



SLOVENSKI STANDARD
SIST HD 60364-4-42:2011/A11:2022

01-februar-2022

Nizkonapetostne električne inštalacije - 4-42. del: Zaščitni ukrepi - Zaščita pred toplotnimi učinki - Dopolnilo A

Low voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects

Errichten von Niederspannungsanlagen - Teil 4-42: Schutzmaßnahmen - Schutz gegen thermische Auswirkungen

Installations électriques basse tension - Partie 4-42: Protection pour assurer la sécurité - Protection contre les effets thermiques

Ta slovenski standard je istoveten z: HD 60364-4-42:2011/A11:2021

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ICS:

29.120.50	Varovalke in druga nadtokovna zaščita	Fuses and other overcurrent protection devices
91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

SIST HD 60364-4-42:2011/A11:2022 **en,fr**

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HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 60364-4-42:2011/A11

December 2021

ICS 29.120.50; 91.140.50

English Version

**Low voltage electrical installations - Part 4-42: Protection for
safety - Protection against thermal effects**

Installations électriques basse tension - Partie 4-42:
Protection pour assurer la sécurité - Protection contre les
effets thermiques

Errichten von Niederspannungsanlagen - Teil 4-42:
Schutzmaßnahmen - Schutz gegen thermische
Auswirkungen

This amendment A11 modifies the Harmonization Document HD 60364-4-42:2011; it was approved by CENELEC on 2021-07-13. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this amendment at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German).

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, Turkey and the United Kingdom.

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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

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European foreword

This document (HD 60364-4-42:2011/A11:2021) has been prepared by CLC/TC 64 “Electrical installations and protection against electric shock”.

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) 2022-06-17
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2024-12-17

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.

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.

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HD 60364-4-42:2011/A11:2021 (E)

1 Modifications to the “Foreword”

At the end of the third paragraph of the Foreword (starting with “The main changes with respect to the previous edition are listed below”), add the following new bullet point and Note:

- “For cables, the provisions of the Construction Products Regulation ((EU) No. 305/2011 (CPR)) came fully into force on 1st July 2017 in respect of Reaction to Fire. These requirements are now expressed by reference to the relevant class according to EN 13501-6.

NOTE See also Note 3 in the Scope.”

2 Modification to Clause 420.1, “Scope”

In the Scope, add the following after Note 2:

“In respect of cables and their reaction to fire, these protective measures can be expressed by reference to the Construction Products Regulation (CPR), and the relevant classes according to EN 13501-6.

NOTE 3 Whilst the CPR requires the manufacturer to declare the reaction to fire performance of the cable in accordance with procedures and classifications that are common across the EU, it is the responsibility of the Member State to determine which classification is required for any particular application or installation. National statutory requirements could therefore override the levels quoted here.”

3 Modification to Clause 420.2, “Normative references”

In Clause 420.2, add the following references:

“EN 13501-6, *Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on power, control and communication cables*

EN 60670-1, *Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 1: General requirements (IEC 60670-1)”*

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4 Modification to 422.2.1

In 422.2.1, replace Note 1 with the following Note:

“

NOTE 1

For cables, compliance with this requirement is achieved by using at least class $C_{ca-s1,d2,a1}$ for cables installed in environment BD2, BD3, and to apply at least class $B2_{ca-s1,d2,a1}$ for cables installed in environment BD4.

For conduit systems, cable trunking systems, cable tray systems and powertrack systems, compliance with this requirement is achieved by using the following products:

- conduit systems classified as non-flame propagating according to EN 61386 series;
- cable trunking systems classified as non-flame propagating according to EN 50085 series;
- cable tray systems and cable ladder systems classified as non-flame propagating according to EN 61537;
- powertrack systems complying with EN 61534 series.”

Replace Note 3 with the following normative text:

“It is recommended to apply at least class $C_{ca-s1,d2,a1}$ for cables installed in environment BD 2 or BD 3 and to apply at least class $B2_{ca-s1,d2,a1}$ for cables installed in environment BD 4.”

5 Modification to 422.3.4

In 422.3.4, replace the first bullet point:

- “Cables shall satisfy the test under fire conditions specified in EN 60332 series”

with:

- “Cables shall satisfy as a minimum the fire test requirements of class E_{ca} as described in EN 13501-6”

Replace Note 1 with the following normative text:

“Where the risk of flame propagation is high, e.g. in long vertical runs of bunched cables, it is recommended to apply cables at least fulfilling the requirements of class C_{ca}-s1,d2,a1 as defined in EN 13501-6.”

Delete Note 2.

