

**MADALPINGELISED ELEKTRIPAIGALDISED. OSA 4-42:  
KAITSEVIISID. KAITSE KUUMUSTOIME EEST**

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-HD 60364-4-42:2011+A1:2015 sisaldab Euroopa standardi HD 60364-4-42:2011 ja selle muudatuse A1:2015 ingliskeelset teksti.	This Estonian standard EVS-HD 60364-4-42:2011+A1:2015 consists of the English text of the European standard HD 60364-4-42:2011 and its amendment A1:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.03.2011.	Date of Availability of the European standard is 18.03.2011.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 29.120.50, 91.140.50

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Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

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English version

**Low voltage electrical installations -  
Part 4-42: Protection for safety -  
Protection against thermal effects  
(IEC 60364-4-42:2010, modified)**

Installations électriques basse tension -  
Partie 4- 42: Protection pour assurer la  
sécurité -  
Protection contre les effets thermiques  
(CEI 60364-4-42:2010, modifiée)

Errichten von Niederspannungsanlagen -  
Teil 4-42: Schutzmaßnahmen -  
Schutz gegen thermische Einflüsse  
(IEC 60364-4-42:2010, modifiziert)

This Harmonization Document was approved by CENELEC on 2011-02-14. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document at national level.

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

This Harmonization Document 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of the International Standard IEC 60364-4-42:2010, prepared by IEC TC 64, Electrical installations and protection against electric shock, together with common modifications prepared by the Technical Committee CENELEC TC 64, Electrical installations and protection against electric shock, was submitted to the formal vote and was approved by CENELEC as HD 60364-4-42 on 2011-02-14.

This European Standard supersedes HD 384.4.42 S1:1985 + A1:1992 + A2:1994.

The main changes with respect to HD 384.4.42 S1:1985 + A1:1992 + A2:1994 are listed below:

- The scope now includes protection against all thermal effects and flames in case of a fire hazard being propagated from electrical installations to other fire compartments segregated by barriers which are in the vicinity.
- Requirements associated with escape routes for evacuation in an emergency have been expanded/modified.
- Requirements associated with the nature of processed or stored materials have been expanded/modified.
- Requirements associated with combustible constructional materials have been expanded/modified.
- Requirements associated with fire propagating structures have been modified slightly.
- New requirements for the selection and erection of installations in locations which might endanger precious goods have been added.
- Protection against overheating now includes space heating appliances.

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

The following dates were fixed:

- latest date by which the HD has to be implemented  
at national level by publication of a harmonized  
national standard or by endorsement (dop) 2012-02-14
- latest date by which the national standards conflicting  
with the HD have to be withdrawn (dow) 2014-02-14

Annexes ZA to ZD have been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60364-4-42:2010 was approved by CENELEC as a Harmonization Document with agreed common modifications as given below.

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

- |                         |   |
|-------------------------|---|
| [2] IEC 60079-14:1996   | NOTE Harmonized as EN 60079-14:1997 (not modified).   |
| [5] IEC 60332-1-2:2004  | NOTE Harmonized as EN 60332-1-2:2004 (not modified).  |
| [6] IEC 60332-3-21:2000 | NOTE Harmonized as EN 60332-3-21:2009 (modified).     |
| [7] IEC 60332-3-22:2000 | NOTE Harmonized as EN 60332-3-22:2009 (not modified). |

[8] IEC 60332-3-23:2000	NOTE Harmonized as EN 60332-3-23:2009 (not modified).
[9] IEC 60332-3-24:2000	NOTE Harmonized as EN 60332-3-24 (not modified).
[10] IEC 60332-3-25:2000	NOTE Harmonized as EN 60332-3-25:2009 (not modified).
[11] IEC 60364-4-43	NOTE Harmonized as HD 60364-4-43.
[13] IEC 60364-5-52	NOTE Harmonized as HD 60364-5-52.
[16] IEC 60598 series	NOTE Harmonized in EN 60598 series (partially modified).
[17] IEC 60598-1:2003	NOTE Harmonized as EN 60598-1:2004 (modified).
[18] IEC 60598-1:2008	NOTE Harmonized as EN 60598-1:2008 (modified).
[19] IEC 60670-1	NOTE Harmonized as EN 60670-1.
[20] IEC 60695-4	NOTE Harmonized as EN 60695-4.
[21] IEC 60702-1	NOTE Harmonized as EN 60702-1.
[22] IEC 60947-2	NOTE Harmonized as EN 60947-2.
[23] IEC 61034-2	NOTE Harmonized as EN 61034-2.
[25] IEC 61386-1	NOTE Harmonized as EN 61386-1.
[26] IEC 61439-1	NOTE Harmonized as EN 61439-1.
[27] IEC 62020	NOTE Harmonized as EN 62020.
[28] IEC 62305 series	NOTE Harmonized in EN 62305 series (partially modified).

