



# SLOVENSKI STANDARD

## SIST HD 60364-7-729:2009

01-december-2009

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Low-voltage electrical installations -- Part 7-729: Requirements for special installations or locations - Operating or maintenance gangways

Errichten von Niederspannungsanlagen - Anforderungen für Betriebsstätten, Räume und Anlagen besonderer Art - Teil 7-729: Bedienungsgänge und Wartungsgänge

Installations électriques à basse tension -- Partie 7-729: Règles pour les installations et emplacements spéciaux - Passages d'entretien ou de service

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Ta slovenski standard je istoveten z: **HD 60364-7-729:2009**

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### **ICS:**

91.140.50 Sistemi za oskrbo z elektriko Electricity supply systems

**SIST HD 60364-7-729:2009**

**en,fr**

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HARMONIZATION DOCUMENT  
DOCUMENT D'HARMONISATION  
HARMONISIERUNGSDOKUMENT

**HD 60364-7-729**

August 2009

ICS 91.140.50

English version

**Low-voltage electrical installations -  
Part 7-729: Requirements for special installations or locations -  
Operating or maintenance gangways  
(IEC 60364-7-729:2007, modified)**

Installations électriques à basse tension -  
Partie 7-729: Règles pour les installations  
et emplacements spéciaux -  
Passages d'entretien ou de service  
(CEI 60364-7-729:2007, modifiée)

Errichten von Niederspannungsanlagen -  
Teil 7-729: Anforderungen  
für Betriebsstätten, Räume  
und Anlagen besonderer Art -  
Bedienungsgänge und Wartungsgänge  
(IEC 60364-7-729:2007, modifiziert)

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This Harmonization Document was approved by CENELEC on 2009-04-22. 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 64/1595/FDIS, future edition 1 of IEC 60364-7-729, 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 the former 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 60364-7-729 on 2009-04-22.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 2009-11-01
- latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2010-05-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 2012-05-01

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

For this Harmonization Document, the informative Annex B of IEC 60364-7-729:2007 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.

## 729 Introduction

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

The clause numbering of Part 7-729 follows the pattern and corresponding references of HD 60364. The numbers following the particular number of Part 7-729 are those of the corresponding parts or clauses of HD 60364.

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

### 729.1 Scope

The requirements of this part of HD 60364 apply to basic protection and other aspects in restricted access areas with switchgear and controlgear assemblies, including requirements for operating or maintenance gangways.

### 729.2 Normative references

The following normative documents contain provisions which through reference in this text, constitute provisions of this part of HD 60364. For dated references, subsequent amendments to, or revisions of any of these publications do not apply.

HD 60364-1:2008, *Low-voltage electrical installations – Part 1: Fundamental principles, assessment of general characteristics, definitions* (IEC 60364-1:2005, mod.)

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

### 729.30 Assessment of general characteristics

*Add the following requirements:*

For restricted access areas the following apply:

- restricted access areas shall be clearly and visibly marked by appropriate signs;
- unauthorised persons shall not have access to restricted access areas;
- door(s) provided for closed restricted access areas shall allow easy evacuation to the outside by opening without the use of a key, tool or any other device which not part of the opening mechanism.

#### 729.410.3.7

*Replace the paragraph with the following requirements:*

In restricted access areas where it is not reasonably practicable to provide protective measures for basic protection (protection against direct contact) in accordance with HD 60364-4-41, minimum distances are required.

