

**Madalpingelised elektripaigaldised. Osa
4-41: Kaitseviisid. Kaitse elektrilöögi
eest**

Low-voltage electrical installations -- Part 4-41:
Protection for safety - Protection against electric
shock

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-HD 60364-4-41:2007 sisaldab Euroopa standardi HD 60364-4-41:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 13.09.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-HD 60364-4-41:2007 consists of the English text of the European standard HD 60364-4-41:2007.</p> <p>This document is endorsed on 13.09.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Harmoneerimisdokumendi HD 60364 osa 4-41 kirjeldab olulisi nõudeid, mis puudutavad kaitset elektrilöögi eest, sealhulgas inimeste ja kariloomade põhikaitset (kaitset otsepuute eest) ja rikkekaitset (kaitset kaudpuute puhul). See käsitleb ka nende nõuete rakendamist ja omavahelist sobitamist suhtes välistoimetega. Teatud juhtudel on need nõuded lubatud rakendamiseks ka lisakaitseks.</p>	<p>Scope: Part 4-41 of IEC 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.</p>
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ICS 13.260, 91.140.50

Võtmesõnad: ehitis, elektrilöögikaitse, elektripaigaldis, kaitseviisid, madalpinge

English version

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

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

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

This Harmonization Document was approved by CENELEC on 2006-02-01. 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, 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

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Foreword

The text of document 64/1489/FDIS, future edition 5 of IEC 60364-4-41, prepared by IEC TC 64, Electrical installations and protection against electric shock, was submitted to the IEC-CENELEC parallel vote.

A draft amendment, prepared by SC 64A, Protection against electric shock, of Technical Committee CENELEC TC 64, Electrical installations and protection against electric shock, was submitted to the formal vote.

The combined texts were approved by CENELEC as HD 60364-4-41 on 2006-02-01.

This Harmonization Document supersedes HD 384.4.41 S2:1996 + A1:2002 and HD 384.4.47 S2:1995.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 2006-08-01
- latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2007-08-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 2009-02-01

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.

The contents of the corrigendum of July 2007 have been included in this copy.

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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.

In the previous edition HD 384.4.41 S2:1996

- protection under normal conditions (now designated basic protection) was referred to as protection against direct contact and
- protection under fault conditions (now designated fault protection) was referred to as protection against indirect contact.

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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*