## COMMON MODIFICATIONS

### 422 Precautions where particular risks of fire exist


#### 422.3

**Add** the following note:

NOTE 3 Other locations having similar risk as those mentioned in IEC 60364-5-51, Table 51A, BE2 should also be considered, for example commercial kitchens.

#### 422.3.1

**Modify** the Note as follows:

Luminaires marked  in accordance with EN 60598-1 are suitable for mounting on a normally flammable surface.

#### 422.3.9

**Modify** first line as follows:

Final circuits supplying or traversing the location and current using equipment, shall be protected against insulation faults as follows:

#### 422.3.12

**Modify** text as follows:

PEN conductors are not allowed in locations where condition BE2 applies, except for circuits traversing such locations and having no connection between their traversing PEN conductor and any conductive part in this location and erected in such a way as to reduce the risk of a fault between the pen conductor and any conductive part in the location to a minimum.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60332	Series	Tests on electric and optical fibre cables under fire conditions	EN 60332	Series
IEC 60364-4-41 (mod)	2005	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41 + corr. July	2007 2007
IEC 60364-5-51 (mod)	2005	Electrical installations of building - Part 5-51: Selection and erection of electrical equipment - Common rules	HD 60364-5-51	2009
IEC 60598-2-24 (mod)	-	Luminaires - Part 2: Particular requirements - Section 24: Luminaires with limited surface temperatures	EN 60598-2-24	-
IEC 61084	Series	Cable trunking and ducting systems for electrical installations	-	-
IEC 61386	Series	Conduit systems for cable management	EN 61386	Series
IEC 61534	Series	Powertrack systems	EN 61534	Series
IEC 61537	-	Cable management - Cable tray systems and cable ladder systems	EN 61537	-

## 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 Harmonization Document.

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

Country	Clause No.	Wording
Germany	420.1	In Germany the following additional requirements to the scope apply to the second indent of clause 420.1 - against flames and smoke in case of a fire hazard being propagated from electrical installations to other fire compartments segregated by barriers which are in the vicinity, and
	421.3	<p>In Germany the following additional requirements for protection against arcing apply:</p> <p>421.3 Protective devices shall be installed for protection in case of arcing where the electrical installation shall meet a high degree of reliability.</p> <p>Protective devices for the protection against arcing shall detect the light effect of the arc and the increase of current in the line conductors. Furthermore, they shall extinguish the arc within a time of 5 ms and disconnect the electrical installation from the supply. The extinguishing of the arc may not be generated before the set limiting values regarding the light and current detection are exceeded.</p> <p>Slowly acting protective devices are not able to prevent damage of goods and that can make it impossible to put the electrical installation in to operation again within a short time.</p> <p>In general a separation by use of a metal sheet does not provide the required arc withstand capability.</p>
	421.7	<p>Where in case of a fire hazard from switchgear assemblies heavy smoke generation in escape corridors may be assumed a sealed fire barrier for the erection of the switchgear assembly is necessary.</p> <p>This requirement is fulfilled if the switchgear assembly is placed in an enclosure of non-combustible material or in a separate location. Ceilings and walls of the separating location shall have a fireresisting capability for a time of at least 90 min and doors for a time of at least 30 min.</p>
	422.1.2	<p>Additional requirements apply in Germany:</p> <p>“In Germany for the selection and erection of electrical equipment Chapter 53 “Erection of low voltage installations – Part 530: Selection and erection of electrical equipment – Switchgear and controlgear” applies in addition.”</p>
	422.3	<p>Section 422.3 includes, for example, the selection and erection of installations in locations with risks of fire due to the nature of processed or stored materials like the manufacturing, processing, storage of combustible materials, including the accumulation of dust in barns, wood working factories, paper mills, textile factories or similar.</p> <p>NOTE The nature and allowed quantities of combustible materials, or surface or volume of the locations may be regulated by national authorities.</p>