
**Niskonapetostne električne inštalacije – 7-701. del: Zahteve za posebne
inštalacije ali lokacije – Prostor s kadjo ali prho**

Low-voltage electrical installations - Part 7-701: Requirements for special
installations or locations - Locations containing a bath or shower

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST IEC 60364-7-701:2006
https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-
ad54be313776/sist-iec-60364-7-701-2006](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST IEC 60364-7-701:2006](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006)

<https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006>

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

60364-7-701

Deuxième édition
Second edition
2006-02

Installations électriques à basse tension –

Partie 7-701:

**Règles pour les installations et emplacements
spéciaux – Emplacements contenant une
baignoire ou une douche**

(standards.iteh.ai)

Low-voltage electrical installations –

SIST IEC 60364-7-701:2006

[https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006)

Part 7-701:

**Requirements for special installations or
locations – Locations containing a bath
or shower**

© IEC 2006 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembe, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

N

Pour prix, voir catalogue en vigueur
For price, see current catalogue

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

**Part 7-701: Requirements for special installations or locations –
Locations containing a bath or shower**

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.
<https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-4d1e31703470/iec-60364-7-701-2006>
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 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 60364-7-701 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 1984, and constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

- Extension of the requirements of zone 3 for the whole area of the room containing a bath tub or a shower basin and consequently deletion of any reference to zone 3.
- Applicability of the requirements of this part when fixed prefabricated bath or shower units are installed.
- Clarification of requirements concerning the local equipotential bonding.
- Introduction of particular requirements for specific switchgear, accessories and current-using-equipment installed in zone 1 and 2.

The text of this standard is based on the following documents:

FDIS	Report on voting
64/1494/FDIS	64/1513/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The following standards belong to the IEC 60364-7 series, under the general title *Low voltage electrical installations – Part 7: Requirements for special installations or locations*:

Part 7-704: Construction and demolition site installations¹

Part 7-705: Agricultural and horticultural premises¹

Part 7-706: Conducting locations with restricted movement¹

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

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[SIST IEC 60364-7-701:2006](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006)
<https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006>

¹ To be published.

700.1 Introduction

The requirements of this part of IEC 60364 supplement, modify or replace certain of the general requirements of the other parts of IEC 60364.

The clause numbering of Part 7-701 follows the pattern and corresponding references of IEC 60364. The numbers following the particular number of Part 7-701 are those of the corresponding parts, or clauses of IEC 60364.

The absence of reference to a part, a clause or a subclause means that the corresponding general requirements are applicable.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST IEC 60364-7-701:2006](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006)
[https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-
ad54be313776/sist-iec-60364-7-701-2006](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-ad54be313776/sist-iec-60364-7-701-2006)

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-701: Requirements for special installations or locations – Locations containing a bath or shower

701 Locations containing a bath or shower

701.1 Scope

The particular requirements of this part of IEC 60364 apply to the electrical installations in locations containing a fixed bath (bath tub) or shower and to the surrounding zones as described in this standard.

This standard does not apply to emergency facilities, e.g. emergency showers used in industrial areas or laboratories.

NOTE 1 For locations containing a bath or shower for medical treatment, special requirements may be necessary.

NOTE 2 For prefabricated bath and/or shower units, see also IEC 60335-2-105.

NOTE 3 In Germany, the term locations may be interpreted as rooms of buildings.

701.2 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.

[https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-](https://standards.iteh.ai/catalog/standards/sist/c4eb82b8-6e1e-4d93-a575-a51b-21376/iec-60364-7-701-2006)

IEC 60364-4-41, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60364-5-54, *Electrical installations of buildings – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements, protective conductors and protective bonding conductors*

IEC 61558-2-5, *Safety of power transformers, power supply units and similar – Part 2-5: Particular requirements for shaver transformers and shaver supply units*

701.30 Assessment of general characteristics

701.30.1 General

When applying this standard, the zones specified in 701.30.2 to 701.30.4 shall be taken into account. For fixed prefabricated bath or shower units, the zones are applied to the situation when the bath or shower basin is in its usable configuration(s).

Horizontal or inclined ceilings, walls with or without windows, doors, floors and fixed partitions may limit the extent of locations containing a bath or shower as well as their zones. Where the dimensions of fixed partitions are smaller than the dimensions of the relevant zones, e.g. partitions having a height lower than 225 cm, the minimum distance in horizontal and vertical direction shall be taken into account (see Figures 701.1 and 701.2).

For electrical equipment in parts of walls or ceilings limiting the zones specified in 701.30.2 to 701.30.4, but being part of the surface of that wall or ceiling, the requirements for the respective zone apply.

