



SLOVENSKI STANDARD

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SIST EN 60519-1:2011

Varnost pri električnih grelnih inštalacijah in elektromagnetni obdelavi - 1. del: Splošne zahteve

Safety in installations for electroheating and electromagnetic processing - Part 1:
General requirements

Sicherheit in Elektrowärmeanlagen und Anlagen für elektromagnetische
Bearbeitungsprozesse - Teil 1: Allgemeine Anforderungen
(standards.iteh.ai)

Sécurité dans les installations destinées au traitement électrothermique et
électromagnétique - Partie 1: Exigences générales
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25.180.10 Električne peči Electric furnaces

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Safety in installations for electroheating and electromagnetic processing - Part 1: General requirements (IEC 60519-1:2015)

Sécurité dans les installations destinées au traitement
électrothermique et électromagnétique - Partie 1: Exigences
générales
(IEC 60519-1:2015)

Sicherheit in Elektrowärmeanlagen und Anlagen für
elektromagnetische Bearbeitungsprozesse - Teil 1:
Allgemeine Anforderungen
(IEC 60519-1:2015)

This European Standard was approved by CENELEC on 2015-04-14. 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.

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 27/947/FDIS, future edition 5 of IEC 60519-1, prepared by IEC/TC 27 "Industrial electroheating and electromagnetic processing" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60519-1:2015.

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) 2016-01-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-04-14

This document supersedes EN 60519-1:2011

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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

[SIST EN 60519-1:2015](https://standards.iteh.ai/catalog/standards/sist/a3173e2e-9e34-4a9a-96b8-f2015)

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Endorsement notice

The text of the International Standard IEC 60519-1:2015 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 60079 (series)	NOTE	Harmonized as EN 60079 (series).
IEC 60204 (series)	NOTE	Harmonized as EN 60204 (series).
IEC 60335 (series)	NOTE	Harmonized as EN 60335 (series).
IEC 60601 (series)	NOTE	Harmonized as EN 60601 (series).
IEC 60974 (series)	NOTE	Harmonized as EN 60974 (series).
IEC 61140:2001	NOTE	Harmonized as EN 61140:2001.
IEC 61140:2001/A1:2004	NOTE	Harmonized as EN 61140:2001/A1:2006.
IEC 61439 (series)	NOTE	Harmonized as EN 61439 (series).
IEC 62226 (series)	NOTE	Harmonized as EN 62226 (series).
IEC 62271 (series)	NOTE	Harmonized as EN 62271 (series).

IEC 62311	NOTE	Harmonized as EN 62311.
ISO 5349-1:2001	NOTE	Harmonized as EN ISO 5349-1:2001.
ISO 7010	NOTE	Harmonized as EN ISO 7010.
ISO 15265:2004	NOTE	Harmonized as EN ISO 15265:2004.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60071-1	-	Insulation co-ordination - Part 1: Definitions, principles and rules	EN 60071-1	-
IEC 60204-1 (mod)	2005	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	2006
+A1	2008		+A1	2009
-	-		+corrigendum Feb.	2010
IEC 60204-11	2000	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	2000
-	-		+corrigendum Feb.	2010
IEC 60228	-	Conductors of insulated cables	EN 60228	-
-	-		+corrigendum May	-
IEC 60335-1:2010/A1:2013	2013		-	-
IEC 60335-1 (mod)	2010	Household and similar electrical appliances - Safety - Part 1: General requirements	EN 60335-1	2012
-	-		+A11	2014
-	-		+AC	2014
IEC 60335-2-24	-	Household and similar electrical appliances - Safety - Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers	EN 60335-2-24	-
IEC 60335-2-89	-	Household and similar electrical appliances - Safety - Part 2-89: Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor	EN 60335-2-89	-
-	-		+AC	-
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	-	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41	-
-	-		+corrigendum Jul.	-
IEC 60364-4-42	-	Low-voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects	HD 60364-4-42	-