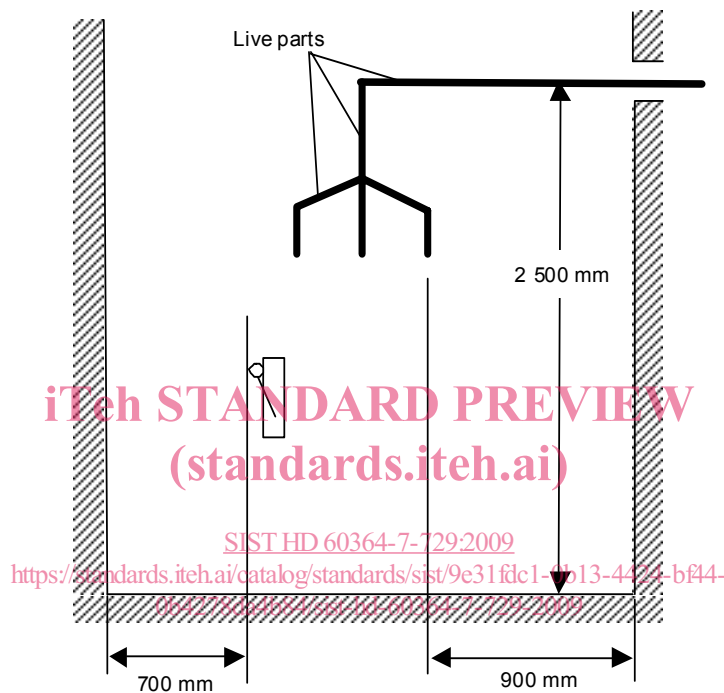
NOTE 1 See HD 60364-1, Clause 30 for assessment of general characteristics when deciding to use this method of protection.

NOTE 2 In cases of protective device with high rating, such as large circuit-breakers, greater distances may be necessary for the withdrawing of the device.

**729.410.3.7.1**

Where the gangway has unprotected live parts arranged on one side only (see Figure 729.1), the minimum distances shall be:

- |    |                                                   |           |
|----|---------------------------------------------------|-----------|
| a) | width of gangway between the wall and live parts  | 900 mm;   |
| b) | free passage in front of controls (handles, etc.) | 700 mm;   |
| c) | height of live parts above the floor              | 2 500 mm. |



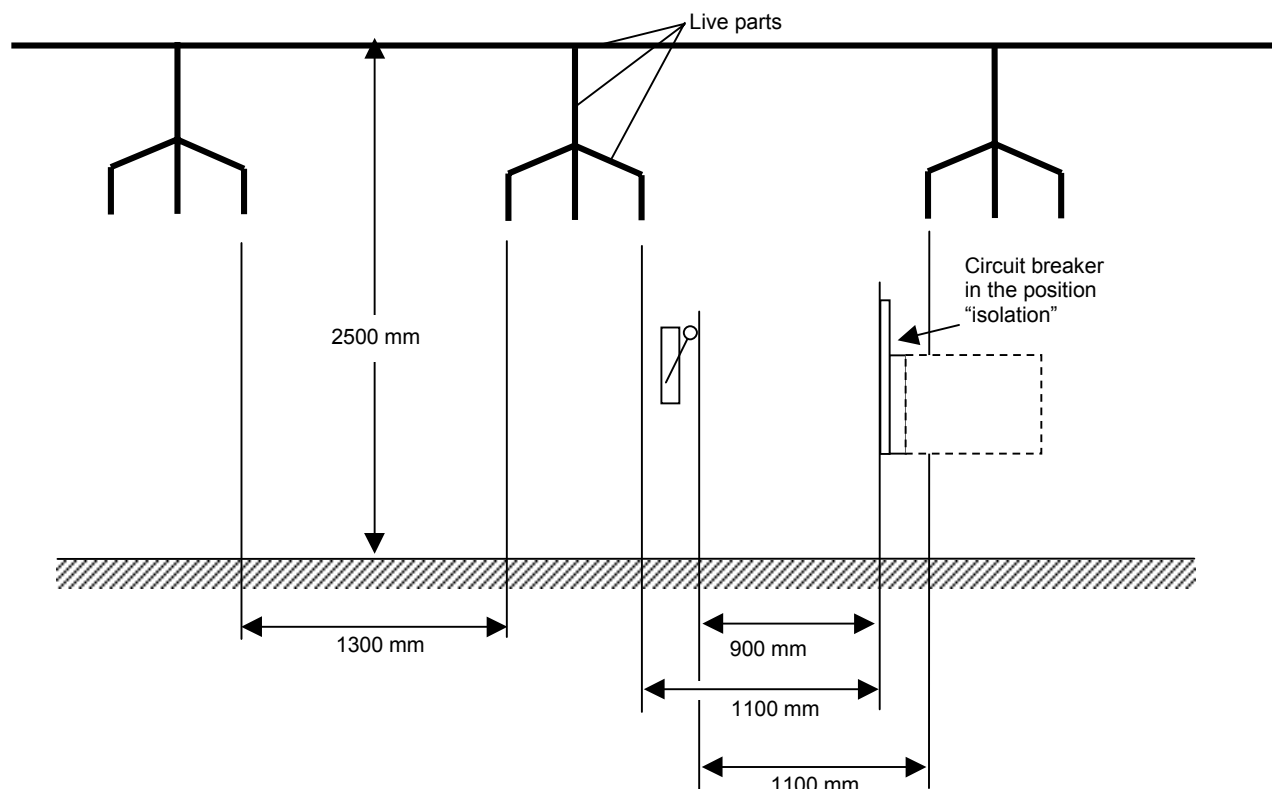
NOTE The 2 500 mm height above the floor given as the minimum distance to live parts applies only in the gangway where it is possible for persons to stand or walk.

