Electrical installations of buildings –

Part 5-54:
Selection and erection of electrical equipment – Earthing arrangements, protective conductors and protective bonding conductors

This English-language version is derived from the original bilingual publication by leaving out all French-language pages. Missing page numbers correspond to the French-language pages.
Electrical installations of buildings –

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS OF BUILDINGS –

Part 5-54: Selection and erection of electrical equipment – Earthing arrangements, protective conductors and protective bonding conductors

FOREWORD

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3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.

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IEC 60364-5-54 has been prepared by IEC technical committee 64, Electrical installations and protection against electric shock.


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

<table>
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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.

It has the status of a basic safety publication in accordance with IEC Guide 104.

This publication has been drafted, as close as possible, in accordance with the ISO/IEC Directives, Part 3.

Annex A forms an integral part of this standard.

Annex B is for information only.
The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

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• withdrawn;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

Clause numbering is sequential, preceded by the number of this part (e.g. 541). Numbering of figures and tables takes the number of this part followed by a sequential number, i.e. Table 54.1, 54.2, etc. Numbering of figures and tables in annexes takes the letter of the annex, followed by the number of the part, followed by a sequential number, e.g. A.54.1, A.54.2, etc.
Part 5-54: Selection and erection of electrical equipment – Earthing arrangements, protective conductors and protective bonding conductors

541 General

541.1 Scope

This part of IEC 60364 addresses the earthing arrangements, protective conductors and protective bonding conductors in order to satisfy the safety of the electrical installation.

541.2 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 60050(195), International Electrotechnical Vocabulary (IEV) – Part 195: Earthing and protection against electric shock

IEC 60287-1-1, Electric cables – Calculation of the current rating – Part 1-1: Current rating equations (100 % load factor) and calculation of losses – General

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

IEC 60364-4-43, Electrical installations of buildings – Part 4-43: Protection for safety – Protection against overcurrent

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

IEC 60364-5-52, Electrical installations of buildings – Part 5-52: Selection and erection of electrical equipment – Wiring systems

IEC 60724, Short-circuit temperature limits of electric cables with rated voltages of 1 kV ($U_m = 1.2$ kV) and 3 kV ($U_m = 3.6$ kV)

IEC 60853-2, Calculation of the cyclic and emergency current rating of cables – Part 2: Cyclic rating of cables greater than 18/30 (36) kV and emergency ratings for cables of all voltages

IEC 60909-0, Short-circuit currents in three-phase a.c. systems – Part 0: Calculation of currents

IEC 60949, Calculation of thermally permissible short-circuit currents, taking into account non-adiabatic heating effects
IEC 61024-1, Protection of structures against lightning – Part 1: General principles

IEC 61140, Protection against electric shock – Common aspects for installation and equipment

IEC Guide 104, The preparation of safety publications and the use of basic safety publications and group safety publications