ICS 29.020, 91.140.50 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2015

STN	**Elektrické inštalácie nízkeho napätia. Časť 7-753: Požiadavky na osobitné inštalácie alebo priestory. Vykurovacie káble a zabudované vykurovacie systémy.**	**STN 33 2000-7-753** 33 2000

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/15

Obsahuje: HD 60364-7-753:2014, HD 60364-7-753:2014/AC:2014, IEC 60364-7-753:2014

Oznámením tejto normy sa od 11.06.2017 ruší
STN 33 2000-7-753 z marca 2004

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HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 60364-7-753

August 2014

ICS 91.140.50

English Version

Low-voltage electrical installations - Part 7-753: Requirements for special installations or locations - Heating cables and embedded heating systems (IEC 60364-7-753:2014)

Installations électriques à basse tension - Partie 7-753: Exigences pour les installations ou emplacements spéciaux - Câbles chauffants et systèmes de chauffage intégrés (CEI 60364-7-753:2014)

Errichten von Niederspannungsanlagen - Teil 7-753: Anforderungen für Betriebsstätten, Räume und Anlagen besonderer Art - Heizleitungen und umschlossene Heizsysteme (IEC 60364-7-753:2014)

This Harmonization Document was approved by CENELEC on 2014-06-11. 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, 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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. HD 60364-7-753:2014 E

Foreword

The text of document 64/1916/FDIS, future edition 2 of IEC 60364-7-753, 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 60364-7-753:2014.

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)	2015-03-11
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2017-06-11

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

Endorsement notice

The text of the International Standard IEC 60364-7-753:2014 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 standards indicated:

IEC 60079 Series	NOTE	Harmonized as EN 60079 Series (partly modified).
IEC 60079-30-1	NOTE	Harmonized as EN 60079-30-1.
IEC 60079-30-2	NOTE	Harmonized as EN 60079-30-2.
IEC 60519 Series	NOTE	Harmonized as EN 60519 Series (not modified).
IEC 62395 Series	NOTE	Harmonized as EN 62395 Series (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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

NOTE 1 When 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.cenelec.eu

Publication	Year	Title	EN/HD	Year
IEC 60079-7	-	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"	EN 60079-7	-
IEC 60335-2-96	-	Household and similar electrical appliances - Safety - Part 2-96: Particular requirements for flexible sheet heating elements for room heating	EN 60335-2-96	-
IEC 60364	series	Low-voltage electrical installations	HD 60364	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 60364-4-42	-	Low voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects	HD 60364-4-42	-
IEC 60800	-	Heating cables with a rated voltage of 300/500 V for comfort heating and prevention of ice formation	-	-

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.

Subclause	Special national condition
753.415.1.1	**Norway** In Norway the following additional requirements apply: In Norway, circuits supplying heating units galvanic connected to a public IT distribution network, the rated residual operating current of the RCDs may be selected to be less or equal to 30 mA above the leakage current for the heating units in normal operation.
753.424.101	**Germany** Add the following new 2nd paragraph: This requirement does not apply for circuits using the protective measure SELV.
753.432.1 (new)	**Spain** In Spain the following additional requirements apply: In Spain, circuits supplying heating units in dwellings shall be protected by circuit breakers with a maximum rated current of 25 A.
753.511	**Spain** In Spain the following additional requirements apply: In Spain, the standard applicable for heating cables is UNE 21155-1.
753.522.1, headline	**Germany** In Germany, the following additional requirements apply: **Delete** “(AA)”
753.522.4 headline	**Germany** In Germany, the following additional requirements apply: **Delete** “(AE)”
753.524 (new)	**Spain** In Spain the following additional requirements apply: In Spain, the line conductor of the cable supplying the thermostat shall have a cross-sectional area equal to that of the cold lead.
Annex A, headline	**Germany** Modify headline as follows: Information **for the contractor and** the user of the installation
Annex A, first paragraph	**Germany** Modify the text of the 1st paragraph as follows: A description of the heating system shall be provided by the installer of the heating system for the owner of the building upon completion of the installation or for his agent.

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 CENELEC national member.

This Harmonization Document does not fall under any Directive of the EC.

In the relevant CENELEC countries these A-deviations are valid instead of the provisions of the Harmonization Document until they have been removed.

Subclause	Deviation
753.411.1, first paragraph	**Austria** Regulations for electrical low voltage installations, statutory order BGBl. II/223/2010 issued 2010-07-12. In Austria the following additional requirements apply: In the case of heating units which are delivered from the manufacturer without an earthed conductive shield a suitable conductive covering, for example, a mesh metallic grid, with an mesh size not more than 3 mm for ceilings, floor and wall installations, shall be provided on site and connected to the protective conductor of the electrical installation.
753.5	**France** According to French legislation “Arrêté du 22 octobre 1969” the following applies: 753.5 Selection and erection of equipment For heating components of heating floor, NF P 52-302-1 applies.

