BSI Standards Publication

Luminaires

Part 1: General requirements and tests

bsi.

National foreword

This British Standard is the UK implementation of EN IEC 60598-1:2024+A11:2024. It is derived from IEC 60598-1:2024. It supersedes BS EN IEC 60598-1:2021+A11:2022 which will be withdrawn on 31 December 2027.

The UK participation in its preparation was entrusted to Technical Committee CPL/34/4, Luminaires.

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

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For the Great Britain market (England, Scotland and Wales), if UK Government has designated this publication for conformity with UKCA marking (or similar) legislation, it may contain an additional National Annex. Where such a National Annex exists, it shows the correlation between this publication and the relevant UK legislation. If there is no National Annex of this kind, the relevant Annex ZA or ZZ in the body of the European text will indicate the relationship to UK regulation applicable in Great Britain. References to EU legislation may need to be read in accordance with the UK designation and the applicable UK law. Further information on designated standards can be found at www.bsigroup.com/standardsandregulation.

For the Northern Ireland market, UK law will continue to implement relevant EU law subject to periodic confirmation. Therefore Annex ZA/ZZ in the European text, and references to EU legislation, are still valid for this market.

UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of www.gov.uk.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
31 March 2025	CENELEC amendment A11:2024 text inserted and designator and National Foreword corrected

EUROPEAN STANDARD **EN IEC 60598-1:2024+A11**

EUROPÄISCHE NORM

December 2024

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Supersedes EN IEC 60598-1:2021; EN IEC 60598-1:2021/A11:2022

English Version

Luminaires - Part 1: General requirements and tests (IEC 60598-1:2024)

Luminaires - Partie 1: Exigences générales et essais (IEC 60598-1:2024)

Leuchten - Teil 1: Allgemeine Anforderungen und Prüfungen (IEC 60598-1:2024)

This European Standard was approved by CENELEC on 2024-12-11. 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.

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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 CEN-CENELEC Management Centre 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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

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European foreword

The text of document 34D/1739/FDIS, future edition 10 of IEC 60598-1, prepared by SC 34D "Luminaires" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60598-1:2024.

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) 2025-12-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-12-31

This document supersedes EN IEC 60598-1:2021 and all of its amendments and corrigenda (if any).

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.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of EN IEC 60598-1:2024/A11:2024.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60598-1:2024 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 standard indicated:

IEC 60061 (series)	NOTE	Approved as EN 60061 (series)
IEC 60068-2-2:2007	NOTE	Approved as EN 60068-2-2:2007 (not modified)
IEC 60079 (series)	NOTE	Approved as EN IEC 60079 (series)
IEC 60081	NOTE	Approved as EN 60081
IEC 60086-1	NOTE	Approved as EN IEC 60086-1
IEC 60086-2	NOTE	Approved as EN IEC 60086-2

IEC 60216 (series)	NOTE	Approved as EN 60216 (series)
IEC 60228	NOTE	Approved as EN IEC 60228
IEC 60269 (series)	NOTE	Approved as EN 60269 (series)
IEC 60357	NOTE	Approved as EN 60357
IEC 60364 (series)	NOTE	Approved as HD 60364 (series)
IEC 60364-4-41	NOTE	Approved as HD 60364-4-41
IEC 60364-5-51	NOTE	Approved as HD 60364-5-51
IEC 60364-5-54:2011	NOTE	Approved as HD 60364-5-54:2011 (not modified) + A11:2017
IEC 60364-7-701	NOTE	Approved as HD 60364-7-701
IEC 60364-7-702	NOTE	Approved as HD 60364-7-702
IEC 60400	NOTE	Approved as EN 60400
IEC 60432-3	NOTE	Approved as EN 60432-3
IEC 60598-2-2	NOTE	Approved as EN IEC 60598-2-2
IEC 60598-2-3	NOTE	Approved as EN 60598-2-3
IEC 60598-2-5	NOTE	Approved as EN 60598-2-5
IEC 60664 (series)	NOTE	Approved as EN 60664 (series)
IEC 60664-1:2020	NOTE	Approved as EN IEC 60664-1:2020 (not modified)
IEC 60664-3	NOTE	Approved as EN 60664-3
IEC 60682	NOTE	Approved as EN 60682
IEC 60695 (series)	NOTE	Approved as EN IEC 60695 (series)
IEC 60695-2 (series)	NOTE	Approved as EN IEC 60695-2 (series)
IEC 60838 (series)	NOTE	Approved as EN 60838 (series)
IEC 60901	NOTE	Approved as EN 60901
IEC 60921	NOTE	Approved as EN 60921

