

## SLOVENSKI STANDARD SIST HD 60364-7-708:2009

01-december-2009

BUXca Yý U. SIST HD 384.7.708 S2:2005

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Low-voltage electrical installations -- Part 7-708: Requirements for special installations or locations - Caravan parks, camping parks and similar locations

### iTeh STANDARD PREVIEW

Errichten von Niederspannungsanlagen - Teil 7-708 Anforderungen für Betriebsstätten, Räume und Anlagen besonderer Art - Plätze für Wohnwagen/Caravans, Campingplätze und ähnliche Bereiche

SIST HD 60364-7-708:2009

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Installations électriques à basse tension Partie 7-708. Préscriptions pour les installations et emplacements particuliers - Parcs de caravanes, parcs de camping et emplacements analogues

Ta slovenski standard je istoveten z: HD 60364-7-708:2009

#### ICS:

91.140.50 Sistemi za oskrbo z elektriko Electricity supply systems
97.200.30 Oprema za taborjenje in camping equipment and tabori camp-sites

SIST HD 60364-7-708:2009 en,fr,de

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#### HARMONIZATION DOCUMENT

HD 60364-7-708

# DOCUMENT D'HARMONISATION **HARMONISIERUNGSDOKUMENT**

September 2009

ICS 91.140.50; 97.200.30

Supersedes HD 384.7.708 S2:2005

English version

### Low-voltage electrical installations -Part 7-708: Requirements for special installations or locations -Caravan parks, camping parks and similar locations

(IEC 60364-7-708:2007, modified)

Installations électriques à basse tension -Partie 7-708: Exigences pour les installations ou emplacements particuliers -Parcs de caravanes, parcs de camping et emplacements analogues

Errichten von Niederspannungsanlagen -Teil 7-708: Anforderungen für Betriebsstätten, Räume und Anlagen besonderer Art -Caravanplätze, Campingplätze und ähnliche Bereiche (CEI 60364-7-708:2007, modifiée) (IEC 60364-7-708:2007, modifiziert)

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This Harmonization Document was approved by CENELEC on 2009-04-01 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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

#### **Foreword**

The text of document 64/1572/FDIS, future edition 2 of IEC 60364-7-708, 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 60364-7-708 on 2009-04-01.

This Harmonization Document supersedes HD 384.7.708 S2:2005.

The main changes with respect to HD 384.7.708 S2:2005 concern:

- requirements of this part are aligned with those in other parts of HD 60364;
- one 30 mA RCD now protects only one socket-outlet.

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

The following dates were fixed:

latest date by which the existence of the HD A R D PRF (doa)F \( \) 2009-10-01 has to be announced at national level

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- latest date by which the HD has to be implemented at national level by publication of a harmonized 64-7-708:2009 national standard or by endorsement catalog/standards/sist/2de7fa29-2eb6-4cfd-b6e8-c8dad2eb3ee1/sist-hd-60364-7-708-2009
- latest date by which the national standards conflicting (dow) 2012-04-01 with the HD have to be withdrawn

For this Harmonization Document the informative Annex A of IEC 60364-7-708:2007 shall be disregarded and has been replaced by the normative Annex ZA, *Special national conditions;* and the informative Annex ZB, *A-deviations*.

Annexes ZA and ZB have been added by CENELEC.

#### Introduction

The requirements of this part of HD 60364 supplement, modify or replace certain of the general requirements contained in Parts 1 to 6 of HD 60364.

The clause numbering appearing after 708 refers to the corresponding parts or clauses of HD 60364, Parts 1 to 6. Numbering of clauses does not, therefore, necessarily follow sequentially. Numbering of figures and tables takes the number of this part followed by a sequential number.

The absence of reference to a part or a clause means that the general requirements contained in Parts 1 to 6 of HD 60364 are applicable.

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#### 708.1 Scope

The particular requirements contained in this part of HD 60364 apply only to circuits intended to supply leisure accommodation vehicles, tents or residential park homes in caravan parks, camping parks and similar locations.

NOTE 1 For the purposes of this part of HD 60364, "caravan park" from now on will understand "caravan park and camping park and similar locations".