6 Modification to 422.5.1

Replace the Note with the following normative text:

“Fire detectors may be provided which ensure the implementation of measures for preventing propagation of fire, for example, the closing of fire-proof shutters in ducts, building voids and the like. Boxes and enclosures according to EN 60670-1 for hollow walls shall be used. Cables shall fulfil the requirements of EN 13501-6, at least a minimum of a class C_{ca}-s1,d2,a1.”

7 Modification to Annex ZA, “Normative references to international publications with their corresponding European publications”

Add the following new references to the Annex ZA:

“

Publication	Year	Title	EN/HD	Year
		Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on electric cables	EN 13501-6	-
		Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 1: General requirements	EN 60670-1	-

“

8 Additions to Annex ZB, “Special National Conditions”

Add the following Special National Conditions:

“

Country	Clause	Special national condition
NL	420.1	In the Netherlands, the class for “reaction to fire” in accordance to EN 13501-6 shall comply with NEN 8012.
SK	420.1	In Slovakia, for the fire protection of buildings STN 92 0203 applies.
AT	422.2.1	In Austria, for wiring in escape routes there are special conditions established by federal state authorities.

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Country	Clause	Special national condition
DE	422.2.1 Note 1	Change the wording NOTE 1 for cables by the following: For cables It is recommended to use cables in accordance with clause 4.1 of EN 50575: 2014 + A1: 2016 for reasons of evacuation according to 422.2, which have at least performance B _{1ca} -s1 (flame-retardant and with low smoke emission). Cable systems that supply circuits for safety purposes must be protected or designed in such a way that they can fulfill their function for the duration of the national fire protection regulations or, if these regulations do not exist, for a duration of at least 1 hour.
CH	422.2.1	In Switzerland: d2 is considered as "critical behaviour" and therefore forbidden in escape routes.
GB	422.2.1	In the UK, 422.2.1 is replaced with the following: 422.2.1 Only cables that meet the following requirements shall be installed in protected escape routes: (i) cables meeting the requirements of 560.8.1 or cables with resistance to flame propagation according to the recommended requirements of the relevant part of BS EN 60332-3 (series) or, where cable management systems according to (i) or (ii) below are used, to the recommended requirements of BS EN 60332-1-2 and (ii) a minimum of 60 % light transmittance when tested in accordance with BS EN 61034-2. Cables in protected escape routes shall be as short as practicable. Cables encroaching on escape routes shall not be installed within arm's reach unless they are provided with protection against mechanical damage likely to occur during an evacuation. Where used in protected escape routes, cable management systems shall be one or more of the following types and shall be of limited smoke production so as not to inhibit escape: (i) conduit systems classified as non-flame propagating according to BS EN 61386 (ii) cable trunking systems and cable ducting systems classified as non-flame propagating according to BS EN 50085 (iii) cable tray and cable ladder systems classified as non-flame propagating according to BS EN 61537 (iv) powertrack systems meeting the requirements of BS EN 61534. NOTE 1 Non-fire resisting cables need to satisfy the requirements of the CPR in respect of their reaction to fire. See Appendix 2, item 17. There are no requirements in the CPR for fire resisting cables described in Regulation 560.8. NOTE 2 Ferrous metal, e.g. steel, is deemed to be an example of a material having limited smoke production. Cables that are supplying safety circuits shall have a resistance to fire rating of either the time authorized by regulations for building elements or British Standards for the circuits or one hour in the absence of such a regulation or standard. Refer to Regulation 560.8 for such cables.
IT	422.2.1	In Italy, the installation in environment BD2, BD3 and BD4 shall comply with Part 751 of Italian Standard CEI 64-8
NO	422.2.1 Note 1	In Norway, compliance with the requirement for being non-flame propagating is, for cables, achieved by applying cables that at least fulfil the requirements of class D _{ca} -s2,d2,a2 as defined in NS-EN 13501-6.
SK	422.2.1	In Slovakia, for the electrical wirings used for the purpose of securing the permanent supply of electric power during fire, additional requirements of STN 92 0203 applies.
SK	422.2.1 Note 1	In Slovakia, for the management cables systems used for cables B _{2ca} -s1,d1,a1, additional requirements of STN 92 0203 for reduced content of halogen elements in combustible materials of management cables systems applies.

