

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

Low-voltage electrical installations –  
Part 7-714: Requirements for special installations or locations – External lighting  
installations

Installations électriques à basse tension –  
Partie 7-714: Règles pour les installations et emplacements spéciaux –  
Installations d'éclairage extérieur



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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Low-voltage electrical installations –  
Part 7-714: Requirements for special installations or locations – External  
lighting installations**

**Installations électriques à basse tension –  
Partie 7-714: Règles pour les installations et emplacements spéciaux –  
Installations d'éclairage extérieur**

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## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
714 External lighting installations .....	6
714.1 Scope .....	6
714.2 Normative references.....	6
714.4 Protection for safety.....	6
714.41 Protection against electric shock.....	6
714.410.3 General requirements .....	6
714.411 Protective measure: automatic disconnection of supply.....	7
714.411.3.1 Protective earthing and protective equipotential bonding .....	7
714.411.3.1.2 Protective equipotential bonding .....	7
714.411.3.3 Additional protection .....	7
714.41 (Annex A) Provisions for basic protection .....	7
714.5 Selection and erection of electrical equipment .....	7
714.51 Common rules .....	7
714.512 Operational conditions and external influences .....	7
714.512.2 External influences .....	7
714.536 Isolation and switching.....	8
714.536.2 Isolation.....	8
714.536.2.1 General .....	8
Annex A (informative) List of notes concerning certain countries.....	9
Bibliography.....	10

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**LOW-VOLTAGE ELECTRICAL INSTALLATIONS –****Part 7-714: Requirements for special installations or locations –  
External lighting installations**

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International Standard IEC 60364-7-714 has been prepared by committee 64: Electrical installations and protection against electric shock.

This second edition cancels and replaces the first edition, published in 1996, and constitutes a technical revision.

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

- clause numbering is aligned with present structure of IEC 60364;
- additional protection is required in some cases of equipment incorporating lighting;
- more stringent requirements regarding IP degree of protection;
- introduction of particular requirements for isolation.

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

FDIS	Report on voting
64/1806/FDIS	64/1814/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.

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.

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

- reconfirmed,
- withdrawn,
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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 714 refers to the corresponding parts or clauses of IEC 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 clause means that the general requirements contained in Parts 1 to 6 of IEC 60364 are applicable.

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## LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

### Part 7-714: Requirements for special installations or locations – External lighting installations

#### 714 External lighting installations

##### 714.1 Scope

The particular requirements of this part of IEC 60364 apply to the selection and erection of luminaires and lighting installations forming part of an outdoor fixed installation.

The origin of the external lighting installation is the supply delivery point of electrical energy by the supply authority or the origin of the circuit supplying the external lighting installation exclusively.

The requirements apply to, for example, lighting installations for roads, parks, gardens, places open to the public, sporting areas, illumination of monuments, floodlighting, telephone kiosks, bus shelters, advertising panels, town plans and road signs.

The requirements do not apply to:

- public street-lighting installations which are part of the public power grid;
- temporary festoon lighting;
- road traffic signal systems;
- luminaires which are fixed to the outside of a building and are supplied directly from the internal wiring of that building.

For lighting installations for swimming pools and fountains, see IEC 60364-7-702.

##### 714.2 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 60364-4-41:2005, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60364-5-51:2005, *Electrical installations of buildings – Part 5-51: Selection and erection of electrical equipment – Common rules*

IEC 60364-5-53:2001, *Electrical installations of buildings – Part 5-53: Selection and erection of electrical equipment – Isolation, switching and control*

##### 714.4 Protection for safety

###### 714.41 Protection against electric shock

###### 714.410.3 General requirements

###### 714.410.3.6

*Add the following:*



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

#### **714.411 Protective measure: automatic disconnection of supply**

##### **714.411.3.1 Protective earthing and protective equipotential bonding**

###### **714.411.3.1.2 Protective equipotential bonding**

*Add the following:*

Metallic structures (such as fences, grids etc.), which are not exposed-conductive-parts and are not part of the external lighting installation need not be connected to the earthing terminal.

###### **714.411.3.3 Additional protection**

*Add the following:*

Equipment incorporating lighting in telephone kiosks, bus shelters, advertising panels, town plans and similar installations shall be provided with additional protection by a residual current protective device having a rated operating residual current not exceeding 30 mA (see also IEC 60364-4-41, 415.1).

#### **714.41 Annex A Provisions for basic protection**

*Add the following:*

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Enclosures of luminaires and lighting installations shall prevent access to live parts without the use of a tool or key, unless they are in a location where only skilled or instructed persons may obtain access.

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Doors giving access to electrical equipment and located less than 2,50 m above ground level shall be locked with a key or a tool. In addition, protection against contact with live parts shall be provided when the door is open either by the use of equipment having at least the degree of protection IPXXB or IP2X by construction or by installation, or by placing a barrier or an enclosure giving the same degree of protection.

For luminaires at a height of less than 2,80 m above ground level, access to the light source shall only be possible after removing a barrier or an enclosure requiring the use of a tool.

#### **714.5 Selection and erection of electrical equipment**

##### **714.51 Common rules**

###### **714.512 Operational conditions and external influences**

###### **714.512.2 External influences**

###### **714.512.2.1**

*Add the following:*

Classes of external influences for ambient temperature and climatic conditions depend on local conditions. The following classes are generally recommended:

- ambient temperature: from  $-40^{\circ}\text{C}$  to  $+5^{\circ}\text{C}$  (AA2) and from  $-5^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  (AA4);
- climatic conditions: from 10 % to 100 % (AB2) and from 5 % to 95 % (AB4).

The classes given for the following external influences are minimum requirements:

- presence of water: AD 3 (sprays);
- presence of foreign bodies: AE 2 (small objects).

Classes of other conditions of external influences are dependent on local conditions.

NOTE Other classes of external influences e.g. corrosive substances, mechanical impact, solar radiation, etc. may be applicable in certain conditions (see IEC 60364-5-51).

*Add the following:*

#### **714.512.2.105**

The electrical equipment shall have, by construction or by installation, at least the degree of protection IP33.

NOTE 1 It may be necessary in some cases, due to operational or cleaning conditions, to require higher degrees of protection.

NOTE 2 Construction and safety requirements of luminaires are given in the IEC 60598 series.

### **714.536 Isolation and switching**

#### **714.536.2 Isolation**

##### **714.536.2.1 General**

###### **714.536.2.1.1**

*Add the following:*

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Every circuit shall be capable of being individually isolated from each of the live supply conductors, except as detailed in 536.1.2.

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## Annex A (informative)

### List of notes concerning certain countries

Country	Clause N°	Nature (permanent or less permanent according to IEC Directives)	Rationale (detailed justification for the requested country note)	Wording
IT	714.1			In Italy, the national standard CEI 64-8 (that endorses IEC 60364) covers requirements for parallel public lighting installations which are part of the public power grid, with the exclusion of the serial public lighting installations which are part of the public power grid
IE	714.411.3.3			In Ireland, RCD protection is required for all outdoor luminaires at a height of less than 2,8 m. Where failure of illumination may cause danger, circuits shall be subdivided into several sub-circuits, each protected separately by an RCD
IE	714.41.A			In Ireland, all doors shall be lockable with a key or tool, regardless of height
IE	714.512.2.05			In Ireland, the following applies: Electrical equipment mounted externally on lighting columns shall have a degree of protection of at least IP44. Lanterns shall have a degree of protection of at least IP54

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