IEC 60923	NOTE	Approved as EN 60923
IEC 60929	NOTE	Approved as EN 60929
IEC 61140:2016	NOTE	Approved as EN 61140:2016 (not modified)
IEC 61184	NOTE	Approved as EN 61184
IEC 61195	NOTE	Approved as EN 61195
IEC 61199:2011	NOTE	Approved as EN 61199:2011 (not modified)
IEC 61199:2011/A1:2012	NOTE	Approved as EN 61199:2011/A1:2013 (not modified)
IEC 61199:2011/A2:2014	NOTE	Approved as EN 61199:2011/A2:2015 (not modified)
IEC 61210	NOTE	Approved as EN 61210
IEC 61558-2-5	NOTE	Approved as EN 61558-2-5
IEC 61995 (series)	NOTE	Approved as EN 61995 (series)
IEC 62031	NOTE	Approved as EN IEC 62031
IEC 62035	NOTE	Approved as EN 62035
IEC 62133-1	NOTE	Approved as EN 62133-1
IEC 62368 (series)	NOTE	Approved as EN IEC 62368 (series)
IEC 62368-3:2017	NOTE	Approved as EN IEC 62368-3:2020 (not modified)
IEC 62471:2006	NOTE	Approved as EN 62471:2008
IEC 62504:2014	NOTE	Approved as EN 62504:2014 (not modified)
IEC 62722 (series)	NOTE	Approved as EN IEC 62722 (series)

European foreword to amendment A11

This document (EN IEC 60598-1:2024/A11:2024) has been prepared by CLC/TC 34, “Lighting”.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2025-12-31
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2027-12-31

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For the relationship with EU Legislation, see informative Annex ZZ, which is an integral part of this document.

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Annex ZB
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard or Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause	Special national condition

6.4 **Denmark**

Supply cords of class I luminaires, which are delivered without a plug, shall be provided with a visible tag with the following text:

Vigtigt !
Lederen med grøn/gul isolation
må kun tilsluttes en klemme mærket

If essential for the safety of the luminaire, the tag shall in addition be provided with a diagram, which shows the connection of the other conductors, or be provided with the following text:

For tilslutning af de øvrige ledere,

se medfølgende vejledning.

"ø" may be replaced by "oe"; "æ" may be replaced by "ae".

8.2.18 **Denmark**

Socket-outlets intended for providing power to other appliances shall be in compliance with DS60884-2-D1:2017, the Standard Sheets being applied as follows:

Class I . . . . . Standard Sheet DK 1-3a, DK 1-1c and DK 1-1d

For class I luminaires, the earthing contact of the socket-outlet shall be electrically connected to the earthing terminal of the appliance.

Class II luminaires with a degree of protection not higher than IPX0, Standard Sheet DKA 1-4a can be used.

EXEMPTION:

Socket-outlets supplied from isolation transformers (shaver supply units) and socket-outlets on outdoor luminaires may be in accordance with the requirement of DS60884-2-D1:2017 for fixed socket-outlets.

8.2.1 **Cyprus**

Domestic luminaires intended for connection to a standard United Kingdom 13 A socket must be pre-fitted with an approved plug complying with BS 1363.

Cord sets for domestic luminaires for connection with an appliance inlet must be pre-fitted with an approved plug complying with BS 1363.

Plugs must be fitted with the correct fuse.

Denmark

Supply cords on single-phase portable luminaires having a rated current not exceeding 13 A

shall be provided with a plug according to the following table:

Class of luminaire	DS60884-2-D1:2017	EN 50075 Standard Sheet
Class I	DK 2-1a, C 2b, C 3b or C 4	
Class II	DKA 2-1a, DKA 2-1b, C 5, C 6	I

For luminaires having an appliance inlet, the plug on the supply cord shall comply with the above requirements.

If multi-phase luminaires and single-phase luminaires having a rated current exceeding 13 A are provided with a supply cord with a plug, the plug shall comply with the following table or EN 60309.

Plug	
Class of luminaire	**DS60884–2-D1:2017**
Class I	**DK 6-1a**
Class II	**DK 6-1a***
*** Earthing contact not connected.**	

Finland

For luminaires provided with non-detachable flexible cables and cords and a plug, the plug shall comply with the requirements of SFS 5610 and EN 50075, the Standard Sheets to be applied being as follows:

— Class I luminaires SFS 5610, sheet IV or VII or IVA or VIIA

— Class II luminaires SFS 5610, sheet XVI (alt I only) or
SFS 5610, sheet XVII or EN 50075, sheet I

United Kingdom

Domestic luminaires intended for connection to a standard United Kingdom 13 A socket must be pre-fitted with an approved plug complying with BS 1363.

Cord sets for domestic luminaires for connection with an appliance inlet must be pre-fitted with an approved plug complying with BS 1363.

Annex ZC
(informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN and/or CENELEC member.

This European Standard falls under Directive 2014/35/EU.