The particular requirements do not apply to the internal electrical installations of leisure accommodation vehicles, mobile or transportable units or residential park homes.

NOTE 2 For electrical installations in leisure accommodation vehicles, see HD 60364-7-721.

NOTE 3 The electrical installations of residential park homes should comply with the general requirements of HD 60364, together with the relevant particular requirements of Part 7.

NOTE 4 Reference throughout this standard to other "Parts" refers to various parts in the HD 60364 series.

For the remainder of the electrical installation of caravan parks, the general requirements of HD 60364 together with the relevant particular requirements of Part 7 apply.

#### 708.2 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.

HD 472 S1:1989 + Corr. 2002, Nominal voltages for low voltage public electricity supply systems (IEC 60038:1983, mod.)

EN 60309-2, Plugs, socket-outlets and couplers for industrial purposes – Part 2: Dimensional interchangeability requirements for pin and contact-tubes accessories (IEC 60309-2)

HD 60364-4-43<sup>1)</sup>, Low-voltage electrical installations sis Part 74-432 Protection for safety – Protection against overcurrent (IEC 60364-4-433 mod.): 1/sist-hd-60364-7-708-2009

HD 60364-7 (all parts), Low-voltage electrical installations – Part 7: Requirements for special installations or locations (IEC 60364-7 all parts, mod.)

EN 62262, Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) (IEC 62262)

#### 708.3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 708.3.1

#### leisure accommodation vehicle

unit of living accommodation for temporary or seasonal occupation that may meet the requirements for the construction and use of road vehicles

#### 708.3.1.1

#### caravan

trailer leisure accommodation vehicle, used for touring, that meets the requirements for the construction and use of road vehicles

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<sup>1)</sup> At draft stage.

#### 708.3.1.2

#### motor caravan

camping car

self-propelled leisure accommodation vehicle, used for touring, that meets the requirements for the construction and use of road vehicles

NOTE The motor caravan is either adapted from a series production vehicle, or designed and built on an existing chassis, with or without the driving cab, the accommodation being either fixed or demountable.

#### 708.3.1.3

#### mobile home

transportable leisure accommodation vehicle that includes means for mobility but does not meet the requirements for the construction and use of road vehicles

#### 708.3.2

#### caravan/tent pitch

plot of ground intended to be occupied by a leisure accommodation vehicle or tent

#### 708.3.3

#### caravan park/camping park

area of land that contains two or more caravan pitches and/or tents

#### 708.3.4

#### residential park home

factory-produced relocatable dwelling

#### 708.31 Purposes, supplies and structure

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# 708.312 Conductor arrangement and system earthing (standards.iteh.ai)

#### 708.312.2 Types of system earthing

#### 708.312.2.1 TN-systems SIST HD 60364-7-708:2009

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Add the following: c8dad2eb3ee1/sist-hd-60364-7-708-2009

For a TN-system, the final circuit for the supply to a leisure accommodation vehicle, tent or residential park home shall not include a PEN conductor.

#### **708.313 Supplies**

Add the following:

#### 708.313.1.2

The nominal supply system voltage shall be selected from HD 472 S1:1989 + Corr. 2002.

The nominal supply voltage shall not exceed 230 V single-phase, or 400 V three-phase.

#### 708.4 Protection for safety

#### 708.41 Protection against electric shock

#### 708.411.2 Requirements for basic protection

#### 708.41.B.2 Obstacles

Protection by obstacles shall not be used.

#### 708.41.B.3 Placing out of reach

Protection by placing out of reach shall not be used.

#### 708.41.C.1 Non-conducting location

Protection by non-conducting location shall not be used.

NOTE This precludes the use of class 0 equipment.

#### 708.41.C.2 Protection by earth-free local equipotential bonding

Protection by earth free local equipotential bonding shall not be used.

#### 708.5 Selection and erection of electrical equipment

#### 708.512 Operational conditions and external influences

#### 708.512.2 External influences

Add the following:

NOTE In a caravan park or camping park, special consideration is given to the protection of people, due to the fact that the human body may be in contact with earth potential, to the protection of wiring due to tent pegs or ground anchors and to the movement of heavy or high vehicles.

