



SLOVENSKI STANDARD
SIST HD 60364-7-753:2014
01-november-2014

Nizkonapetostne električne inštalacije - 7-753. del: Zahteve za posebne inštalacije ali lokacije - Ogrevalni kabli in z njimi povezani sistemi ogrevanja (IEC 60364-7-753:2014)

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST HD 60364-7-753:2014](https://standards.iteh.ai/catalog/standards/sist/2f8738ab-d807-4a46-b343-401764007d51/sist-hd-60364-7-753-2014)

Ta slovenski standard je istoveten z: HD 60364-7-753:2014

ICS:

29.060.01	Električne žice in kabli na splošno	Electrical wires and cables in general
91.140.10	Sistemi centralnega ogrevanja	Central heating systems
91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

SIST HD 60364-7-753:2014

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST HD 60364-7-753:2014](#)

<https://standards.iteh.ai/catalog/standards/sist/2f8738ab-d807-4a46-b343-401784007d51/sist-hd-60364-7-753-2014>

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

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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.

<u>Subclause</u>	<u>Special national condition</u>
753.415.1.1	<p>Norway</p> <p>In Norway the following additional requirements apply:</p> <p>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.</p>
753.424.101	<p>Germany</p> <p>Add the following new 2nd paragraph:</p> <p>This requirement does not apply for circuits using the protective measure SELV.</p>
753.432.1 (new)	<p>Spain</p> <p>In Spain the following additional requirements apply:</p> <p>In Spain, circuits supplying heating units in dwellings shall be protected by circuit breakers with a maximum rated current of 25 A.</p>
753.511	<p>Spain</p> <p>In Spain the following additional requirements apply:</p> <p>In Spain, the standard applicable for heating cables is UNE 21155-1.</p>
753.522.1, headline	<p>Germany</p> <p>In Germany, the following additional requirements apply:</p> <p>Delete "(AA)"</p>
753.522.4 headline	<p>Germany</p> <p>In Germany, the following additional requirements apply:</p> <p>Delete "(AE)"</p>
753.524 (new)	<p>Spain</p> <p>In Spain the following additional requirements apply:</p> <p>In Spain, the line conductor of the cable supplying the thermostat shall have a cross-sectional area equal to that of the cold lead.</p>
Annex A, headline	<p>Germany</p> <p>Modify headline as follows:</p> <p>Information for the contractor and the user of the installation</p>
Annex A, first paragraph	<p>Germany</p> <p>Modify the text of the 1st paragraph as follows:</p> <p>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.</p>

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.

<u>Subclause</u>	<u>Deviation</u>
753.411.1, first paragraph	<p>Austria</p> <p>Regulations for electrical low voltage installations, statutory order BGBl. II/223/2010 issued 2010-07-12.</p> <p>In Austria the following additional requirements apply:</p> <p>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.</p>
753.5	<p>France</p> <p>According to French legislation "Arrêté du 22 octobre 1969" the following applies:</p> <p>753.5 Selection and erection of equipment</p> <p>For heating components of heating floor, NF P 52-302-1 applies.</p>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST HD 60364-7-753:2014](#)

<https://standards.iteh.ai/catalog/standards/sist/2f8738ab-d807-4a46-b343-401784007d51/sist-hd-60364-7-753-2014>



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**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

M

ICS 91.140.50

ISBN 978-2-8322-1573-9

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
753 Heating cables and embedded heating systems.....	6
753.1 Scope	6
753.2 Normative references.....	6
753.3 Terms and definitions.....	6
753.4 Protection for safety.....	7
753.41 Protection against electric shock	7
753.411 Automatic disconnection of supply	8
753.413 Protective measure: electrical separation	8
753.42 Protection against thermal effects.....	8
753.423 Protection against burns	8
753.424 Protection against overheating	8
753.5 Selection and erection of electrical equipment	9
753.51 Common rules	9
753.511 Compliance with standards	9
753.514 Identification	9
753.515 Prevention of mutual detrimental influences	9
753.52 Wiring systems	10
753.520 Introduction	10
753.522 Selection and erection of wiring systems in relation to external influences.....	10
Annex A (normative) Information for the user of the installation.....	11
Annex B (informative) List of notes concerning certain countries.....	12
Bibliography.....	13

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 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