NOTE (from CEN/CENELEC IR Part 2:2018, 2.16) Where standards fall under EC Directives or Regulations, it is the view of the Commission of the European Communities (OJ No C 59; 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted within the EC except under the safeguard procedure provided for in the relevant Directive or Regulation.

A-deviations in non EU countries are valid instead of the respective provisions of the European Standard until the national situation causing the A-deviation has changed.

Clause	Deviation
7 and 8	**France**
	(Arrêté of the 22th September 1969)
	Socket-outlets 10/16 A intended for providing power to other appliances except those supplied by an isolating transformer shall be shuttered.
	(Arrêté du 30 décembre 2011 portant règlement de sécurité pour la construction des immeubles de grande hauteur et leur protection contre les risques d'incendie et de panique)
	Section VIII, Installations électriques et éclairage
	Article GH 48, Eclairage
	§ 1 Généralités:
	c) Les parties externes des luminaires satisfont à l'essai au fil incandescent, la température du fil incandescent étant de:
	– 850°C pour les luminaires dans les escaliers et les circulations horizontales communes ;
	– 650°C pour les luminaires dans les locaux.
	United Kingdom
	(Approved Document B of the United Kingdom Building Regulations)
	Particular fire protection requirements relating to thermoplastic diffusers are listed in Subclause 6.15 of the above Regulations.

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60061-2 (mod)	-	Lamp caps and holders together with gauge for the control of interchangeability and safe - Part 2: Lampholders	EN 60061-2 + A1 to A57	1993
IEC 60061-3	-	Lamp caps and holders together with gauge for the control of interchangeability and safety - Part 3: Gauges	EN 60061-3 + A1 to A58	1993
IEC 60068-2-6	-	Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008
IEC 60068-2-14	2023	Environmental testing – Part 2-14: Tests – T N: Change of temperature	EN IEC 60068-2-14	2023
IEC 60068-2-31	2008	Environmental testing – Part 2-31: Tests – T Ec: Rough handling shocks, primarily for equipment-type specimens	EN 60068-2-31	2008
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	2014
IEC/TR 60083	-	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	IEC/TR 60083	2015
IEC 60085	-	Electrical insulation - Thermal evaluation and designation	EN 60085	2008
IEC 60112	2020	Method for the determination of the proof an the comparative tracking indices of solid insulating materials	EN IEC 60112	2020
IEC 60155	-	Glow-starters for fluorescent lamps	EN 60155	1995
			+ A1	1995
			+ A2	2007
IEC 60227	all parts	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	EN 50525 [1]	all parts (see below)

[1] EN 50525 Series, which is related to, but not directly equivalent with IEC 60227 Series, applies instead.

Publication	Year	Title	EN/HD	Year
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 1: General requirements	EN 50525-1	2011
			+ A1	2022
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (Uo/U) - Part 2-11: Cables for general applications - Flexible cables with thermoplastic PVC insulation	EN 50525-2-11	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (Uo/U) - Part 2-12: Cables for general applications - Cables with thermoplastic PVC insulation for extensible leads	EN 50525-2-12	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (Uo/U) - Part 2-21: Cables for general applications - Flexible cables with crosslinked elastomeric insulation	EN 50525-2-21	2011
			+ AC	2013
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-22: Cables for general applications - High flexibility braided cables with crosslinked elastomeric insulation	EN 50525-2-22	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-31: Cables for general applications - Single core non-sheathed cables with thermoplastic PVC insulation	EN 50525-2-31	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-41: Cables for general applications - Single core cables with crosslinked silicone rubber insulation	EN 50525-2-41	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-42: Cables for general applications - Single core non-sheathed cables with crosslinked EVA insulation	EN 50525-2-42	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-51: Cables for general applications - Oil resistant control cables with thermoplastic PVC insulation	EN 50525-2-51	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-71: Cables for general applications - Flat tinsel cables (cords) with thermoplastic PVC insulation	EN 50525-2-71	2011

Publication	Year	Title	EN/HD	Year
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 2-72: Cables for general applications - Flat divisible cables (cords) with thermoplastic PVC insulation	EN 50525-2-72	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 2-81: Cables for general applications - Cables with crosslinked elastomeric covering for arc welding	EN 50525-2-81	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 2-82: Cables for general applications - Cables with crosslinked elastomeric insulation for decorative chair	EN 50525-2-82	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 2-83: Cables for general applications - Multicore cables with crossl silicone rubber insulation	EN 50525-2-83	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 3-11: Cables with special fire performance - Flexible cables with halogen-free thermoplastic insulation, and low emi of smoke	EN 50525-3-11	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 3-21: Cables with special fire performance - Flexible cables with halogen-free crosslinked insulation, and low emiss smoke	EN 50525-3-21	2011
			+ AC	2013
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 3-31: Cables with special fire performance - Single core non-sheathed cables with halogen-free thermoplastic insulation, and low emission of smoke	EN 50525-3-31	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/75((U0/U) - Part 3-41: Cables with special fire performance - Single core non-sheathed cables with halogen-free crosslinked insul and low emission of smoke	EN 50525-3-41	2011
IEC 60238	2016	Edison screw lampholders	EN IEC 60238	2018