NOTE In Ireland, a zone 3 exists within 2400 mm horizontally from zone 2, and 750 mm above zones 1 and 2.

701.30.2 Description of zone 0

Zone 0 is the interior of the bath tub or shower basin, see Figure 701.1.

For showers without basin, the height of zone 0 is 10 cm and its surface extent has the same horizontal extent as zone 1, see Figure 701.2.

NOTE 1 In Spain, for showers without basin, the height of zone 0 is 5 cm.

NOTE 2 In Germany this requirement is not relevant.

701.30.3 Description of zone 1

Zone 1 is limited

- a) by the finished floor level and the horizontal plane corresponding to the highest fixed shower head or water outlet or the horizontal plane lying 225 cm above the finished floor level, whichever is higher,

NOTE 1 In Belgium, Denmark, Hungary and Italy, if the bottom of the bath tub or shower basin is located higher than 15 cm from the floor level, the horizontal plane is located 225 cm above the bottom of bath tub or shower basin.

NOTE 2 In the Netherlands 225 cm is replaced by 260 cm.

NOTE 3 In the Czech Republic and in Spain the zone 2 is considered above the zone 1 as far as the ceiling or the horizontal plane lying 300 cm above the finished floor level, whichever is higher.

- b) by the vertical surface:
- circumscribing the bath tub or shower basin (see Figure 701.1),
 - at a distance of 120 cm from the centre point of the fixed water outlet on the wall or ceiling for showers without basin (see Figure 701.2).

Zone 1 does not include zone 0.

The space under the bath tub or shower is considered to be zone 1.

NOTE 4 In Spain, and for showers without basin, where the water outlet is fixed the vertical limit is fixed at 60 cm around the water outlet.

NOTE 5 In Spain, the space under the bath tub or shower basin accessible without the use of a tool is considered to be zone 1. If it is accessible only with the use of a tool, it is considered to be neither zone 0, nor 1 nor 2.

701.30.4 Description of zone 2

Zone 2 is limited

- a) by the finished floor level and the horizontal plane corresponding to the highest fixed shower head or water outlet or the horizontal plane lying 225 cm above the finished floor level, whichever is higher,

NOTE 1 In the Netherlands, 225 cm is replaced by 260 cm.

- b) by the vertical surface at the boundary of zone 1 and the parallel vertical surface at a distance of 60 cm from the zone 1 border (see Figure 701.1).

For showers without basin, there is no zone 2 but an increased zone 1 is provided by the horizontal dimension of 120 cm mentioned in the second dash of 701.30.3 b) (see Figure 701.2).

NOTE 2 In Spain, zone 2 exists in any case.

701.4 Protection for safety

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

701.414.1 General

Protection against direct contact in zones 0, 1 and 2 shall be provided for all electrical equipment by:

- barriers or enclosures affording a degree of protection of at least IPXXB or IP2X, or
- insulation capable of withstanding a test voltage of 500 V a.c. r.m.s for 1 min.

NOTE In Belgium and Italy, PELV is not permitted.

Annex B Obstacles and placing out of reach

701.B.2 Obstacles

Protection against direct contact by means of obstacles is not permitted.

701.B.3 Placing out of reach

Protection against direct contact by placing out of reach is not permitted.

701.415 Additional protection

701.415.1 Additional protection: residual current protective devices (RCDs)

In rooms containing a bath or shower, one or more residual current protective devices (RCDs) with a rated residual operating current not exceeding 30 mA shall provide protection of all circuits. The use of such RCDs is not required for circuits:

- with the protective measure “protection by electrical separation” if any circuit supplies one single current using equipment;
- with the protective measure “SELV or PELV”.

NOTE 1 In the Czech Republic, Germany, Hungary and Slovenia, additional protection by a residual current protective device with a rated residual operating current not exceeding 30 mA is not required for circuits supplying fixed installed water heating appliances only.

NOTE 2 In Belgium, Italy, Russia and Spain, PELV is not permitted.

NOTE 3 In Spain, these requirements do not apply outside:

- zones 0, 1 and 2;
- the zone limited by the boundary of the zone 2 and the vertical surface at a distance of 240 cm from the zone 2 border, with a height of 225 cm above the finished floor level; and
- the space placed above zone 2, up to the ceiling or a height of 3 m, whichever is lower.

701.415.2 Additional protection: supplementary protective equipotential bonding

Modify:

Local supplementary equipotential bonding according to 415.2 shall be established, connecting the protective conductor to the exposed-conductive-parts and accessible extraneous-conductive-parts within a room containing a bath tub and/or a shower.