



SLOVENSKI STANDARD
SIST HD 384.5.54 S1:2000

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**Električne inštalacije v zgradbah – 5. del: Izbira in namestitve električne opreme –
54. poglavje: Ozemljitev in zaščitni vodniki (IEC 60364-5-54:1980, spremenjen)**

Electrical installation of buildings -- Part 5: Selection and erection of electrical equipment
-- Chapter 54: Earthing arrangements and protective conductors

Elektrische Anlagen von Gebäuden -- Teil 5: Auswahl und Errichtung elektrischer
Betriebsmittel -- Kapitel 54: Erdung und Schutzleiter

Installations électriques des bâtiments -- Partie 5: Choix et mise en oeuvre des matériels
électriques -- Chapitre 54: Mises à la terre et conducteurs de protection

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Ta slovenski standard je istoveten z: HD 384.5.54 S1:1988

ICS:

91.140.50 Sistemi za oskrbo z elektriko Electricity supply systems

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en

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HD 384.5.54 S1

ENGLISH VERSION

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KEY WORDS: Electrical installations of buildings; protective measures for indoor installations; safety requirements; earthing; protective conductors; electrical safety requirements

ELECTRICAL INSTALLATIONS OF BUILDINGS
PART 5: SELECTION AND ERECTION OF ELECTRICAL EQUIPMENT
CHAPTER 54: EARTHING ARRANGEMENTS AND PROTECTIVE CONDUCTORS

Installations électriques des bâtiments
Cinquième partie: Choix et mise en oeuvre des matériels électriques
Chapitre 54: Mises à la terre et conducteurs de protection

Elektrische Anlagen von Gebäuden
Teil 5: Auswahl und Errichtung elektrischer Betriebsmittel
Kapitel 54: Erdung und Schutzleiter

BODY OF THE HD

iTeh STANDARD PREVIEWThe Harmonization Document consists of: **(standards.iteh.ai)**

- IEC 364-5-54 (1980) ed 1; IEC/TC 64, not appended
- Common modifications prepared by CLC/SC 64A

This Harmonization Document was approved by CENELEC on 1987-12-02.

The English and French versions of this Harmonization Document are provided by the text of the IEC publication and the German version is the official translation of the IEC text.

ALL texts prepared by CENELEC exist in three official versions (English, French and German).

According to the CENELEC Internal Regulations the CENELEC member National Committees are bound:

to announce the existence of this Harmonization Document at national level by or before 1988-06-01

to publish their new harmonized national standard by or before 1988-12-01

to withdraw all conflicting national standards by or before 1988-12-01.

Harmonized national standards are listed on the HD information sheet, which is available from the CENELEC National Committees or from the CENELEC Central Secretariat.

The CENELEC National Committees are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

FOREWORD

This Harmonization Document has been recommended by CENELEC/SC 64A: Electrical installations of buildings, Protection against electric shock.

This Harmonization Document necessitates reference to the following Standards:

CENELEC Harmonization Documents:

- HD 384.1 Electrical installations of buildings, Part 1: Scope.
- HD 384.3 Electrical installations of buildings, Part 3: Assessment of general characteristics.
- HD 384.4.41 Electrical installations of buildings, Part 4: Protection for safety, Chapter 41: Protection against electric shock.

CENELEC European Standard:

- EN 50 014 Electrical apparatus for potentially explosive atmospheres - General requirements.

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IEC Publications:

- IEC 28 International standard of resistance for copper.
- IEC 111 Recommendation for the resistivity of commercial hard-drawn aluminium electrical conductor wire for international use.
- IEC 287 Calculation of the continuous current rating of cables (100% load factor).

 ENDORSEMENT NOTICE

The text of the International Standard IEC Publication 364-5-54, First edition, 1980, together with the relevant Amendment No. 1, 1982, applies as a CENELEC Harmonization Document with agreed common modifications as given below.

CLAUSE	COMMON MODIFICATIONS
542.2.1	<p>The fifth indention is replaced by:</p> <ul style="list-style-type: none"> - metallic reinforcement of concrete embedded in the earth; <p>The third paragraph of the second Note is deleted.</p>
542.2.5	<p>The sub-clause is replaced by:</p> <p>Metallic water pipe systems may only be used as earth electrodes if the consent of the distributor of the water is obtained and if suitable arrangements exist for the user of the electrical installation to be warned of any proposed changes in the water pipe system.</p> <p>The existing Note remains.</p> <p><small>https://standards.iteh.ai/catalog/standards/sist/a319f5de-64cc-4aea-917a-2a9e410d7ee7/sist-hd-384-5-54-s1-2000</small></p>
542.3.1	<p>The Note is deleted.</p> <p>In Table 54A:</p> <ul style="list-style-type: none"> - the title is modified to read "Conventional minimum cross-sectional areas of earthing conductors; - - in the first column of the second line an asterisk (*) is added; - in the third column of the second line the symbols Cu and Fe are replaced by Copper and Galvanized steel respectively; - after the table, the following explanation is added: "*Protection against corrosion may be obtained by means of a sheath".
542.5.3	<p>The Sub-clause is deleted.</p>