Publication	Year	Title	EN/HD	Year
IEC 60245	all parts	Rubber insulated cables - Rated voltages up to and including 450/750 V	EN 50525 [2]	all parts (see below)
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 1: General requirements	EN 50525-1	2011
			+ A1	2022
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (Uo/U) - Part 2-11: Cables for general applications - Flexible cables with thermoplastic PVC insulation	EN 50525-2-11	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (Uo/U) - Part 2-12: Cables for general applications - Cables with thermoplastic PVC insulation for extensible leads	EN 50525-2-12	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (Uo/U) - Part 2-21: Cables for general applications - Flexible cables with crosslinked elastomeric insulation	EN 50525-2-21	2011
			+ AC	2013
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-22: Cables for general applications - High flexibility braided cables with crosslinked elastomeric insulation	EN 50525-2-22	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-31: Cables for general applications - Single core non-sheathed cables with thermoplastic PVC insulation	EN 50525-2-31	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-41: Cables for general applications - Single core cables with crosslinked silicone rubber insulation	EN 50525-2-41	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-42: Cables for general applications - Single core non-sheathed cables with crosslinked EVA insulation	EN 50525-2-42	2011
		Electric cables - Low voltage energy cables of rated voltages up to and including 450/750 V (U0/U) - Part 2-51: Cables for general applications - Oil resistant control cables with thermoplastic PVC insulation	EN 50525-2-51	2011

[2] EN 50525 series, which is related to, but not directly equivalent with IEC 60245 series, applies instead.

Publication	Year	Title	EN/HD	Year
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 2-71: Cables for g applications - Flat tinsel cables (cords thermoplastic PVC insulation	EN 50525-2-71	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 2-72: Cables for g applications - Flat divisible cables (cords thermoplastic PVC insulation	EN 50525-2-72	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 2-81: Cables for g applications - Cables with cross elastomeric covering for arc welding	EN 50525-2-81	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 2-82: Cables for g applications - Cables with cross elastomeric insulation for decorative chair	EN 50525-2-82	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 2-83: Cables for g applications - Multicore cables with cross silicone rubber insulation	EN 50525-2-83	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 3-11: Cables with speci performance - Flexible cables with halogen-thermoplastic insulation, and low emiss smoke	EN 50525-3-11	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 3-21: Cables with speci performance - Flexible cables with halogen-crosslinked insulation, and low emissi smoke	EN 50525-3-21	2011
			+ AC	2013
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 3-31: Cables with speci performance - Single core non-sheathed with halogen-free thermoplastic insulatior low emission of smoke	EN 50525-3-31	2011
		Electric cables - Low voltage energy cab rated voltages up to and including 450/ (U0/U) - Part 3-41: Cables with speci performance - Single core non-sheathed with halogen-free crosslinked insulation low emission of smoke	EN 50525-3-41	2011

Publication	Year	Title	EN/HD	Year
IEC 60320	all parts	Appliance couplers for household and similar general purposes	EN 60320	all parts (see below)
		Appliance couplers for household and similar general purposes - Part 1: General requirements	EN IEC 60320-1	2021
		Appliance couplers for household and similar general purposes - Part 2-1: Sewing machine couplers	EN IEC 60320-2-1	2021
		Appliance couplers for household and similar general purposes - Part 2-3: Appliance coupler with a degree of protection higher than IPX0	EN IEC 60320-2-3	2021
		Appliance couplers for household and similar general purposes - Part 2-4: Appliance couplers dependent on appliance weight for engagement	EN IEC 60320-2-4	2021
		Appliance couplers for household and similar general purposes - Part 3: Standard sheets and gauges	EN 60320-3	2014
			+ A1	2021
			+ A2	2022
IEC 60335-1	2020	Household and similar electrical appliances – Safety – Part 1: General requirements	EN IEC 60335-1	2023
IEC 60360	-	Standard method of measurement of lamp cap temperature rise	EN 60360	1998
IEC 60384-14	-	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification - Fixed capacitors for electromagnetic interference suppression and connection to the supply mains	EN 60384-14	2013
			+ A1	2016
IEC 60417	database	Graphical symbols for use on equipment	-	-
IEC 60432-1 (mod)	1999	Incandescent lamps - Safety specifications - Part 1: Tungsten filament lamps for domestic and similar general lighting purposes	EN 60432-1	2000
+ A1	2005		+ A1	2005
+ A2	2011		+ A2	2012
IEC 60432-2 (mod)	1999	Incandescent lamps - Safety specifications - Part 2: Tungsten halogen lamps for domestic and similar general lighting purposes	EN 60432-2	2000
+ A1 (mod)	2005		+ A1	2005
+ A2	2012		+ A2	2012

