Electrical installations of buildings –

Part 5-51:
Selection and erection of electrical equipment – Common rules

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS OF BUILDINGS –

Part 5-51: Selection and erection of electrical equipment –
Common rules

FOREWORD

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International Standard IEC 60364-5-51 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

This fifth edition of IEC 60364-5-51 cancels and replaces the fourth edition published in 2001 and constitutes a technical revision.

The document 64/1438/FDIS, circulated to National Committees as Amendment 1, led to the publication of the new edition.
The main changes with respect to the previous edition are listed below:

− corrections of misprints in Table 51 based on Table 321 derived from the old Part 3;
− introduction of a new Clause 516 dealing with measures for mitigation of protective conductor currents;

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

<table>
<thead>
<tr>
<th>FDIS</th>
<th>Report on voting</th>
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<tbody>
<tr>
<td>64/1438/FDIS</td>
<td>64/1460/RVD</td>
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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.

IEC 60364 consists of the following parts, under the general title *Electrical installations of buildings*:

- Part 1: Fundamental principles, assessment of general characteristics, definitions
- Part 2: Void
- Part 3: Void
- Part 4: Protection for safety
- Part 5: Selection and erection of electrical equipment
- Part 6: Verification
- Part 7: Requirements for special installations or locations

The committee has decided that the contents of this amendment and the base 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- withdrawn,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.
510 Introduction

510.1 Scope

This part of IEC 60364 deals with the selection of equipment and its erection. It provides common rules for compliance with measures of protection for safety, requirements for proper functioning for intended use of the installation, and requirements appropriate to the external influences foreseen.

510.2 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 60073:1996, Basic and safety principles for man-machine interface, marking and identification – Coding principles for indication devices and actuators

IEC 60079 (all parts), Electrical apparatus for explosive gas atmospheres

IEC 60255-22-1:1988, Electrical relays – Part 22: Electrical disturbance tests for measuring relays and protection equipment – Section 1: 1 MHz burst disturbance tests


IEC 60364-4-41:2001, Electrical installations of buildings – Part 4-41: Protection for safety – Protection against electric shock


IEC 60364-4-44:2001, Electrical installations of buildings – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances


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

IEC 60446:1999, Basic and safety principles for man-machine interface, marking and identification – Identification of conductors by colours or numerals

IEC 60447:1993, Man-machine interface (MMI) – Actuating principles
IEC 60529:1989, Degrees of protection provided by enclosures (IP Code)

IEC 60617-DB:2001, Graphical symbols for diagrams

IEC 60707:1999, Flammability of solid non-metallic materials when exposed to flame sources – List of test methods

IEC 60721-3-0:1984, Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Introduction

IEC 60721-3-3:1994, Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 3: Stationary use at weather-protected locations

IEC 60721-3-4:1995, Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 4: Stationary use at non-weatherprotected locations

IEC 60884-1:2002, Plugs and socket-outlets for household and similar purposes – Part 1: General requirements

IEC 61000-2 (all parts) Electromagnetic compatibility (EMC) – Part 2: Environment

IEC 61000-2-2:1990, Electromagnetic compatibility (EMC) – Part 2: Environment – Section 2: Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems


IEC 61000-4-3:2002, Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test


IEC 61000-4-6:1996, Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 6: Immunity to conducted disturbances, induced by radio-frequency fields

IEC 61000-4-8:1993, Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 8: Power frequency magnetic field immunity test. Basic EMC publication


IEC 61024-1:1990, Protection of structures against lightning – Part 1: General principles

IEC 61082 (all parts), Preparation of documents used in electrotechnology

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1 “DB” refers to the IEC on-line database.
510.3 General

Every item of equipment shall be selected and erected so as to allow compliance with the rules stated in the following clauses of this part of IEC 60364 and the relevant rules in other parts of the IEC 60364 series.