Country	Clause	Special national condition
NO	422.2.1 Note 3	normative text replacing note 3 In Norway, cables installed in environment classified as BD2, BD3 or BD4 according to NEK 400-5-51:2018, table 51A shall at least fulfil the requirements of class D _{ca} -s2,d2,a2 as defined in NS-EN 13501-6. Cables at least fulfilling the requirements of as class E _{ca} as defined in NS-EN 13501-6 may be used if the cables are protected by an automatic fire extinction system.
DE	422.3.4 Note 1	In Germany: Replace Note 1 with the following new text: Where the risk of flame propagation is high, e.g. in long vertical runs of bunched cables, without other structural or active-fire protection measures, it is recommended to apply cables at least fulfilling the requirements of class C _{ca} -s1,d2,a1 as defined in EN 13501-6.
GB	422.3.4	In the UK, 422.3.4 is replaced with the following: 422.3.4 A cable shall as a minimum meet the requirements of BS EN 60332-1-2 unless it is fully embedded in non-combustible material such as plaster or concrete, or installed in one or more of the following: (i) A conduit system satisfying the test under fire conditions specified in BS EN 61386-1. (ii) A cable trunking system or cable ducting system satisfying the test under fire conditions specified in the appropriate part of the BS EN 50085 series. A cable trunking system or cable ducting system shall satisfy the test under fire conditions specified in the appropriate part of the BS EN 50085 series. (iii) A cable tray system or cable ladder shall satisfy the test under fire conditions specified in BS EN 61537. (iv) A powertrack system shall satisfy the test for resistance to flame propagation specified in the appropriate part of the BS EN 61534 series. Wiring systems shall be selected and installed to minimize the propagation of flame. Where the risk of flame propagation is high the cable shall meet the requirements of the appropriate part of BS EN 60332-3 series. NOTE 1 The risk of flame propagation can be high where cables are bunched or installed in long vertical runs. NOTE 2 Cables manufactured for the above application also need to satisfy the requirements of the CPR in respect of their reaction to fire. See Appendix 2, item 17. NOTE 3 Where non-metallic cable management systems are proposed to be used in locations where a particular risk of fire exists, the manufacturer should be consulted regarding the suitability for use with cables not meeting BS EN 60332-3 series.
IE	422.3.4	Replace: "Cables shall satisfy as a minimum the fire test requirements of class E _{ca} as described in EN 13501-6" With: "Cables shall satisfy as a minimum the fire test requirements of class D _{ca} as described in EN 13501-6"
NO	422.3.4 Note 1	normative text replacing note 1 In Norway, where the risk of flame propagation is high, e.g. in long vertical runs of bunched cables, it is recommended to apply cables at least fulfilling the requirements of class D _{ca} -s2,d2,a2 as defined in NS-EN 13501-6.
SK	422.4	In Slovakia, for the installing electrical equipment on combustible materials, additional requirements of STN 33 2312 applies.

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Country	Clause	Special national condition
DE	422.5.1	Change the wording by the following: <i>Replace the text of the Note by the following new text and keep it as Note:</i> Boxes and enclosures for hollow-walls according to EN 60670-1 and cables that meet the requirements of EN 13501-6, class C _{ca} -s1,d2,a1 can be used.
GB	422.5.1	In the UK, 422.5.1 is replaced with the following. 422.5.1 In structures where the shape and dimensions are such as will facilitate the spread of fire, precautions shall be taken so that the electrical installation does not propagate a fire (e.g. chimney effect).
NO	422.5.1	normative text replacing the note: In Norway, cables shall at least fulfil the requirements of class D _{ca} -s2,d2,a2 as defined in NS-EN 13501-6.

“

9 Additions to Annex ZC, “A-Deviations”

Add the following A-deviations:

“

Country	Clause	Deviation
SK	421.1	In Slovakia for the installation of electro-thermal appliances, the requirements laid down by Decree of the Ministry of Interior of the Slovak Republic no. 401/2007 Coll. applies
SK	422.2	In Slovakia for electrical wiring in escape routes, the additional special fire protection requirements laid down by the Decree of the Ministry of Interior of the Slovak Republic no. 94/2004 Coll applies.
DE	422.2.1	Replace the text by: In Germany, the requirements of the regional LAR („Richtlinie über brandschutztechnische Anforderungen an Leitungsanlagen (Leitungsanlagen-Richtlinie - LAR)“) apply.
ES	422.2.1 Note 1	In Spain: According to Low Voltage Spanish Electro technical Regulation (ITC-BT-028) cables in BD2, BD3 and BD4 environments must be at least C _{ca} -s1b,d1,a1.
BE	422.2.1 Note 1	In Belgium: The RGIE/AREI (Electric Installations General Regulation) defines the classification of the cables to be used according to the environment concerned.
FI	422.2.1 Note 1	In Finland Requirements for fire safety of escape routes are given in decree of the Ministry of the Environment on Fire safety of Buildings (848/2017)