Publication	Year	Title	EN/HD	Year
IEC 60529	-	Degrees of protection provided by enclos (IP Code)	EN 60529	1991
			+ corr. May	1993
			+ A1	2000
			+ A2	2013
IEC 60570 (mod)	2003	Electrical supply track systems for luminaire	EN 60570	2003
+ A1	2017		+ A1	2018
+ A2	2019		+ A2	2020
IEC 60598-2	all parts	Luminaires - Part 2: Particular requirements	EN 60598-2	all parts
IEC 60598-2-4 (mod)	2017	Luminaires - Part 2: Particular requirements Section 4: Portable general purpose luminaires	EN 60598-2-4	2018
IEC 60603	all parts	Connectors for frequencies below 3 MHz for with printed boards	EN 60603	all parts (see below)
		Connectors for frequencies below 3 MHz for with printed boards - Part 1: Ger specification - General requirements and g for the preparation of detail specifications, assessed quality	EN 60603-1	1998
		Connectors for frequencies below 3 MHz for with printed boards - Part 12: Detail specifica for dimensions, general requirements and t for a range of sockets designed for use integrated circuits	EN 60603-12	1998
		Connectors for frequencies below 3 MHz for with printed boards - Part 13: Detail specifica for two-part connectors of assessed quality printed boards for basic grid of 2,54 mm (0,1 with free connectors for non-access insulation displacement terminations (ID)	EN 60603-13	1998
		Connectors for frequencies below 3 MHz for with printed boards - Part 14: Detail specifica for circular connectors for low-frequency a and video applications such as audio, video audio-visual equipment	EN 60603-14	1998
		Connectors for frequencies below 3 MHz for with printed boards - Part 2: Detail specifica for two-part connectors with assessed qua for printed boards, for basic grid of 2,54 mm in) with common mounting features	EN 60603-2	1998
			+ A1	2005
		Connectors for frequencies below 3 MHz for with printed boards - Part 3: Two- connectors for printed boards having cont spaced at 2,54 mm (0,1 in) centres staggered terminations at that same spacin	EN 60603-3	1998

Publication	Year	Title	EN/HD	Year
		Connectors for frequencies below 3 MHz for use with printed boards - Part 4: Two-part connectors for printed boards having contacts spaced at 1,91 mm (0,075 in) centres and staggered terminations at that same spacing	EN 60603-4	1998
		Connectors for frequencies below 3 MHz for use with printed boards - Part 5: Edge-socket connectors and two-part connectors for double-sided printed boards with 2,54 mm (0,1 in) spacing	EN 60603-5	1998
		Connectors for frequencies below 3 MHz for use with printed boards - Part 6: Edge-socket connectors and printed-board connectors with 2,54 mm (0,1 in) contact spacing for single or double-sided printed boards of 1,6 mm (0,063 in) nominal thickness	EN 60603-6	1998
		Connectors for electronic equipment - Part 7: Detail specification for 8-way, unshielded, free and fixed connectors	EN IEC 60603-7	2020
		Connectors for electronic equipment - Part 7-1: Detail specification for 8-way, shielded, free and fixed connectors	EN 60603-7-1	2011
		Connectors for electronic equipment - Part 7-2: Detail specification for 8-way, unshielded, free and fixed connectors, for data transmissions with frequencies up to 100 MHz	EN 60603-7-2	2010
		Connectors for electronic equipment - Part 7-3: Detail specification for 8-way, shielded, free and fixed connectors, for data transmission with frequencies up to 100 MHz	EN 60603-7-3	2010
		Connectors for electronic equipment - Part 7-4: Detail specification for 8-way, unshielded, free and fixed connectors, for data transmissions with frequencies up to 250 MHz	EN 60603-7-4	2010
		Connectors for electronic equipment - Part 7-41: Detail specification for 8-way, unshielded, free and fixed connectors, for data transmissions with frequencies up to 500 MHz	EN 60603-7-41	2010
		Connectors for electronic equipment - Part 7-5: Detail specification for 8-way, shielded, free and fixed connectors, for data transmissions with frequencies up to 250 MHz	EN 60603-7-5	2010
		Connectors for electronic equipment - Part 7-51: Detail specification for 8-way, shielded, free and fixed connectors, for data transmissions with frequencies up to 500 MHz	EN 60603-7-51	2010
		Connectors for electronic equipment - Part 7-7: Detail specification for 8-way, shielded, free and fixed connectors for data transmission with frequencies up to 600 MHz	EN 60603-7-7	2010