**Figure 729.1 – Gangways in installations with live parts on one side**

**729.410.3.7.2**

Where the gangway has live parts on both sides (see Figure 729.2), the minimum distances shall be:

- |    |                                                                                                         |           |
|----|---------------------------------------------------------------------------------------------------------|-----------|
| a) | width of gangway between live parts                                                                     | 1 300 mm; |
| b) | minimum distance between the front of the handle and the live parts on the opposite side of the gangway | 1 100 mm; |
| c) | minimum free passage in front of controls (handles, isolation position of circuit breakers, etc.)       | 900 mm;   |
| d) | height of live parts above the floor                                                                    | 2 500 mm. |



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NOTE The 2 500 mm height above the floor given as the minimum distance to live parts applies only in the gangway where it is possible for persons to stand or walk.

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Figure 729.2 – Gangways in installations with live parts on both sides

### 729.513 Accessibility

Add the following paragraphs:

#### 729.513.2 Requirements for operating and maintenance gangways

The width of gangways and access areas shall be adequate for work, operational access, emergency access, emergency evacuation and for the movement of equipment.

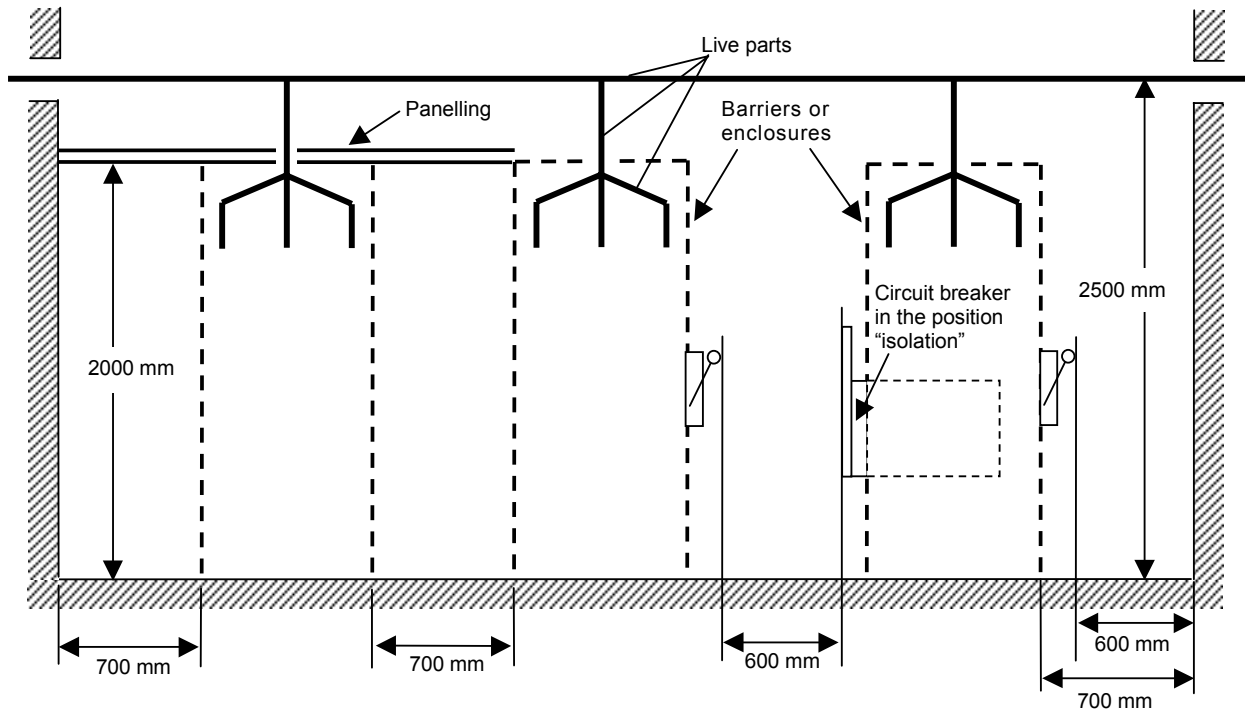
Gangways shall permit equipment doors or hinged panels to be opened to at least 90° (see also Annex A, Clause A.1).

