MADALPINGELISED ELEKTRIPAIGALDISED. OSA 4-41: KAITSEVIISID. KAITSE ELEKTRILÖÖGI EEST

Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock (IEC 60364-4-41:2005, modified + A1:2017, modified)

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-HD 60364-4-41:2017 sisaldab Euroopa standardi HD 60364-4-41:2017 ja selle muudatuse A11:2017 ingliskeelset teksti.	This Estonian standard EVS-HD 60364-4-41:2017 consists of the English text of the European standard HD 60364-4-41:2017 and its amendment A11:2017.
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 07.07.2017, muudatuse A11 11.08.2017.	Date of Availability of the European standard is 07.07.2017, for amendment A11 11.08.2017
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.

ICS 13.260, 91.140.50

HARMONIZATION DOCUMENT **HD 60364-4-41**

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT July 2017

ICS 13.260; 91.140.50 Supersedes HD 60364-4-41:2007

English Version

Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock (IEC 60364-4-41:2005 , modified + A1:2017 , modified)

Installations électriques à basse tension - Partie 4-41: Protection pour assurer la sécurité - Protection contre les chocs électriques (IEC 60364-4-41:2005 , modifiée + A1:2017 , modifiée)

Errichten von Niederspannungsanlagen - Teil 4-41: Schutzmaßnahmen - Schutz gegen elektrischen Schlag (IEC 60364-4-41:2005 , modifiziert + A1:2017 , modifiziert)

This Harmonization Document was approved by CENELEC on 2016-12-30. 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

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European foreword

The text of document 64/2147/FDIS, future IEC 60364-4-41:2005/A1, prepared by IEC/TC 64, Electrical installations and protection against electric shock, was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as HD 60364-4-41:2017.

A draft amendment, which covers common modifications to IEC 60364-4-41:2005/A1 (64/2147/FDIS), was prepared by CLC/TC 64 "Electrical installations and protection against electric shock", was submitted to the formal vote and approved by CENELEC.

A further draft amendment, prepared by WG 09, Disconnection times and related matters, of CLC/TC 64 "Electrical installations and protection against electric shock", was submitted to the formal vote.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-01-07
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-07-07

Annexes ZA and ZB have been added by CENELEC.

In this document, the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

This Harmonization Document supersedes HD 60364-4-41:2007.

HD 60364-4-41:2017 includes the following significant technical changes with respect to HD 60364-4-41:2007:

- The requirements of clause 411.3.1.2, relating to protective bonding, have been revised in a number of respects.

- Clause 411.3.2.1 now requires that the device providing automatic disconnection in the event of a fault shall be suitable for isolation of at least the line conductors.

- The disconnection times referred to in clause 411.3.2.2 now apply also to final circuits with a rated current not exceeding 63 A with one or more socket-outlets.

- Certain requirements of clause 411.3.2.5 relating to where it is not feasible for an overcurrent protective device to interrupt the supply or the use of a residual current protective device (RCD) for this purpose are not appropriate have been relocated to an annex (Annex D) and modified.

- The range of rated currents of socket-outlets that are required by clause 411.3.3 to be provided with additional protection by means of a residual current protective device (RCD) with a rated residual operating current not exceeding 30 mA has been extended up to 32 A.

- A new clause, 411.3.4, requires that lighting circuits of a TN or TT system in single household premises shall be provided with protection by a residual current protective device with a rated residual operating current not exceeding 30 mA.

- The note in clause 411.4.4 now gives product standard numbers and certain other particulars for residual current devices for use in connection with the requirements of

the clause.

- In clause 411.6.2, relating to earthing of exposed-conductive-parts in IT systems, the condition R_A x I_d ≤120 V for d.c. systems has been deleted.

- The requirements of clause 411.6.3.1 for fault protection in IT systems have been revised in a number of respects.

- The requirements of clause 412.2.4.1 for wiring systems providing basic protection and fault protection considered to meet the requirements for the protective measure of double or reinforced insulation have been revised in a number of respects.

- The former content of Annex D, relating to correspondence between IEC 60364-4-41:2001 and IEC 60364-4-41:2005, has been deleted and is replaced by content relating to provisions where automatic disconnection according to clause 411.3.2 is not feasible.

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.

Annexes which are additional to those in IEC 60364-4-41:2005/A1:2017 are prefixed “Z”.

Endorsement notice

The text of the International Standard IEC 60364-4-41:2005/A1:2017 was approved by CENELEC as a Harmonization Document with agreed common modifications.

Contents

410 Introduction

This Part 4-41 of HD 60364 deals with protection against electric shock as applied to electrical installations. It is based on EN 61140 which is a basic safety standard that applies to the protection of persons and livestock. EN 61140 is intended to give fundamental principles and requirements that are common to electrical installations and equipment or are necessary for their co-ordination.

The fundamental rule of protection against electric shock, according to EN 61140, is that hazardous-live-parts must not be accessible and accessible conductive parts must not be hazardous live, neither under normal conditions nor under single fault conditions.

According to 4.2 of EN 61140, protection under normal conditions is provided by basic protective provisions and protection under single fault conditions is provided by fault protective provisions. Alternatively, protection against electric shock is provided by an enhanced protective provision, which provides protection under normal conditions and under single fault conditions.

This standard in accordance with IEC Guide 104 has the status of a group safety publication (GSP) for protection against electric shock.

410.1 Scope

Part 4-41 of HD 60364 specifies essential requirements regarding protection against electric shock, including basic protection (protection against direct contact) and fault protection (protection against indirect contact) of persons and livestock. It deals also with the application and co-ordination of these requirements in relation to external influences.

Requirements are also given for the application of additional protection in certain cases.

410.2 Normative references

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.

IEC 60364-5-52, *Electrical installations of buildings – Part 5-52: Selection and erection of electrical equipment - Wiring systems*

HD 60364-5-54, *Electrical installations of buildings – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements, protective conductors and protective bonding conductors* (IEC 60364-5-54, modified)

HD 60364-6, *Low-voltage electrical installations – Part 6: Verification* (IEC 60364-6, modified)

EN 60439-1, *Low-voltage switchgear and controlgear assemblies* (IEC 60439-1)

IEC 60449, *Voltage bands for electrical installations of buildings*

IEC 60614 (all parts), *Conduits for electrical installations - Specification*

IEC 61084 (all parts), *Cable trunking and ducting systems for electrical installations*

EN 61140, *Protection against electric shock – Common aspects for installation and equipment* (IEC 61140)

EN 61386 (all parts), *Conduit systems for cable management* (IEC 61386 – all parts)

EN 61558-2-6, *Safety of power transformers, power supply units and similar – Part 2-6: Particular requirements for safety isolating transformers for general use* (IEC 61558-2-6)

IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications*