



SLOVENSKI STANDARD

SIST HD 60364-5-559:2005

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Električne inštalacije zgradb – 5-55. del: Izbira in namestitvev električne opreme – Druga oprema – 559. točka: Svetilke in inštalacije razsvetljave

Electrical installations of buildings -- Part 5-55: Selection and erection of electrical
equipment - Other equipment -- Clause 559: Luminaires and lighting installations

Elektrische Anlagen von Gebäuden -- Teil 5-55: Auswahl und Errichtung elektrischer
Betriebsmittel - Andere Betriebsmittel -- Abschnitt 559: Leuchten und
Beleuchtungsanlagen

Installations électriques des bâtiments -- Partie 5-55: Choix et mise en oeuvre des
matériels électriques - Autres matériels -- Article 559: Luminaires et installations
d'éclairage

Ta slovenski standard je istoveten z: HD 60364-5-559:2005

ICS:

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91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

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HARMONIZATION DOCUMENT

HD 60364-5-559

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

September 2005

ICS 91.140

English version

Electrical installations of buildings
Part 5-55: Selection and erection of electrical equipment –
Other equipment
Clause 559: Luminaires and lighting installations
(IEC 60364-5-55:2001 (Clause 559), modified)

Installations électriques des bâtiments
Partie 5-55: Choix et mise en oeuvre
des matériels électriques –
Autres matériels
Article 559: Luminaires et installations
d'éclairage
(CEI 60364-5-55:2001 (Article 559),
modifiée)

Elektrische Anlagen von Gebäuden
Teil 5-55: Auswahl und Errichtung
elektrischer Betriebsmittel –
Andere Betriebsmittel
Abschnitt 559: Leuchten und
Beleuchtungsanlagen
(IEC 60364-5-55:2001 (Abschnitt 559),
modifiziert)

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This Harmonization Document was approved by CENELEC on 2005-04-12. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document on a national level.

Up-to-date lists and bibliographical references concerning such national implementation 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of Clause 559 of the International Standard IEC 60364-5-55:2001, prepared by IEC TC 64, Electrical installations and protection against electric shock, together with the common modifications prepared by SC 64B, Protection against thermal effects, of Technical Committee CENELEC TC 64, Electrical installations and protection against electric shock, was submitted to the formal vote and was approved by CENELEC as HD 60364-5-559 on 2005-04-12.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 2005-10-01
- latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2006-04-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 2008-04-01

Annex ZA has been added by CENELEC.

Clauses, subclauses and annexes which are additional to those of Clause 559 of IEC 60364-5-55 are prefixed "Z".

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

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559 Luminaires and lighting installations

559.1 Scope

The particular requirements of this Clause of HD 60364 (HD384) apply to the selection and erection of luminaires and lighting installations intended to be part of the fixed installation.

Additional requirements for specific types of lighting installations are covered in various parts 7:

- HD 384.7.714 for outdoor lighting installations;
- HD 60364-7-715 for extra-low-voltage lighting installations.

The requirements of this clause do not apply to:

- high voltage signs supplied at low voltage (called neon-tube);
- signs and luminous-discharge-tube installations operating from a no-load rated output voltage exceeding 1 kV but not exceeding 10 kV (EN 50107).

NOTE Safety requirements for luminaires are covered by EN 60598.

559.Z2 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.

EN 50107, series, *Signs and luminous-discharge-tube installations operating from a no-load rated output voltage exceeding 1 kV but not exceeding 10 kV*

EN 60598, series, *Luminaires* (IEC 60598 series, mod.)

EN 60670, series, *Boxes and enclosures for electrical accessories for household and similar fixed electrical installations* (IEC 60670 series, mod.)

EN 60998, series, *Connecting devices for low-voltage circuits for household and similar purposes* (IEC 60998 series, mod.)

EN 61048, *Auxiliaries for lamps - Capacitors for use in tubular fluorescent and other discharge lamp circuits - General and safety requirements* (IEC 61048:1991 + corrigendum 1992, mod.)

EN 61347-1, *Lamp controlgear - Part 1: General and safety requirements* (IEC 61347-1)

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)

HD 22.3 S4:2004, *Cables of rated voltages up to and including 450/750 V and having cross-linked insulation - Part 3: Heat resistant silicone rubber insulated cables*

HD 384.1 S2:2001, *Electrical installations of buildings - Part 1: Scope, object and fundamental principles* (IEC 60364-1:1992, mod.)

HD 384.4.46 S2:2001, *Electrical installations of buildings - Part 4: Protection for safety - Chapter 46: Isolation and switching* (IEC 60364-4-46:1981, mod.)

HD 384.4.482 S1:1997, *Electrical installations of buildings - Part 4: Protection for safety - Chapter 48: Choice of protective measures as a function of external influences - Section 482: Protection against fire where particular risks or danger exist*

HD 384.5.52 S1:1995, *Electrical installations of buildings - Part 5: Selection and erection of electrical equipment - Chapter 52: Wiring systems* (IEC 60364-5-52:1993, mod.)

IEC 60364-5-53:2001, *Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control*

HD 384.5.537 S2:1998, *Electrical installations of buildings - Part 5: Selection and erection of electrical equipment - Chapter 53: Switchgear and controlgear - Section 537: Devices for isolation and switching* (IEC 60364-5-537:1981 + A1:1989, mod.)

HD 384.7.714 S1:2000, *Electrical installations of buildings - Part 7: Requirements for special installations or locations - Section 714: Outdoor lighting installations* (IEC 60364-7-714:1996, mod.)

HD 60364-7-715:2005, *Electrical installations of buildings - Part 7-715: Requirements for special installations or locations - Extra-low voltage lighting installations* (IEC 60364-7-715:1999, mod.)

IEC 60050-195, *International Electromechanical Vocabulary (IEV) - Part 195: Earthing and protection against electric shock*

IEC 60050-826, *International Electromechanical Vocabulary (IEV) - Part 826: Electrical installations*

IEC 60417 (database), *Graphical symbols for use on equipment*
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IEC 61995-1, *Devices for the connection of a luminaire for household and similar purposes - Part 1: General requirements*

559.3 Definitions

For the purpose of this clause, the general definitions of HD 384.1, EN 60598, IEC 60050-195 and IEC 60050-826 apply.

559.3.1 Display stands for luminaires denote permanent stands in sales rooms or parts of sales rooms, which are used to display luminaires.

The following items are not regarded as display stands:

- trade fairs stands, in which luminaires remain connected for the duration of the fair;
- temporary exhibition panels with permanently connected luminaires;
- exhibition panels with a range of luminaires which can be connected with a plug-in device.

559.4 General requirements for installations

Luminaires shall be selected and erected in accordance with the manufacturer's instructions and shall comply with EN 60598.

NOTE Z1 See Annex ZA for the explanation of symbols used in luminaires, in controlgear for luminaires and in the installation of the luminaires.

NOTE Z2 For the purposes of this section, luminaires without transformer/ converter, fitted with ELV lamps connected in series, are low-voltage equipment and not ELV equipment.

NOTE Z3 A luminaire installed in a pelmet should not adversely affect the operation of curtains or blinds and should not present risk of fire or electric shock in normal use.

559.5 Protection against thermal effects

NOTE Z1 Additional requirements regarding protection against thermal effects for luminaires may be found in Subclauses 482.1.14 and 482.1.15 of HD 384.4.482 S1.

559.5.1 In the selection and erection of luminaires the thermal effect of radiant and convected energy on the surroundings shall be taken into account, including:

- a) the maximum permissible power dissipated by the lamps;
- b) fire resistance of adjacent material
 - at the point of installation,
 - in the thermally affected areas;
- c) minimum distance to combustible materials, including those in the path of a spotlight beam.

559.5.2 Luminaires marked in accordance with EN 60598 shall be installed in compliance with the marking. Manufacturer's instructions with respect to the fire resistance of materials affected by the luminaires shall be followed.

NOTE Z1 See annex ZA for thermal effects markings and symbols.

559.6 Wiring systems

[SIST HD 60364-5-559:2005](https://standards.iteh.ai/catalog/standards/sist/d2ea67dc-37f6-4712-b1e5-332e74afd19d/sist-hd-60364-5-559-2005)

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559.6.1 Connection to the fixed wiring

Wiring systems shall be terminated in

- a box, which shall comply with the relevant part of EN 60670; or
- a device for connecting a luminaire (DCL) outlet according to IEC 61995-1 mounted in a box; or
- electrical equipment designed to be connected directly to the wiring system

NOTE Z1 In suspended ceilings one connecting box can be used for a number of luminaires.

559.6.Z1 Fixing of the luminaire

Adequate means to fix the luminaire shall be provided.

The fixing means may be mechanical accessories (e. g. hooks or screws), boxes or enclosures which are able to support luminaires or supporting devices for connecting a luminaire.

In places where:

- the fixing means is intended to support a pendant luminaire, the fixing means shall be capable of carrying a mass of not less than 5 kg.
- the mass of the luminaire is higher than 5 kg, the installer shall ensure that the fixing means is capable of supporting the mass of the pendant luminaire.

The installation of the fixing means shall be in accordance with the manufacturer's instructions.

The weight of luminaires and their eventual accessories shall be compatible with the mechanical resistance of the ceiling or suspended ceiling where installed.

In these conditions, a ceiling or a suspended ceiling may be considered as a stable element of the construction and consequently luminaires may be fixed onto them.


Any cable or cord between the fixing means and the luminaire shall be installed so that any expected stresses in the conductors, terminals and terminations will not impair the safety of the installation.

NOTE Z1 See also Clause 522.8 of HD 384.5.52 S1.

559.6.2 The installation of through circuit wiring in luminaries is only allowed for luminaries designed for through wiring.

559.6.3 Cables for through wiring shall be selected in accordance with the temperature information on the luminaire or on the manufacturer's instruction sheet, if any, as follows:

- unless specified in the manufacturer's instructions, for luminaires complying with EN 60598 but with no temperature marking, heat resistant cables are not required;
- for luminaires complying with EN 60598 but with temperature marking, cables suitable for the marked temperature shall be used;
- in the absence of information, heat-resistant cables and/or insulated conductors in accordance with HD 22.3 or those of an equivalent type shall be used.

NOTE Z1 The temperature marking indicates the maximum temperature according to EN 60598-1, Table 12.2 and is marked with the symbol  .

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559.6.Z3 Conductors of a three-phase circuit shall be installed in the same space inside the luminaire intended for through wiring.

559.6.Z4 Supply cables shall be suitable for the location meeting the requirements of 559.6.3 or be locally thermally protected or the insulation substituted.

If the luminaire does not provide connecting devices for connection to the supply, the connecting devices shall be:




- terminals used for the connection to the supply according to EN 60998; or
- devices for connecting a luminaire (DCL) plug according to IEC 61995-1; or
- installation couplers used for the connection to the supply; or
- other suitable and appropriate connecting devices.


559.6.4 Groups of luminaires, divided between the three phase conductors of a three-phase system with only one common neutral conductor, shall be provided with at least one device disconnecting simultaneously all phase conductors.

NOTE See also Clause 462.1 of HD 384.4.46 S2 and HD 385.5.537 S2.

559.7 Independent lamp controlgear, e.g. ballasts

Only independent lamp controlgear marked as suitable for independent use, according to the relevant standard, shall be used outside luminaires.

Only “class P” thermally protected ballast(s)/transformer(s), marked with the symbol , or temperature declared thermally protected ballast(s)/transformer(s), symbol  with a marked value equal to or below 130°C, or  marked ballast(s)/transformer(s), may be mounted on flammable surfaces.

NOTE The generally recognised symbol is:  independent ballast 5138 of IEC 60417.

559.8 Compensation capacitors

Compensation capacitors having a total capacitance exceeding 0,5 µF shall only be used in conjunction with discharge resistors.

NOTE 1 See also 536.2.1.4 of IEC 60364-5-53.

NOTE 2 Capacitors and their marking should be in accordance with EN 61048.

559.9 Protection against electric shock for display stands for luminaires

Protection against electric shock shall be provided by either:

- SELV supply; or [SIST HD 60364-5-559:2005](https://standards.iteh.ai/catalog/standards/sist/d2ea67dc-37f6-4712-b1e5-332e74af1f9d/sist-hd-60364-5-559-2005)
- automatic disconnection of supply using a residual current operated protective device having a rated residual operating current not exceeding 30 mA.

559.10 Stroboscopic effect

In the case of lighting for premises where machines with moving parts are in operation, consideration shall be given to stroboscopic effects which can give a misleading impression of moving parts being stationary. Such effects may be avoided by selecting suitable lamp controlgear.