IEC 60364-4-44	-	Low-voltage electrical installations - Part 4- HD 60364-4-442	-	-
		44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances		
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	-	Low-voltage electrical installations - Part 5- HD 60364-5-54	-	-
		54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors		
IEC 60398	-	Installations for electroheating and electromagnetic processing - General performance test methods	-	-
IEC 60417	-	Graphical symbols for use on equipment	-	-
IEC 60445	-	Basic and safety principles for man-machine interface, marking and identification - Identification of equipment terminals, conductor terminations and conductors	EN 60445	-
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 60825-1	-	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	-
IEC 60865-1	-	Short-circuit currents - Calculation of effects - Part 1: Definitions and calculation methods	EN 60865-1	-
IEC 60909-0	-	Short-circuit currents in three-phase a.c. systems - Part 0: Calculation of currents	EN 60909-0	-
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999
IEC 61000-3-3	-	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	-
IEC 61000-3-11	-	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection	EN 61000-3-11	-
IEC 61000-6-2	-	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments	EN 61000-6-2	-
-	-		+corrigendum Sep.	-
IEC 61000-6-4	-	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	EN 61000-6-4	-
IEC 61010-1	2010	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements	EN 61010-1	2010
IEC 61082-1	-	Preparation of documents used in electrotechnology - Part 1: General requirements	EN 61082-1	-

IEC 61310	series	Safety of machinery - Indication, marking and actuation	EN 61310	series
IEC 61326-3-1	-	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-1: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications	EN 61326-3-1	-
IEC 61508	series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	series
IEC 61672-1	-	Electroacoustics - Sound level meters - Part 1: Specifications	EN 61672-1	-
IEC 61672-2	-	Electroacoustics - Sound level meters - Part 2: Pattern evaluation tests	EN 61672-2	-
IEC 61786-1	-	Measurement of DC magnetic, AC magnetic and AC electric fields from 1 Hz to 100 kHz with regard to exposure of human beings - Part 1: Requirements for measuring instruments	EN 61786-1	-
IEC 61786-2	-	Measurement of low-frequency magnetic and electric fields with regard to exposure of human beings - Part 2: Guidance for measurements	-	-
IEC 61936-1	-	Power installations exceeding 1 kV a.c. - Part 1: Common rules	EN 61936-1	-
-	-		+AC	-
-	-		+AC	-
-	-		+AC	-
IEC 62061	-	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	EN 62061	-
-	-		+corrigendum Feb.	-
IEC 62471 (mod)	2006	Photobiological safety of lamps and lamp systems	EN 62471	2008
IEC 82079-1	-	Preparation of instructions for use - Structuring, content and presentation - Part 1: General principles and detailed requirements	EN 82079-1	-
IEC Guide 104	-	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO 3746	-	Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane	EN ISO 3746	-
ISO 3864-1	-	Graphical symbols - Safety colours and safety signs - Part-1: Design principles for safety signs and safety markings	-	-
ISO 6385	-	Ergonomic principles in the design of work systems	EN ISO 6385	-
ISO 7000	-	Graphical symbols for use on equipment - Registered symbols	-	-
ISO 12100	2010	Safety of machinery - General principles for design - Risk assessment and risk reduction	EN ISO 12100	2010

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ISO 13577-1	-	Industrial furnaces and associated processing equipment - Safety - Part 1: General requirements	-	-
ISO 13577-2	-	Industrial furnaces and associated processing equipment - Safety - Part 2: Combustion and fuel handling systems	-	-
ISO 13732-1	-	Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 1: Hot surfaces	EN ISO 13732-1	-
ISO 13849	series	Safety of machinery - Safety-related parts of control systems	EN ISO 13849	series
ISO 13850	-	Safety of machinery - Emergency stop - Principles for design	EN ISO 13850	-
ISO 13855	-	Safety of machinery - Positioning of safeguards with respect to the approach speeds of parts of the human body	EN ISO 13855	-
ISO 13857	-	Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs	EN ISO 13857	-
ISO 14119	-	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection	-	-
ISO 14120	-	Safety of machinery – Guards - General requirements for the design and construction of fixed and movable guards	-	-
ISO 14159	-	Safety of machinery - Hygiene requirements for the design of machinery	EN ISO 14159	-
ISO 19353	-	Safety of machinery - Fire prevention and protection	-	-
IEC/TR 61000-3-6	-	Electromagnetic compatibility (EMC) - Part 3-6: Limits - Assessment of emission limits for the connection of distorting installations to MV, HV and EHV power systems	-	-
IEC/TS 61000-3-5	-	Electromagnetic compatibility (EMC) - Part 3-5: Limits - Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 75 A	-	-
ISO/IEC Guide 51	-	Safety aspects - Guidelines for their inclusion in standards	-	-
CISPR 11	-	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	EN 55011	-

Annex ZZ
(informative)
Coverage of Essential Requirements of EU Directive 2006/42/EC

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 the EU Directive 2006/42/EC (Machinery Directive).

