SLOVENSKI STANDARD
SIST EN IEC 60519-12:2018

01-maj-2018

Nadomešča:
SIST EN 60519-12:2013

Varnost pri električnih grelnih inštalacijah in elektromagnetni obdelavi - 12. del: Posebne zahteve za inštalacije z infrardečim električnim ogrevanjem

Safety in installations for electroheating and electromagnetic processing - Part 12: Particular requirements for infrared electroheating

Ta slovenski standard je istoveten z: **EN IEC 60519-12:2018**

ICS:

97.100.10	Električni grelniki	Electric heaters

SIST EN IEC 60519-12:2018 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60519-12

March 2018

ICS 25.180.10

Supersedes EN 60519-12:2013

English Version

Safety in installations for electroheating and electromagnetic processing - Part 12: Particular requirements for infrared electroheating (IEC 60519-12:2016)

Sécurité dans les installations destinées au traitement électrothermique et électromagnétique - Partie 12: Exigences particulières pour chauffage électrique par rayonnement infrarouge (IEC 60519-12:2016)

Sicherheit in Elektrowärmeanlagen und Anlagen für elektromagnetische Bearbeitungsprozesse - Teil 12: Besondere Anforderungen an Infrarot-Elektrowärmeanlagen (IEC 60519-12:2016)

This European Standard was approved by CENELEC on 2017-01-19. 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 CEN-CENELEC Management Centre 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 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: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 27/967/CDV, future edition 2 of IEC 60519-12, prepared by IEC/TC 27 "Industrial electroheating and electromagnetic processing" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60519-12:2018.

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)	2018-09-02
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-03-02

This document supersedes EN 60519-12:2013.

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

Endorsement notice

The text of the International Standard IEC 60519-12:2016 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 60519-2:2006	NOTE	Harmonized as EN 60519-2:2006 (not modified).
IEC 60825-1:2014	NOTE	Harmonized as EN 60825-1:2014 (not modified).
IEC 61010-1:2010	NOTE	Harmonized as EN 61010-1:2010 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60519-1	2015	Safety in installations for electroheating and electromagnetic processing -- Part 1: General requirements	EN 60519-1	2015

IEC 60519-12

Edition 2.0 2016-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Safety in installations for electroheating and electromagnetic processing – Part 12: Particular requirements for infrared electroheating

Sécurité dans les installations destinées au traitement électrothermique et électromagnétique – Partie 12: Exigences particulières pour chauffage électrique par rayonnement infrarouge

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SAFETY IN INSTALLATIONS FOR ELECTROHEATING AND ELECTROMAGNETIC PROCESSING –

Part 12: Particular requirements for infrared electroheating

FOREWORD

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International Standard IEC 60519-12 has been prepared by IEC technical committee 27: Industrial electroheating and electromagnetic processing.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) the structure has been redrafted according to IEC 60519-1:2015;

b) terms/definitions, normative references and bibliography have been updated and completed;

c) all requirements and content from IEC 60519-12:2013 that have been included in IEC 60519-1:2015 have been removed to avoid any duplication.

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

CDV	Report on voting
27/967/CDV	27/982/RVC

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

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

A list of all parts in the IEC 60519 series, published under the general title *Safety in installations for electroheating and electromagnetic processing*, 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 the next edition.

The clauses of parts of the IEC 60519 series (hereinafter called Particular Requirements) supplement or modify the corresponding clauses of IEC 60519-1:2015 (*General Requirements* hereinafter called Part 1).

This part of IEC 60519 is to be read in conjunction with Part 1. It supplements or modifies the corresponding clauses of Part 1. Where the text 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. When a particular subclause of Part 1 is not mentioned in this part, that subclause applies as far as is reasonable.

Additional specific provisions to those in Part 1, given as individual clauses or subclauses, are numbered starting from 101.

NOTE The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

In this standard, the following print types are used:

- requirements and definitions: in roman type;
- NOTES: in smaller roman type;
- terms used throughout this standard which have been defined in Clause 3: **in bold type**.

INTRODUCTION

The scope of this standard covers a broad range of types and designs of infrared equipment which are used for many different purposes. This standard is intended to cover all industrial infrared equipment types, with some few exceptions provided in Clause 1.

Many other types of electroheating equipment emit infrared radiation of hazardous levels, therefore IEC 60519-1:2015 provides all general requirements addressing optical radiation and this document provides specific considerations for infrared equipment and helpful methods.

With reference to IEC 60519-2:2006 it has been agreed in TC 27 that this standard covers all kinds of infrared emission hazards of industrial electroheating installations and provisions not given in IEC 60519-1:2015.

The discussion of infrared radiation assessment has become quite detailed in this standard, as for the industry there is not any single useful source available for simple, versatile, easy to use and cost effective measurement methods.

The other principles for covering the risks caused by infrared radiation were:

- the manufacturer usually does not employ an expert in optical radiation measurement or has access to an optical laboratory with all the necessary equipment needed for elaborate measurements;
- operating staff with limited experience in radiation measurement is usually responsible for the task of performing the necessary measurements and will appreciate a simple and easy to follow guide;
- the scope of IEC 62471:2006 is limited to lamps but is applicable for other light sources. Therefore, core aspects were adapted from that standard and if possible simplified for this document.
- figures illustrating the classes defined in IEC 62471:2006 and listed in IEC 60519-1:2015 are included;
- relevant documents of American National Standard Institute/Illuminating Engineering Society of North America, the ANSI/IESNA RP 27 series, are based on the ICNIRP recommendations as well. They provide no extra or contradictory material with regard to this standard and its references.