HD 60364-7-753:2014/AC:2014

Corrigendum to HD 60364-7-753:2014

English version

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Foreword

In the foreword, before the paragraph regarding patent rights, **add**:

“This document supersedes HD 384.7.753 S1:2002.”

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October 2014

IEC 60364-7-753

Edition 2.0 2014-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Low-voltage electrical installations – Part 7-753: Requirements for special installations or locations – Heating cables and embedded heating systems

Installations électriques à basse tension – Partie 7-753: Exigences pour les installations ou emplacements spéciaux – Câbles chauffants et systèmes de chauffage intégrés

IEC 60364-7-753:2014-05(en-fr)

IEC 60364-7-753

Edition 2.0 2014-05

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-753: Requirements for special installations or locations – Heating cables and embedded heating systems

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60364-7-753 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

This second edition cancels and replaces the first edition published in 2005 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) The title has been changed from "Floor and ceiling heating systems" to "Heating cables and embedded heating systems" to align with the revised scope.
b) The scope has been extended and now covers embedded electric heating systems for surface heating, also electric heating systems for de-icing or frost prevention or similar applications, and covers both indoor and outdoor systems. This includes heating systems

for: walls, ceiling, floors, roofs, drainpipes, gutters, pipes, stairs, roadways, non-hardened compacted areas (e.g. football fields, lawns).

c) For wall heating systems, this standard contains additional requirements (e.g. metal sheath/enclosure/grid) to protect against the effects of overheating caused by a short-circuit between live conductors due to penetration of an embedded heating unit.

d) From heating units delivered from the manufacturer without exposed-conductive-parts, this standard requires a metallic mesh grid covering. This has been reduced to 3 mm for wall heating systems.

e) This standard now requires that electric heating systems shall be selected and erected so as to avoid any harmful influence between the heating system and any electrical or non-electrical installations envisaged.

f) This standard covers surface temperatures and now refers the reader to the appropriate IEC guide.

The text of this standard is based on the following documents:

FDIS	Report on voting
64/1916FDIS	64/1954/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60364 series, published under the general title *Low-voltage electrical installations*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

For the purpose of this part (IEC 60364-7-753) the requirements of the general parts 1 to 6 of IEC 60364 apply.

The IEC 60364-7-7XX parts of IEC 60364 contain particular requirements for special installations or locations which are based on the requirements of the general parts of IEC 60364 (IEC 60364-1 to IEC 60364-6). These IEC 60364-7-7XX parts are considered in conjunction with the requirements of the general parts.

The particular requirements of this part of IEC 60364 supplement, modify or replace certain of the requirements of the general parts of IEC 60364 being valid at the time of publication of this part. The absence of reference to the exclusion of a part or a clause of a general part means that the corresponding clauses of the general part are applicable (undated reference).

Requirements of other 7XX parts being relevant for installations covered by this part also apply. This part may therefore also supplement, modify or replace certain of these requirements valid at the time of publication of this part.

The clause numbering of this part follows the pattern and corresponding references of IEC 60364. The numbers following the particular number of this part are those of the corresponding parts, or clauses of the other parts of the IEC 60364 series, valid at the time of publication of this part, as indicated in the normative references of this document (dated reference).

If requirements or explanations additional to those of the other parts of the IEC 60364 series are needed, the numbering of such items appears as 753.101, 753.102, 753.103 etc.

NOTE In the case where new or amended general parts with modified numbering were published after this part was issued, the clause numbers referring to a general part in this 753 part may no longer align with the latest edition of the general part. Dated references should be observed.

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-753: Requirements for special installations or locations – Heating cables and embedded heating systems

753 Heating cables and embedded heating systems

753.1 Scope

This part of IEC 60364 applies to embedded electric heating systems for surface heating. It also applies to electric heating systems for de-icing or frost prevention or similar applications. Both indoor and outdoor systems are covered.

Heating systems for industrial and commercial applications complying with relevant parts of IEC 60519, IEC 62395 and IEC 60079 are not covered.

NOTE Examples of heating systems covered by this standard are heating systems for walls, ceilings, floors, roofs, drainpipes, gutters, pipes, stairs, roadways, non-hardened compacted areas (e.g. football fields, lawns).

753.2 Normative references

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

IEC 60079-7, *Explosive atmospheres – Part 7: Equipment protection by increased safety "e"*

IEC 60335-2-96, *Household and similar electrical appliances – Safety – Part 2-96: Particular requirements for flexible sheet heating elements for room heating*

IEC 60364 (all parts), *Low-voltage electrical installations*

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

IEC 60364-4-42, *Low-voltage electrical installations – Part 4-42: Protection for safety – Protection against thermal effects*

IEC 60800, *Heating cables with a rated voltage of 300/500 V for comfort heating and prevention of ice formation*