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

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

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INTERNATIONAL STANDARD

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**Safety in installations for electroheating and electromagnetic processing –
Part 1: General requirements**

**Sécurité dans les installations destinées au traitement électrothermique et
électromagnétique –
Partie 1: Exigences générales**

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CONTENTS

FOREWORD.....	7
INTRODUCTION.....	10
1 Scope and object.....	11
1.1 Scope	11
1.2 Object.....	11
2 Normative references	12
3 Terms, definitions and abbreviations	15
3.1 General concepts.....	15
3.2 Equipment and state of equipment	17
3.3 Parts and accessories.....	18
3.4 Safety related concepts	19
3.5 Abbreviations	20
4 Classification and sub-division.....	21
4.1 Classification by process frequency	21
4.2 Classification by voltage	21
4.3 Sub-division of installation and equipment	22
4.3.1 Subdivision into parts	22
4.3.2 Hierarchy and structure of requirements	25
4.4 Classification of hazards and risks.....	25
4.4.1 Classification of hazards.....	25
4.4.2 Classification of risks.....	26
4.4.3 Limits	26
5 Risk assessment	27
6 General provisions.....	27
6.1 Basic considerations	27
6.2 Significant hazards	28
6.3 Physical environment and operating conditions for the installation as such and electrical equipment outside the processing equipment.....	28
6.4 Physical environment and operating conditions for electrical equipment inside the processing equipment.....	29
6.5 Power supply	30
6.6 Access.....	30
6.7 Ergonomic aspects	31
6.8 Transport and storage.....	31
6.9 Provisions for handling.....	31
6.10 Consumables and replaceable parts	31
7 Protection against electric shock	31
7.1 General.....	31
7.2 Fundamental rule of protection.....	32
7.3 General provisions	32
7.4 Basic protection	33
7.5 Provisions for single fault protection	34
7.6 Protective equipotential bonding	35
7.7 Additional provisions for fault protection for frequencies above 200 Hz	37
7.8 Protective conductor currents	38
7.9 Touch current and touch voltage	39

7.10	Conductors and insulations at high temperature.....	39
7.11	Non-electric faults.....	40
8	Protection against hazards caused by electric or magnetic nearfields.....	40
8.1	General.....	40
8.2	Magnetic fields.....	40
8.3	Local electric fields.....	41
8.4	Requirements related to barriers and screens.....	41
8.5	Requirements related to objects worn, carried or held by persons.....	42
9	Protection against hazards from radiation.....	43
9.1	General.....	43
9.2	Installation or equipment generating ionizing radiation.....	43
9.3	Ultraviolet radiation.....	43
9.4	Visible and infrared radiation.....	44
9.5	Laser sources.....	44
10	Protection against hazards from thermal influences.....	44
10.1	General.....	44
10.2	Surface temperature limits for protection against burn.....	45
10.3	Hazards caused by working conditions.....	45
10.4	Heat resistance of components.....	45
10.5	Cooling.....	46
10.6	Over-temperature protection.....	47
11	Protection against hazards from fire.....	48
12	Protection against hazards from fluids.....	48
12.1	General.....	48
12.2	Poisonous and injurious gases and substances.....	49
12.3	Explosion and implosion of pressurised parts.....	49
13	Specific requirements for components and subassemblies.....	49
13.1	General.....	49
13.2	Electrical equipment and conductors.....	50
13.3	Connection to the electrical supply network and internal connections.....	50
13.4	Isolation and switching.....	51
13.5	Sensors and actuators safeguarding moving parts.....	51
13.6	Motors.....	51
13.7	Non electric-heating means.....	52
13.8	Lighting.....	52
13.9	Structural parts and stability.....	52
13.10	Doors, windows and other openings.....	52
14	Control of the installation or equipment.....	52
14.1	General.....	52
14.2	Operator control unit.....	52
14.3	Emergency stop.....	53
14.4	Control systems and their functions.....	53
14.5	Controlgear.....	54
14.6	Protective devices.....	55
14.7	Over-temperature protective device.....	56
14.8	Overpressure safety device.....	56
15	Protection against mechanical hazards.....	57
16	Protection against hazards resulting from use.....	58