Publication	Year	Title	EN/HD	Year
		Connectors for electronic equipment - Part 7- Detail specification for 8-way, shielded, free fixed connectors, for data transmission frequencies up to 1 000 MHz	EN 60603-7-71	2010
		Connectors for electronic equipment - Part 7- Detail specification for 8-way, shielded, free fixed connectors, for data transmissions frequencies up to 2 000 MHz	EN 60603-7-81	2016
			+ AC	2017
		Connectors for electronic equipment - Part 7- Detail specification for 8-way, 12 cont shielded, free and fixed connectors, for transmission with frequencies up to 2 000 M	EN 60603-7-82	2016
		Connectors for frequencies below 3 MHz for with printed boards - Part 8: Two- connectors for printed boards, for basic gr 2,54 mm (0,1 in), with square male contac 0,63 mm x 0,63 mm	EN 60603-8	1998
IEC 60662 (mod)	-	High pressure sodium vapour lamps	EN 60662	2012
			+ A11	2019
IEC 60664-4	2005	Insulation coordination for equipment within low voltage systems - Part 4: Consideration of high frequency voltage stress	EN 60664-4	2006
IEC 60669-1	-	Switches for household and similar fi electrical installations – Part 1: Ger requirements	EN 60669-1	2018
IEC 60669-2-1	-	Switches for household and similar electrical installations - Part 2-1: Parti requirements - Electronic control devices	EN 60669-2-1	2021
			+ corrigendum Oct.	2006
IEC 60684	all parts	Flexible insulating sleeving	EN 60684	all parts (see below)
		Flexible insulating sleeving - Part 1: Definit and general requirements	EN 60684-1	2003
		Flexible insulating sleeving - Part 2: Metho test	EN 60684-2	2011
		Flexible insulating sleeving - Part Specifications for individual types of sleev Sheets 100 to 105: Extruded PVC sleeving	EN 60684-3-100 to 105	2001
		Flexible insulating sleeving - Part Specifications for individual types of sleev Sheets 116 and 117: Extruded polychloropr general purpose	EN 60684-3-116	2011
		Flexible insulating sleeving - Part Specifications for individual types of sleev Sheets 121 to 124: Extruded silicone sleevi	EN 60684-3-121 to 124	2001

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		Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheet 136: Extruded fluorosilicone sleeving - General purpose	EN 60684-3-136	1998
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 145 to 147: Extruded PTFE sleeving	EN 60684-3-145 to 147	2001
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 151: Extruded PVC/nitrile rubber - General purpose	EN 60684-3-151	1998
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 165: Extruded polyolefin, flame retarded, limited fire hazard sleeving	EN 60684-3-165	2004
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 205: Heat-shrinkable chlorinated polyolefin sleeving, flame retarded, nominal shrink ratio 1,7:1 and 2:1	EN 60684-3-205	2011
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 209: Heat-shrinkable polyolefin sleeving, general purpose, flame retarded	EN 60684-3-209	2010
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 211: Heat-shrinkable sleeving, semi-rigid polyolefin, shrink ratio 2:1	EN 60684-3-211	2007
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 212: Heat-shrinkable polyolefin sleevings	EN 60684-3-212	2006
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 214: Heat-shrinkable, polyolefin sleeving, not flame retarded, thick and medium wall	EN IEC 60684-3-214	2019
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 216: Heat-shrinkable, flame- retarded, limited-fire-hazard sleeving	EN IEC 60684-3-216	2019
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 228: Heat-shrinkable, semi-rigid polyvinylidene fluoride sleeving, flame retarded, fluid resistant, shrink ratio 2:1	EN 60684-3-228	2004
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 229: Heat-shrinkable semi-flexible, polyvinylidene fluoride sleeving, flame retarded, fluid resistant, shrink ratio 2:1	EN 60684-3-229	2003

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		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 233: Heat-shrinkable fluoroelas sleeving, flame retarded, fluid resistant, ratio 2:1	EN 60684-3-233	2006
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheets 240 to 243: Heat-shrinkable sleeving	EN 60684-3-240 to 243	2002
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 246: Heat-shrinkable polyolefin sle dual wall, not flame retarded	EN 60684-3-246	2007
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 247: Heat-shrinkable, polyolefin sle dual wall, not flame retarded, thick and m wall	EN IEC 60684-3-247	2019
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 248: General purpose, heat-shrin dual wall polyolefin sleeving, flame ret shrink ratios 2:1, 3:1, 4:1	EN 60684-3-248	2007
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 271: Heat-shrinkable elas sleevings, flame retarded, fluid resistant, ratio 2:1	EN 60684-3-271	2011
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 280: Heat-shrinkable, polyolefin sle anti-tracking	EN IEC 60684-3-280	2019
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 281: Heat-shrinkable, polyolefin sle semiconductive	EN 60684-3-281	2010
		Flexible insulating sleeving - Pa Specifications for individual types of sleeving Sheet 282: Heat-shrinkable, polyolefin sl - Stress control	EN 60684-3-282	2010
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 283: Heat-shrinkable, polyolefin sl for bus-bar insulation	EN IEC 60684-3-283	2019
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 284: Heat-shrinkable sleevings, barrier applications	EN 60684-3-284	2014
		Flexible insulating sleeving - Pa Specifications for individual types of slee Sheet 285: Heat-shrinkable polyolefin sle for medium voltage joint insulation	EN 60684-3-285	2014