#### 708.512.2.1.1 Presence of water (AD)

In a caravan park, equipment shall be selected with a degree of protection of at least IPX4 in order to protect against water splashes (AD4).

NOTE Where the electrical equipment may be subjected to water jets due to washing, etc., a degree of protection of at least IPX5, provided by the equipment itself or by an additional enclosure, should be considered.

# 708.512.2.1.2 Presence of solid foreign bodies (AE) teh.ai)

Equipment installed on a caravan pitch or a tent pitch shall be selected or provided with a degree of protection of at least IP4X in order to protect against the ingress of very small objects (AE3).

708.512.2.1.3 Impact (AG)

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Equipment installed in a caravan park shall be protected against mechanical damage (impact of medium severity AG2). Protection of the equipment shall be afforded by one or more of the following:

- the position or location shall be selected to avoid damage by any reasonably foreseeable impact;
- local or general mechanical protection shall be provided;
- equipment shall be installed that complies with a minimum degree of protection against external mechanical impact of IK07 (see EN 62262).

#### 708.521 Types of wiring systems

#### 708.521.7 Wiring systems in caravan parks

**708.521.7.1** The following wiring systems are suitable for distribution circuits feeding caravan pitch or tent pitch electrical supply equipment:

- a) underground cables;
- b) overhead cables or overhead insulated conductors.

NOTE The preferred method of supply for feeding the caravan pitch or tent pitch electrical supply equipment is by means of underground distribution circuits.

#### 708.521.7.2 Underground cables

An underground distribution circuit shall, unless provided with additional mechanical protection, be buried at a sufficient depth to avoid being damaged, e.g. by tent pegs or ground anchors or by the movement of vehicles.

NOTE 1 A depth of 0,5 m is generally considered as a minimum depth to fulfill this requirement. Alternatively the cable may be installed outside the pitch or other area where tent pegs or ground anchors may be driven.

NOTE 2 For conduit systems buried underground, see EN 50086-2-4:1994 + A1:2001 + Corr. 2001.

#### 708.521.7.3 Overhead cables or overhead insulated conductors

Every overhead conductor shall be insulated.

Poles and other supports for overhead wiring shall be located or protected so that they are unlikely to be damaged by any foreseeable movement of vehicles.

Every overhead conductor shall be at a height above ground of not less than 6 m in all areas subject to the movement of vehicles and 3,5 m in all other areas.

#### 708.53.1 Devices for fault protection by automatic disconnection of supply

#### 708.531.2 Residual current protective devices (RCDs)

Add the following:

Every socket-outlet shall be individually protected by an RCD having a rated residual operating current not exceeding 30 mA. Devices selected shall disconnect all live conductors, including the neutral.

A final circuit intended for the fixed connection for a supply to a mobile home or a residential park home shall be individually protected by an RCD having a rated residual operating current not exceeding 30 mA. Devices selected shall disconnect all live conductors, including the neutral.

## 708.533 Devices for protection against overcurrent PREVIEW

In addition the following applies: (standards.iteh.ai)

Every socket-outlet shall be individually protected by an overcurrent protective device, in accordance with the requirements of HD 60364-4-43. https://standards.itch.a/catalog/standards/sist/2de7fa29-2eb6-4cfd-b6e8-

A fixed connection for a supply to a mobile home or residential park home shall be individually protected by an overcurrent protective device, in accordance with the requirements of HD 60364-4-43.

#### 708.536 Isolation and switching

708.536.2 Isolation

708.536.2.1 General

708.536.2.1.1 At least one means of isolation shall be installed in each distribution cabinet.

This device shall disconnect all live conductors, including the neutral conductor.

#### 708.55 Other equipment

#### 708.55.1 Socket-outlets

**708.55.1.1** Every socket-outlet shall comply with EN 60309-2.

Every socket-outlet shall meet the degree of protection of at least IP44 or such protection shall be provided by an enclosure.

**708.55.1.2** Every socket-outlet shall be located as close as practicable to the caravan pitch or tent pitch to be supplied.

Socket-outlets shall be installed in the distribution board or in separate enclosures.

**708.55.1.3** In order to avoid any hazard due to long connection cords no more than 4 socket–outlets shall be grouped together in any one enclosure.