redrafted, the contents of subclauses 8.2 and 8.3 has been moved to a new normative Annex A and 8.4 has been deleted;
- a new Clause 12 (*Protection against other hazards*) has been added;
- clauses dealing with marking and documentation have been amended.

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

FDIS	Report on voting
27/770/FDIS	27/778/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.

The French version of this standard has not been voted upon.

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

A list of all parts of IEC 60519 series, under the general title *Safety in electroheating installations*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of a new edition.

The clauses of parts of the IEC 60519 series (hereinafter called Particular Requirements) supplement or modify the corresponding clauses of Part 1. Where the text of subsequent parts indicates an "addition" to or a "replacement" of the relevant provision of Part 1, these changes are made to the relevant text of Part 1. Where no change is necessary, the words "This clause of Part 1 is applicable" are used. Additional specific provisions to those in Part 1 are given in the Particular Requirements as additional clauses, subclauses or Annexes.

The committee has decided that the contents of this 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.

INTRODUCTION

International Standard IEC 60519 *Safety in electroheating installations* consists of several parts. Part 1 comprises clauses of a general character and provisions common to various types of industrial electroheating installations or equipment. Subsequent parts of the IEC 60519 series (hereinafter called Particular Requirements) contain specific provisions for particular types of electroheating installations or equipment.

- Part 1: *General requirements*
- Part 2: *Particular requirements for resistance heating equipment*
- Part 3: *Particular requirements for induction and conduction heating and induction melting installations*
- Part 4: *Particular requirements for arc furnace installations*
- Part 5: *Specifications for safety in plasma installations*
- Part 6: *Specifications for safety in industrial microwave heating equipment*
- Part 7: *Particular requirements for installations with electron guns*
- Part 8: *Particular requirements for electroslag remelting furnaces*
- Part 9: *Particular requirements for high-frequency dielectric heating installations*
- Part 10: *Particular requirements for electrical resistance trace heating systems for industrial and commercial applications*
- Part 11: *Particular requirements for installations using the effect of electromagnetic forces on liquid metals*
- Part 21: *Particular requirements for resistance heating equipment – Heating and melting glass equipment*

NOTE Additional parts covering particular industrial electroheating installations or equipment may be prepared in the future.

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