##### 729.513.2.1 Restricted access areas where the protective measure of barriers and enclosures applies

Where the protective measure is provided by barriers or enclosures in accordance with HD 60364-4-41, the following minimum distances apply (see Figure 729.3):

- |                                                                                                                                                     |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| a) width of gangways with barriers or enclosures between switch handles and circuit-breakers in position "isolation" or switch handles and the wall | 600 mm;   |
| b) width of gangways between barriers or enclosures and other barriers or enclosures, or barriers or enclosures and the wall                        | 700 mm;   |
| c) height of panelling above the floor                                                                                                              | 2 000 mm; |
| d) height of live parts above the floor                                                                                                             | 2 500 mm. |

NOTE 1 Where additional workspace is needed e.g. for special switchgear and controlgear assemblies, larger dimensions may be required.



**Figure 729.3 – Gangways in installations where the protective measure of barriers or enclosures applies**

NOTE 2 The above dimensions apply after all parts of the panelling have been mounted and closed and to circuit breakers in the position "isolation".

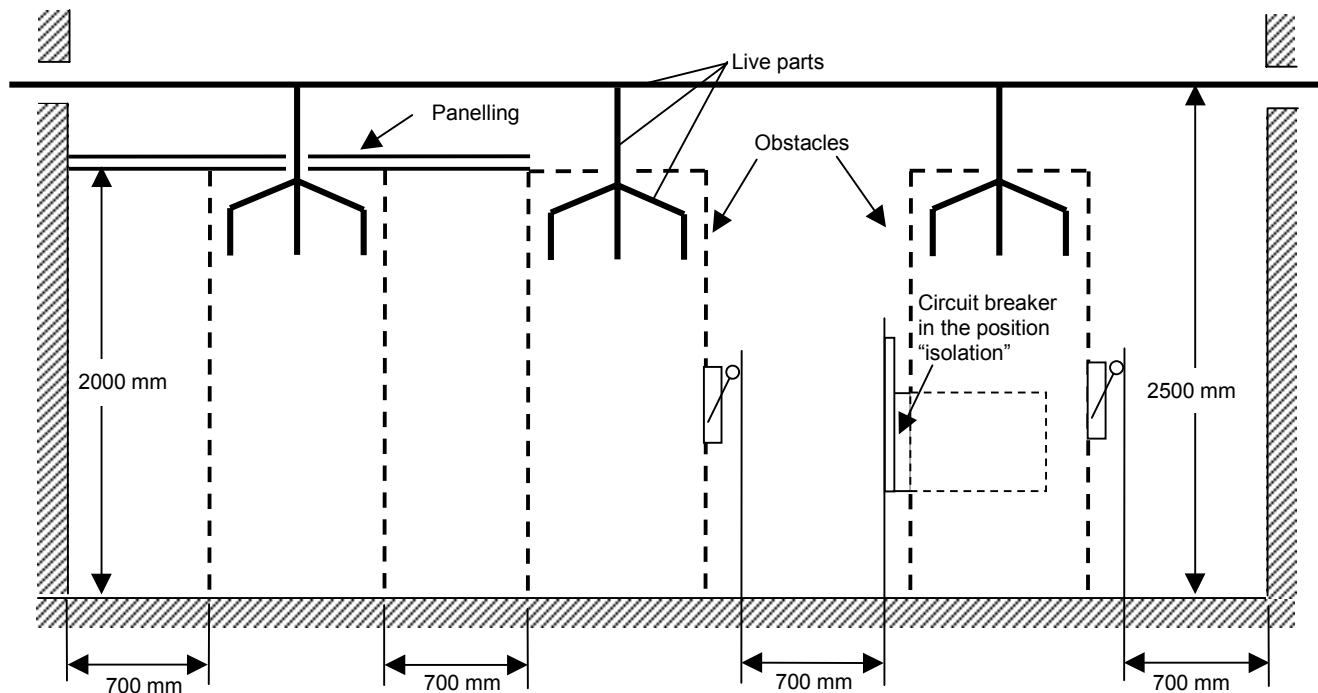
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### 729.513.2.2 Restricted access areas where the protective measure of obstacles applies

