Low-voltage electrical installations –
Part 5-53: Selection and erection of electrical equipment – Devices for protection for safety, isolation, switching, control and monitoring
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 5-53: Selection and erection of electrical equipment – Devices for protection for safety, isolation, switching, control and monitoring

FOREWORD

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


This edition includes the following significant technical changes with respect to the previous edition:

a) revision of all clauses except 531 and 534;
b) introduction of a new Clause 537 Monitoring;
c) Clause 530 contains all normative references and all terms and definitions.
The text of this International Standard is based on the following documents:

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Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The reader’s attention is drawn to the fact that Annex F lists all of the “in-some-country” clauses on differing practices relating to the subject of this standard.

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

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

**IMPORTANT –** The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.
LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 5-53: Selection and erection of electrical equipment – Devices for protection for safety, isolation, switching, control and monitoring

530.1 Scope
This document provides requirements for:

a) isolation, switching, control and monitoring, and
b) selection and erection of:
   1) devices for isolation, switching, control and monitoring, and
   2) devices to achieve compliance with measures of protection for safety.

530.2 Normative references
The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60204-1, Safety of machinery – Electrical equipment of machines – Part 1: General requirements

IEC 60269-2, Low-voltage fuses – Part 2: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application) – Examples of standardized systems of fuses A to K

IEC 60269-3, Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Examples of standardized systems of fuses A to F

IEC 60269-4, Low-voltage fuses – Part 4: Supplementary requirements for use-links for the protection of semiconductor devices

IEC 60309 (all parts), Plugs, socket-outlets and couplers for industrial purposes

IEC 60364 (all parts), Low-voltage electrical installations

IEC 60364-4-41:2005, Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock
IEC 60364-4-41:2005/AMD1:2017

IEC 60364-4-42:2010, Low-voltage electrical installations – Part 4-42: Protection for safety – Protection against thermal effects

IEC 60364-4-43:2008, Low-voltage electrical installations – Part 4-43: Protection for safety – Protection against overcurrent

IEC 60364-4-44:2007, Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances
IEC 60364-4-44:2007/AMD1:2015
IEC 60364-5-55, *Electrical installations of buildings – Part 5-55: Selection and erection of electrical equipment – Other equipment*

IEC 60364-6:2016, *Low voltage electrical installations – Part 6: Verification*

IEC 60417 (all parts), *Graphical symbols for use on equipment*


IEC 60669-1, *Switches for household and similar fixed-electrical installations – Part 1: General requirements*

IEC 60669-2-1, *Switches for household and similar fixed electrical installations – Part 2-1: Particular requirements – Electronic switches*

IEC 60669-2-2, *Switches for household and similar fixed electrical installations – Part 2-2: Particular requirements – Electromagnetic remote-control switches (RCS)*

IEC 60669-2-3, *Switches for household and similar fixed electrical installations – Part 2-3: Particular requirements – Time-delay switches (TDS)*

IEC 60669-2-4, *Switches for household and similar fixed electrical installations – Part 2-4: Particular requirements – Isolating switches*

IEC 60669-2-5, *Switches for household and similar fixed electrical installations – Part 2-5: Particular requirements – Switches and related accessories for use in home and building electronic systems (HBES)*

IEC 60669-2-6, *Switches for household and similar fixed electrical installations – Part 2-6: Particular requirements – Fireman’s switches for exterior and interior signs and luminaires*

IEC 60670-24, *Boxes and enclosures for electrical accessories for household and similar fixed electrical installations – Part 24: Particular requirements for enclosures for housing protective devices and other power dissipating electrical equipment*

IEC 60884 (all parts), *Plugs and socket-outlets for household and similar purposes*

IEC 60898 (all parts), *Electrical accessories – Circuit-breakers for overcurrent protection for household and similar installations*

IEC 60906 (all parts), *IEC system of plugs and socket-outlets for household and similar purposes*


IEC 60947-3, *Low-voltage switchgear and controlgear – Part 3:Switches, disconnectors, switch-disconnectors and fuse-combination units*

IEC 60947-4-1, *Low-voltage switchgear and controlgear – Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters*

IEC 60947-4-2, *Low-voltage switchgear and controlgear – Part 4-2: Contactors and motor-starters – AC semiconductor motor controllers and starters*
IEC 60947-4-3, Low-voltage switchgear and controlgear – Part 4-3: Contactors and motor-starters – AC semiconductor controllers and contactors for non-motor loads

IEC 60947-5-1, Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices

IEC 60947-6-1, Low-voltage switchgear and controlgear – Part 6-1: Multiple function equipment – Transfer switching equipment

IEC 60947-6-2, Low-voltage switchgear and controlgear – Part 6-2: Multiple function equipment – Control and protective switching devices (or equipment) (CPS)

IEC 61008 (all parts), Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)

IEC 61009 (all parts), Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)

IEC 61095, Electromechanical contactors for household and similar purposes

IEC 61439-2, Low-voltage switchgear and controlgear assemblies – Part 2: Power switchgear and controlgear assemblies

IEC 61439-3, Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

IEC 61439-6, Low-voltage switchgear and controlgear assemblies – Part 6: Busbar trunking systems (busways)

IEC 61534 (all parts), Powertrack systems

IEC 61557-8, Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. – Equipment for testing, measuring or monitoring of protective measures – Part 8: Insulation monitoring devices for IT systems

IEC 61557-9, Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. – Equipment for testing, measuring or monitoring of protective measures – Part 9: Equipment for insulation fault location in IT systems

IEC 61643-11, Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems – Requirements and test methods

IEC 61643-12, Low-voltage surge protective devices – Part 12: Surge protective devices connected to low-voltage power distribution systems – Selection and application principles

IEC 61984:2008, Connectors – Safety requirements and tests

IEC 61995 (all parts), Devices for the connection of luminaires for household and similar purposes

IEC 62020, Electrical accessories – Residual current monitors for household and similar uses (RCMs)

IEC 62208, Empty enclosures for low-voltage switchgear and controlgear assemblies – General requirements
IEC 62305 (all parts), Protection against lightning

IEC 62423, Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses

IEC 62606, General requirements for arc fault detection devices

IEC 62626-1, Low-voltage switchgear and controlgear enclosed equipment – Part 1: Enclosed switch-disconnectors outside the scope of IEC 60947-3 to provide isolation during repair and maintenance work