

INTERNATIONAL STANDARD

Low-voltage electrical installations –
Part 7-721: Requirements for special installations or locations – Electrical
installations in caravans and motor caravans

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-721: Requirements for special installations or locations – Electrical installations in caravans and motor caravans

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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International Standard IEC 60364-7-721 has been prepared by IEC technical committee 64: Electrical installations and protection against electrical shock.

This second edition cancels and replaces the first edition published in 2007. This edition constitutes a technical revision.

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

- a) A minimum height of not less than 500 mm above the base of the cylinders is now required for cables passing through the gas cylinder compartment. Where cables have to run through a compartment such cables shall be protected against mechanical damage by installation within a continuous conduit or duct passing through the compartment (721.528.3.1).

- b) It is now required that each independent installation shall be provided with its own main isolating switch which shall disconnect all live conductors and which shall be suitably placed in a readily accessible location in the caravan.(721.536.2.1.1)
- c) The clause numbers for the protective measures not permitted (obstacles, placing out of reach, non-conducting locations and earth-free local equipotential bonding) have been changed.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
64/2200/FDIS	64/2210/RVD

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

This document 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 reader's attention is drawn to the fact that Annex D lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this standard.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or [IEC 60364-7-721:2017](#)
- amended.

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A bilingual version of this publication may be issued at a later date.

INTRODUCTION

For the purpose of this part (IEC 60364-7-721) 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 721.101, 721.102, 721.103 etc.

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 721 part may no longer align with the latest edition of the general part. Dated references should be observed.

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-721: Requirements for special installations or locations – Electrical installations in caravans and motor caravans

721 Electrical installations in caravans and motor caravans

721.1 Scope

The particular requirements of this part of IEC 60364 apply to electrical installations in caravans and motor caravans.

They apply to those electrical circuits and equipment intended for the use of the caravan for habitation purposes.

They do not apply to those electrical circuits and equipment for automotive purposes.

They do not apply to the electrical installations of mobile homes, residential park homes and transportable units.

NOTE 1 For mobile homes and residential park homes the general requirements apply.

NOTE 2 For transportable units see IEC 60364-7-717.

NOTE 3 For the purposes of this document, caravans and motor caravans are referred to as "caravans"

The particular requirements of some parts from the IEC 60364-7 series can also apply to such installations in caravans, for example IEC 60364-7-701.

721.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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

IEC 60038, *IEC standard voltages*

IEC 60309-2, *Plugs, socket-outlets and couplers for industrial purposes – Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories*

IEC 60332-1-2, *Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame*

IEC 60947-2, *Low-voltage switchgear and controlgear – Part 2: Circuit-breakers*

IEC 61008-1, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules*

IEC 61009-1, *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) – Part 1: General rules*

IEC 61084 (all parts), *Cables trunking and ducting systems for electrical installations*

IEC 61386 (all parts), *Conduit systems for cable management*

IEC 62423, *Type F and Type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses*

721.3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

721.3.1

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

721.3.1.1

caravan

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

721.3.1.2

motor caravan

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

Note 1 to entry: A 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 dismountable.

721.3.1.3

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

721.3.1.4

residential park home

factory produced relocatable dwelling

721.31 Purposes, supplies and structure

721.313 Supplies

721.313.1 General

721.313.1.101 The nominal supply system voltage shall be selected from IEC 60038.

The nominal AC supply voltage of the installation of the caravan shall not exceed 230 V single-phase, or 400 V three-phase.

The nominal DC supply voltage of the installation of the caravan shall not exceed 48 V.

721.4 Protection for safety

721.41 Protection against electric shock

721.410.3.5

Add the following:

The protective measures of obstacles and placing out of reach as specified in Annex B of IEC 60364-4-41:2005 shall not be used.

721.410.3.6

Add the following:

The protective measures of non-conducting locations and earth-free local equipotential bonding as specified in Annex C of IEC 60364-4-41:2005 shall not be used.

NOTE This precludes the use of class 0 equipment.

721.411 Protective measure: automatic disconnection of supply

721.411.3.1.2 Protective equipotential bonding

Metal frame parts or thereto connected construction parts shall be connected through main protective bonding conductors to the main earthing terminal within the caravan.

721.413 Protective measure: electrical separation

The protective measure: electrical separation shall not be used, except for a shaver socket-outlet.

721.414 Protective measure: extra-low voltage provided by SELV and PELV

Any part of a caravan installation operating at extra-low voltage shall comply with the requirements of Clause 414.

For extra-low voltage DC power sources, a maximum of 48 V are allowed. In exceptional cases, when AC extra-low voltage is required, the voltage (rms) is not allowed to exceed 48 V.

The requirements of Part 721 are also applicable to extra low-voltage DC installation. See Annex B for recommendations that can be applied in addition.

721.415 Additional protection

721.415.101 Additional protection: residual current protective devices (RCDs)

Addition:

Where protection by automatic disconnection of supply is used, a residual current device with a rated residual operating current not exceeding 30 mA, complying with IEC 60947-2, IEC 61008-1, IEC 61009-1 or IEC 62423 breaking all live conductors, shall be provided. Each supply inlet shall be directly connected to its associated RCD.

NOTE This implies that there cannot be any taps or junctions in this connection.

Consideration should be given to the characteristics of the load in selection of the type of RCD.