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		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 300: Glass textile fibre sleeving, braided, uncoated	EN 60684-3-300	2002
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 320: Polyethylene terephthalate textile sleeving, lightly impregnated	EN 60684-3-320	2002
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 340 to 342: Expandable braided polyethylene terephthalate textile sleeving	EN 60684-3-340 to 342	2003
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 343 to 345: Expandable braided ethylene chlorotrifluoroethylene (E-CTFE) textile sleeving, uncoated	EN 60684-3-343 to 345	2002
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 400 to 402: Glass textile sleeving with silicone elastomer coating	EN 60684-3-400 to 402	2002
		Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheets 403 to 405: Glass textile sleeving with acrylic based coating	EN 60684-3-403 to 405	2002
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 406 to 408: Glass textile sleeving with PVC coating	EN 60684-3-406 to 408	2003
		Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 409: Glass textile sleeving with polyurethane (PUR)-based coating	EN 60684-3-409	1999
		Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheets 420 to 422: Polyethylene terephthalate textile sleeving with acrylic based coating	EN 60684-3-420 to 422	2002
IEC 60695-2-11	-	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products (GWEPT)	EN IEC 60695-2-11	2021
IEC 60695-11-5	-	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2017
IEC 60990	-	Methods of measurement of touch current and protective conductor current	EN 60990	2016
IEC 60998-2-1	-	Connecting devices for low-voltage circuits for household and similar purposes - Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units	EN 60998-2-1	2004

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IEC 60998-2-2	-	Connecting devices for low-voltage circuit household and similar purposes - Part 2- Particular requirements for connecting de as separate entities with screwless-clamping units	EN 60998-2-2	2004
IEC 61032	1997	Protection of persons and equipment enclosures - Probes for verification	EN 61032	1998
IEC 61051-2	2021	Varistors for use in electronic equipment - 2: Sectional specification for surge suppres varistors	EN IEC 61051-2	2021
IEC 61058-1	2016	Switches for appliances -- Part 1: Ge requirements	EN 61058-1	2018
IEC 61058-1-1	-	Switches for appliances - Part 1-1: Requirements for mechanical switches	EN 61058-1-1	2016
IEC 61058-1-2	-	Switches for appliances - Part 1-2: Requirements for electronic switches	EN 61058-1-2	2016
IEC 61058-2-1	-	Switches for appliances - Part 2-1: Particular requirements for cord switches	EN 61058-2-1	2011
IEC 61167	-	Metal halide lamps	EN 61167	2018
			+ A1	2018
IEC 61249	all parts	Materials for printed boards and interconnecting structures	EN 61249	all parts
IEC 61347	all parts	Lamp controlgear	EN 61347	all parts
IEC 61347-1	2015	Lamp controlgear - Part 1: General and s requirements	EN 61347-1	2015
+ A1	2017		+ A1	2021
IEC 61535	2023	Installation couplers intended for perma connection in fixed installations	EN IEC 61535	2019
IEC 61558	all parts	Safety of power transformers, power supp reactors and similar products	EN 61558	all parts
IEC 61558-1	2017	Safety of power transformers, power supp reactors and similar products -- Part 1: Ge requirements and tests	EN IEC 61558-1	2019
IEC 61643-11	-	Low-voltage surge protective devices - Par Surge protective devices connected to voltage power systems - Requirements and methods	EN 61643-11	2012
			+ A11	2018
IEC 61643-331	2020	Components for low-voltage surge prote devices - Part 331: Performance requirem and test methods for metal oxide vari (MOV)	EN IEC 61643-331	2020
IEC 61984	2008	Connectors - Safety requirements and tests	EN 61984	2009