16.1	Particular hazards in processing of food, feed, cosmetics and similar intended for human or animal consumption	58
16.2	Radio frequency interference	58
16.3	Particular hazards in electroheating and electromagnetic processing	58
16.4	Combination equipment	58
17	Protection against other hazards	58
17.1	General.....	58
17.2	Sonic, infra- and ultra-sonic pressure.....	59
18	Verification and testing	59
18.1	General.....	59
18.2	Performing measurements and tests	61
18.3	Verification of conformity with limits for electric or magnetic fields	61
18.4	Examination of drawings or calculations.....	61
18.5	Visual inspection.....	61
18.6	Measurements	62
18.6.1	Insulation resistance measurement up to 200 Hz	62
18.6.2	Measurement of electric or magnetic fields	62
18.6.3	Touch current measurement	62
18.6.4	Ionising radiation measurement	62
18.6.5	Measurement of non-coherent optical irradiation.....	63
18.6.6	Measurement of coherent optical radiation including emission from LEDs	63
18.6.7	Surface temperature measurement.....	63
18.6.8	Sound level measurement	63
18.7	Functional tests	64
18.7.1	Protection by automatic disconnection of supply	64
18.7.2	Voltage test	64
18.7.3	Dielectric test	64
18.7.4	Accessibility of live parts	64
18.8	Numerical modelling	64
18.8.1	General	64
18.8.2	Numerical assessment of electric or magnetic fields	64
18.8.3	Numerical assessment of optical radiation	65
19	Information for use	65
19.1	General requirements	65
19.2	Location and nature of the information for use	65
19.3	Signalling and warning devices	66
19.4	Markings, pictograms, written warnings.....	66
19.5	Instruction handbook(s) / installation, commissioning, operation, maintenance, and decommissioning manual(s)	67
Annex A (informative)	List of significant hazards	71
Annex B (informative)	Electric and magnetic fields, touch currents – limits of exposure hazards	76
B.1	Overview and motivation	76
B.1.1	General	76
B.1.2	Basic concepts	76
B.1.3	Hazard sources and hazard effects.....	76
B.1.4	Frequency dependence	77
B.2	Static magnetic fields.....	77

B.3	Time varying magnetic, electric and electromagnetic fields	78
B.3.1	Basic restrictions between 1 Hz and 100 kHz.....	78
B.3.2	Basic restrictions between 100 kHz and 300 MHz.....	79
B.3.3	Heated worn objects	80
B.4	Touch currents.....	80
B.5	Touch voltages	80
B.5.1	Extra-low voltage (ELV) below 100 Hz.....	80
B.5.2	Extra-low voltage (ELV) above 100 Hz.....	81
B.6	Classification of exposure	81
B.6.1	General	81
B.6.2	Exempt group	81
B.6.3	Risk group 1 (low risk).....	81
B.6.4	Risk group 2 (moderate risk).....	82
B.6.5	Risk group 3 (high risk).....	82
Annex C (informative)	Optical radiation – limits of exposure hazards	83
C.1	Non-coherent radiation limits	83
C.2	Radiation from laser sources and LEDs	84
C.3	Non-coherent optical radiation – risk groups	84
C.3.1	General	84
C.3.2	Exempt group	84
C.3.3	Risk group 1 (low risk).....	85
C.3.4	Risk group 2 (moderate risk).....	85
C.3.5	Risk group 3 (high risk).....	85
C.3.6	Pulsed equipment.....	85
Annex D (informative)	Limits for exposure hazards – noise and vibration.....	86
D.1	General.....	86
D.2	Sonic noise	86
D.3	Ultrasonic pressure.....	86
D.4	Infrasound	86
D.5	Vibration	87
Annex E (normative)	Provisions concerning EMC.....	88
E.1	General.....	88
E.2	Requirements	88
Annex F (normative)	Marking and warning	89
F.1	EMF hazard zones	89
F.2	Touch currents and surfaces	89
F.3	Optical radiation hazards	90
F.4	Symbols and signs used for markings and warnings.....	90
Annex G (informative)	Guidelines on using this standard	92
Annex H (informative)	Connection with ISO 13577 series.....	93
Bibliography.....		94
Figure 1	– Block diagram of a typical EH or EPM installation	23
Figure B.1	– Illustration of the basic restrictions from Tables B.3 and B.4	79
Figure F.1	– Examples of marking for magnetic and electric fields	89
Figure F.2	– Examples of marking for touch current	89
Figure F.3	– Example of marking for infrared radiation	90