

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Low-voltage electrical installations –  
Part 7-702: Requirements for special installations or locations – Swimming  
pools and fountains**

**Installations électriques à basse tension –  
Partie 7-702: Exigences pour les installations ou emplacements spéciaux –  
Piscines et fontaines**

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## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
702 Swimming pools and fountains.....	6
702.1 Scope.....	6
702.2 Normative references .....	6
702.3 Terms and definitions .....	6
702.4 Protection for safety .....	8
702.5 Selection and erection of electrical equipment.....	10
Annex A (informative) Examples of zones .....	15
Annex B (informative) List of notes concerning certain countries.....	19
Bibliography.....	22
Figure A.702.1 – Zone dimensions for swimming pools and paddling pools (side view).....	15
Figure A.702.2 – Zone dimensions for basin above ground level (side view) .....	16
Figure A.702.3 – Examples of zone dimensions (top view) with fixed partitions of height at least 2,5 m.....	17
Figure A.702.4 – Example of determination of the zones of a fountain (side view) .....	18
Table 702.1 – Minimum IP number per zone .....	11

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 7-702: Requirements for special installations or locations –  
Swimming pools and fountains

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International Standard IEC 60364-7-702 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

This third edition cancels and replaces the second edition published in 1997 and constitutes a technical revision.

The main changes with respect to the previous edition are as follows:

- the scope has been improved, including natural areas in natural waters;
- the description of zones has been improved;
- all figures have been updated.

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

FDIS	Report on voting
64/1724/FDIS	64/1728/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 reader's attention is drawn to the fact that Annex B lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this standard.

A list of all parts in the IEC 60364 series, under the general title *Low-voltage electrical installations*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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## INTRODUCTION

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

The clause numbering appearing after 702 refers to the corresponding parts or clauses of IEC 60364, Parts 1 to 6<sup>1)</sup>. Numbering of clauses does not, therefore, necessarily follow sequentially. Numbering of additional text is shown by the addition of “.101, etc”. Numbering of figures and tables takes the number of this part followed by a sequential number. For annexes, the numbering of figures and tables takes the letter of the annex, the number of the part and a sequential number.

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

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1) For historical reasons, IEC 60364-1:2005 numbering is as follows: 11 Scope; 12 Normative references; 20 Terms and definitions, etc.

## LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

### Part 7-702: Requirements for special installations or locations – Swimming pools and fountains

#### 702 Swimming pools and fountains

##### 702.1 Scope

The particular requirements of this part of IEC 60364 apply to electrical installations of:

- basins of swimming pools and paddling pools and their surrounding zones;
- areas in natural waters, lakes in gravel pits and coastal and similar areas, specially intended to be occupied by persons for swimming, paddling and similar purposes, and their surrounding zones. Such areas in natural waters, lakes in gravel pits and coastal and similar areas, are considered as swimming pools;
- basins of fountains and their surrounding zones.

NOTE In these areas, in normal use, the effect of an electric shock is increased by a reduction in body resistance and contact of the body with earth potential.

For swimming pools for medical use, special requirements may apply.

This standard does not cover the use of mobile equipment, e.g. pool cleaning equipment.

##### 702.2 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.

IEC 60245 (all parts), *Rubber insulated cables – Rated voltages up to and including 450/750 V*

IEC 60335-2-41, *Household and similar electrical appliances – Safety – Part 2-41: Particular requirements for pumps*

IEC 60364-4-41:2005, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-2-18, *Luminaires – Part 2: Particular requirements – Section 18: Luminaires for swimming pools and similar applications*

IEC 61386-1, *Conduit systems for cable management – Part 1: General requirements*

##### 702.3 Terms and definitions

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



**702.3.1****fountain**

arrangement, typically for decorative purposes, where water issues from a source and fills a basin of some kind

**702.3.2****basin of fountain**

part of the fountain which collects discharged water

NOTE See also 702.30.101.

**702.3.3****swimming pool**

water basin designed for purposes such as swimming, diving, etc. and not for personal cleaning activity

**702.3.4****paddling pool**

water basin with low water level, e.g. for playing or wading

**702.30 Assessment of general characteristics****702.30.101 General**

Add the following:

The requirements of this part are based on the dimensions of three zones, zone 0, zone 1 and zone 2 as described in 702.30.102 to 702.30.104 (see Figures A.702.1 to A.702.4).

For electrical equipment on parts of walls, floors or ceilings limiting the zones specified in 702.30.102 to 702.30.104, but being part of the surface of that wall, floor or ceiling, the same requirements that apply for the zone limited by the surface shall be fulfilled unless specific requirements exist (see 702.5.6).

The width of zone 1 or zone 2 may be reduced by fixed partitions having a minimum height of 2,5 m.

The requirements for swimming pools also apply to paddling pools.

For basins of fountains which are intended to be occupied by persons, the specifications and requirements for zone 0 and zone 1 for swimming pools apply.

NOTE 1 Fixed partitions are fixed separating walls, walls including windows and doors. The zones are also limited by ceilings, slopes of roofs and floors. Fixed partitions that are lower than 2,5 m are only limiting if they end at a ceiling or slope of a roof.

NOTE 2 When a fixed partition is erected inside a zone, its effects on the zone are illustrated in Figure A.702.3.

NOTE 3 For the installation of a prefabricated swimming pool, the requirements of this standard are applicable.

NOTE 4 Annex A provides some examples of the zones.

**702.30.102 Description of zone 0**

This zone comprises

- the interior of basins, including any recesses in their walls or floors, and
- the interior of basins for foot cleaning, and
- the interior of waterjets or waterfalls, and the space below them (see Figure A.702.4).

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