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IEC 62133-2	-	Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems	EN 62133-2	2017
			+ A1	2021
			+ AC	2022
IEC 62368-1	2018	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN IEC 62368-1	2020
IEC 62391-1	-	Fixed electric double-layer capacitors for use in electric and electronic equipment – Part 1: Generic specification	EN IEC 61391-1	2022
IEC 62391-2	-	Fixed electric double-layer capacitors for use in electronic equipment - Part 2: Sectional specification - Electric double layer capacitors for power application	EN 62391-2	2006
IEC 62471-7	2023	Photobiological safety of lamps and lamp systems - Part 7: Light sources and luminaires primarily emitting visible radiation	EN IEC 62471-7	2023
IEC 62493	2015	Assessment of lighting equipment related to human exposure to electromagnetic fields	EN 62493	2015
+ A1	2022		+ A1	2022
IEC 62680	all parts	Universal Serial Bus interfaces for data and power	EN 62680	all parts (see below)
		Universal serial bus interfaces for data and power - Part 1: Universal serial bus specification, revision 2.0	EN 62680-1	2013
		Universal Serial Bus interfaces for data and power - Part 1-1: Universal Serial Bus interfaces - Common components - USB Battery Charging Specification, Revision 1.2 (TA 14)	EN 62680-1-1	2015
		Universal serial bus interfaces for data and power - Part 1-2: Common components - USB Power Delivery specification	EN IEC 62680-1-2	2022
		Universal serial bus interfaces for data and power - Part 1-3: Common components - USB Type-C® cable and connector specification	EN IEC 62680-1-3	2022
		Universal Serial Bus interfaces for data and power - Part 1-4: Common Components - USB Type-C™ Authentication Specification	EN IEC 62680-1-4	2018
		Universal serial bus interfaces for data and power - Part 1-5: Common components - USB Audio 3.0 device class definition	EN IEC 62680-1-5	2019

Publication	Year	Title	EN/HD	Year
		Universal serial bus interfaces for data power - Part 1-6: Common components - Audio 3.0 device class definition basic fun	EN IEC 62680-1-6	2019
		Universal serial bus interfaces for data power - Part 1-7: Common components - Audio 3.0 device class definition data form	EN IEC 62680-1-7	2019
		Universal serial bus interfaces for data power - Part 1-8: Common components - Audio 3.0 device class definition terminal	EN IEC 62680-1-8	2019
		Universal Serial Bus interfaces for data power - Part 2-1: Universal Serial Specification, Revision 2.0 (TA 14)	EN 62680-2-1	2015
		Universal Serial Bus interfaces for data power - Part 2-2: Universal Serial Bus - Micro USB Cables and Connectors Specific Revision 1.01 (TA 14)	EN 62680-2-2	2015
		Universal Serial Bus interfaces for data power - Part 2-3: Universal Serial Bus C and Connectors Class Document, Revisi (TA 14)	EN 62680-2-3	2015
		Universal serial bus interfaces for data power - Part 3: USB battery cha specification, Revision 1.2	EN 62680-3	2013
		Universal Serial Bus interfaces for data power - Part 3-1: Universal Serial Bu Specification	EN 62680-3-1	2017
		Universal Serial Bus interfaces for data power - Part 4-1: Universal Serial Bus Specification	EN IEC 62680-4-1	2022
IEC/TR 62778	2014	Application of IEC 62471 for the assessm blue light hazard to light sources and lumi	IEC/TR 62778	2014
ISO 3864-1	-	Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings	ISO 3864-1	2011
ISO 7000	-	Graphical symbols for use on equipment	ISO 7000	2019
ISO 8124-1	2022	Safety of toys – Part 1: Safety aspects rela mechanical and physical properties	ISO 8124-1	2022

Annex ZZ
(informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
1. General conditions		
a) the essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment, or, if this is not possible, on an accompanying document;	Clause 6	To be used in conjunction with relevant part 2
b) the electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected;	Clause 4 Clause 7	To be used in conjunction with relevant part 2
c) the electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is assured, providing that the equipment is used in applications for which it was made and is adequately maintained.	See item 2 and 3 of this table	
2. Protection against hazards arising from the electrical equipment Measures of a technical nature shall be laid down in accordance with point 1, in order to ensure that:		

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
a) persons and domestic animals adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact;	Clause 7 Clause 9 Clauses 16 and 17 Clause 8 Clause 10 Clause 13 Clause 12	All to be used in conjunction with relevant part 2
b) temperatures, arcs or radiation v would cause a danger, are not produced;	Clause 7 Clause 13 Clause 14 Clause 12	All to be used in conjunction with relevant part 2
c) persons, domestic animals and property are adequately protected against non-electrical dangers caused by the elec equipment which are revealed experience;	Clause 7 Clause 13	All to be used in conjunction with relevant part 2
d) the insulation is suitable for foreseeable conditions.	Clause 11 Clause 12 Clause 13	All to be used in conjunction with relevant part 2
3. Protection against hazards which may be caused by external influences on the electrical equipment Technical measures shall be laid dov accordance with point 1, in order to ensure that the electrical equipment:		
a) meets the expected mecha requirements in such a way that pers domestic animals and property are endangered;	Clause 6 Clause 7	All to be used in conjunction with relevant part 2
b) is resistant to non-mechanical influences in expected environmental condition such a way that persons, domestic animals and property are not endangered;	Clause 11 Clause 15	All to be used in conjunction with relevant part 2
c) does not endanger persons, dom animals and property in foresee conditions of overload.	Clause 7 Clause 14 Clause 15	All to be used in conjunction with relevant part 2

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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