Where the protective measure of obstacles applies in accordance with HD 60364-4-41, the following minimum distances apply (see Figure 729.4):

- |                                                                                                                     |           |
|---------------------------------------------------------------------------------------------------------------------|-----------|
| a) width of gangway between obstacles and switch handles, or obstacles and the wall, or switch handles and the wall | 700 mm;   |
| b) height of panelling above floor                                                                                  | 2 000 mm; |
| c) height of live parts above the floor                                                                             | 2 500 mm. |





**Figure 729.4 – Gangways in installations where the protective measure of obstacles applies**

NOTE The above dimensions apply after all parts of the panelling have been mounted and closed and to circuit breakers in the position "isolation".

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### 729.513.2.3 Access of gangways

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Gangways longer than 10 m shall be accessible from both ends.

NOTE 1 This may be accomplished by placement of the equipment a minimum of 700 mm from the end walls (see Figure 729.5) or by providing an access door, if needed, on the opposite end wall.

Closed restricted access areas with a length exceeding 20 m shall be accessible by doors from both ends.

NOTE 2 For closed restricted access areas with a length exceeding 6 m, accessibility from both ends is recommended.

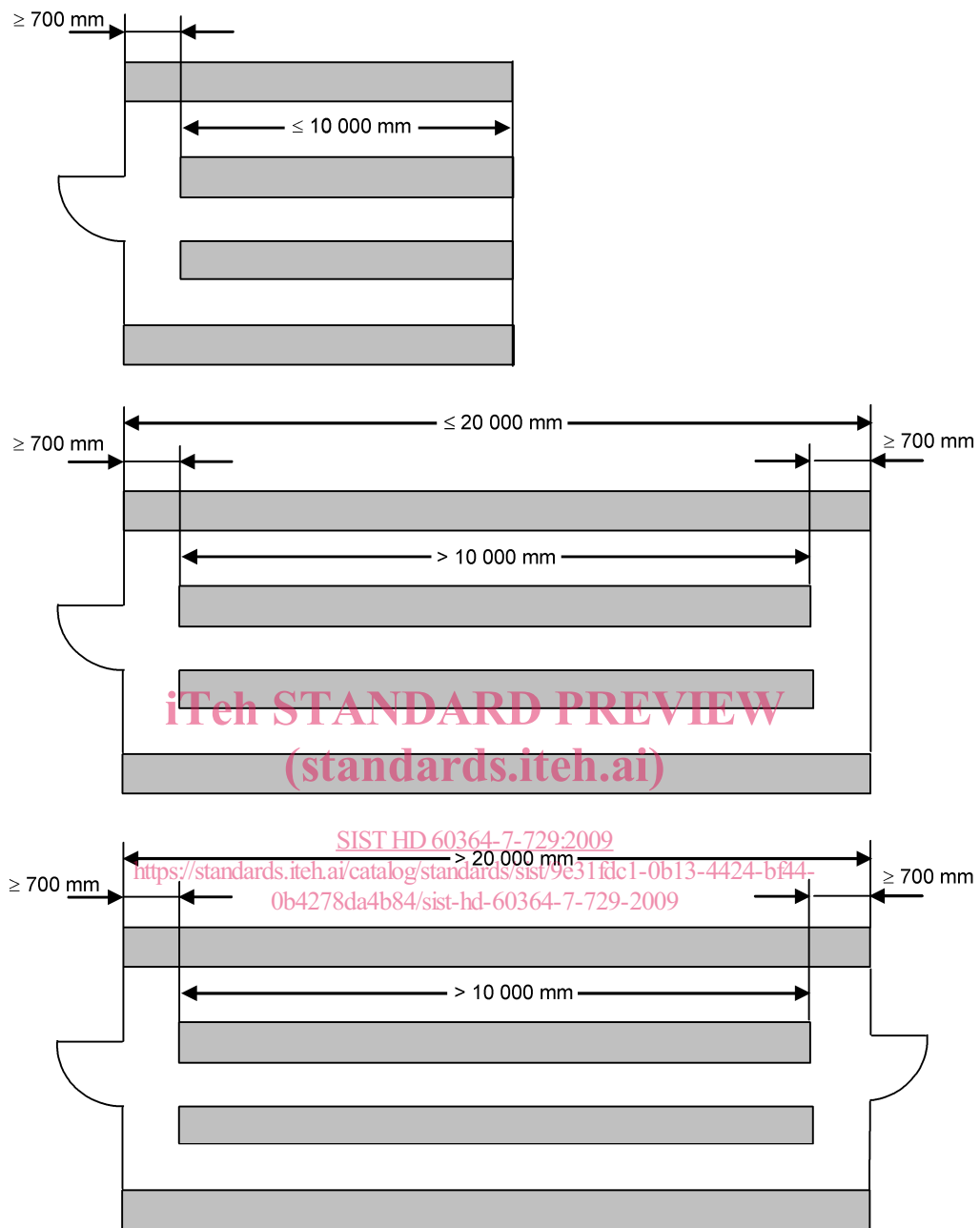


Figure 729.5 – Examples of positioning of doors in long closed restricted access areas

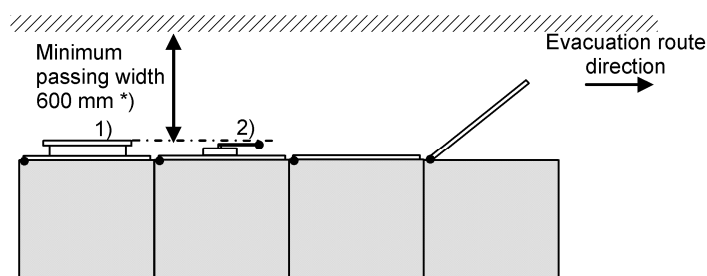
## Annex A (normative)

### Additional requirements for closed restricted access areas

#### A.1 Evacuation

To permit easy evacuation, the doors of any equipment inside the location shall close in the direction of the evacuation route. Gangways shall permit equipment doors or hinged panels to be opened to a minimum of 90° (see Figure 729 A.1).

NOTE Figures 729 A.1, 729 A.2 and 729 A.3 show the minimum width of gangways and distances for passing in case of evacuation.



\*) A minimum width of 600 mm lies between the wall and the circuit-breaker in the isolated position.

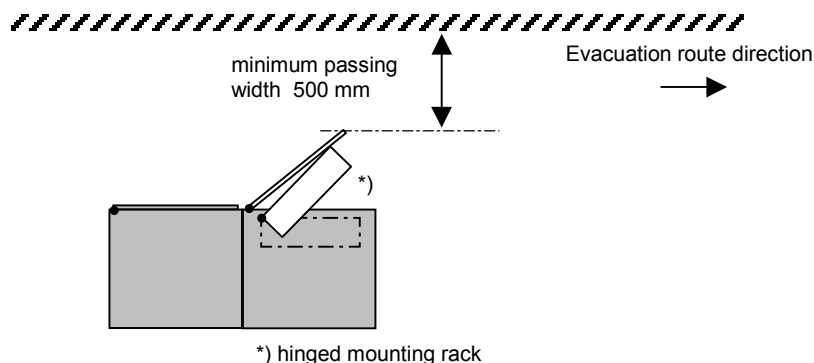
- 1) Circuit-breaker in the isolated position
- 2) Handles (e.g. for controls or equipment)

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**Figure 729 A.1 – Minimum passing width in case of evacuation – Case 1**

For doors which can be fixed in the open position or circuit breakers or equipment which are withdrawn fully for maintenance (position: completely extracted) a minimum distance of 500 mm shall be provided between the door edge or circuit-breaker/equipment edge and the opposite side of the gangway (see Figures 729 A.2 and 729 A.3).

NOTE See Figure 729 A.3 for the minimum passing width in case of circuit-breaker in position: completely extracted.



\*) hinged mounting rack

**Figure 729 A.2 – Minimum passing width in case of evacuation – Case 2**