CLAUSE	COMMON MODIFICATIONS
543.1	<p>The following Note is added to the first paragraph:</p> <p><u>Note:</u> Calculation in conformity with sub-clause 543.1.1 may be necessary if the choice of cross-sectional areas of phase conductors has been determined by considerations of short-circuit current.</p>
543.1.1	<p>In Note 2 the words "IEC Publication 79-8" are replaced by "European Standard EN 50 014".</p>
543.1.2	<p>In the first paragraph, second sentence, the word "usually" is deleted.</p> <p>To the Table the following title is added "Relation between cross-sectional areas of protective conductors and phase conductors".</p>
543.1.4	<p>A further sub-clause 543.1.4 is added:</p> <p>Where a protective conductor is common to several circuits the cross-sectional area of the protective conductor shall be dimensioned so as to correspond to the cross-sectional area of the largest phase conductor.</p>
543.2	<p>The following Footnote is introduced with reference to Chapter 52 "For the time being IEC document 64(Central Office)174".</p>
543.2.2	<p>The following Note is added at the end of this sub-clause:</p> <p>The requirements of letter c) apply only to the connection of external protective conductors.</p>
543.2.4	<p>The following Note is added after item d):</p> <p><u>Note:</u> Metallic water pipes do not usually satisfy these conditions.</p> <p>The first sentence of the second paragraph is deleted.</p>

CLAUSE	COMMON MODIFICATIONS
544.1	The Note is replaced by: "When overcurrent protective devices are used for protection against electric shock, the protective conductor should be incorporated in the same wiring system as the live conductors or in their immediate proximity".
544.2.1	The sentence between brackets, in the fourth line, is deleted.
547.2	The sub-clause is deleted.

Appendix A

The words "valid in 1980, the year of issue of the IEC Reference Document (364-5-54)", are added at the end of the footnote (*).

The words "issued by CIGRE (Conférence Internationale des Grands Réseaux Electriques à haute tension, 112 Boulevard Haussmann, 75008 Paris" are added at the end of the footnote (**).

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Installations électriques des bâtiments

Cinquième partie: Choix et mise en œuvre des matériels électriques

Chapitre 54: Mises à la terre et conducteurs de protection

ITech STANDARD PREVIEW

Electrical installations of buildings

Part 5: Selection and erection of electrical equipment

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Mots clés: installations électriques des bâtiments; mesures de protection pour les installations intérieures; prescriptions de sécurité, mise à la terre; conducteurs de protection; prescriptions de sécurité électrique.

Key words: electrical installations of buildings; protective measures for indoor installations; safety requirements; earthing; protective conductors; electrical safety requirements.



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS OF BUILDINGS

Part 5: Selection and erection of electrical equipment

Chapter 54: Earthing arrangements and protective conductors

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation, for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

iTeh STANDARD PREVIEW

PREFACE

This standard has been prepared by IEC Technical Committee No. 64, Electrical Installations of Buildings.

Drafts of this standard were discussed at the meetings held in Toronto in 1976 and in Moscow in 1977. As a result of the latter meeting, a draft, Document 64(Central Office)68, was submitted to the National Committees for approval under the Six Months' Rule in November 1977.

In addition, the wording of Clause 543.1, Sub-clause 543.1.1 and Appendix A, Document 64(Central Office)75, was circulated for approval under the Two Months' Procedure in December 1978.

The National Committees of the following countries voted explicitly in favour of the Six Months' Rule draft:

Australia	Netherlands
Austria	Norway
Belgium	Romania
Bulgaria	South Africa (Republic of)
Canada	Spain
Egypt	Sweden
France	Switzerland
Israel	Turkey
Italy*	United States of America
Japan	

The National Committees of the following countries voted explicitly in favour of publication of Clause 543.1, Sub-clause 543.1.1 and Appendix A:

Australia	Poland
Austria	Romania
Belgium	South Africa (Republic of)
Denmark	Spain
Egypt	Sweden
France	Switzerland
Germany	Turkey
Israel	Union of Soviet Socialist Republics
Italy	United States of America
Netherlands	

* This country has changed its original negative vote into a positive one after the report on the voting had been circulated.