INTERNATIONAL STANDARD

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

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 29.130.01; 91.140.50


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CONTENTS

FOREWORD........................................................................................................................... 6
530.1 Scope ............................................................................................................................ 8
530.2 Normative references................................................................................................. 8
530.3 Terms and definitions.................................................................................................. 11
530.4 General and common requirements .......................................................................... 14
530.5 Erection of equipment .............................................................................................. 14
531 Devices for protection against indirect contact by automatic disconnection of supply ......................................................................................................................... 14
531.1 Overcurrent protective devices .................................................................................. 14
531.1.1 TN systems ............................................................................................................. 14
531.1.2 TT systems ............................................................................................................. 14
531.1.3 IT systems ............................................................................................................. 15
531.2 Residual current protective devices .......................................................................... 15
531.2.1 General conditions of installation ....................................................................... 15
531.2.2 Selection of devices according to their method of application ............................... 15
531.2.3 TN systems ............................................................................................................. 15
531.2.4 TT systems ............................................................................................................. 16
531.2.5 IT systems ............................................................................................................. 16
531.3 Insulation monitoring devices .................................................................................. 16
532 Devices and precautions for protection against thermal effects .................................. 16
532.1 General ....................................................................................................................... 16
532.2 Locations with a particular risk of fire ...................................................................... 16
532.2.1 General .................................................................................................................. 16
532.2.2 Locations with external influences BD2, BD3 or BD4 ............................................ 17
532.2.3 Locations with external influences BE2 ................................................................ 17
532.3 Selection of arc fault detection devices (AFDD) ....................................................... 18
533 Devices for protection against overcurrent ................................................................. 18
533.1 General requirements ............................................................................................... 18
533.1.1 General .................................................................................................................. 18
533.1.2 Compliance with standards ................................................................................... 18
533.1.3 Fuses ..................................................................................................................... 19
533.2 Selection of devices for protection against overload current .................................... 19
533.2.1 General .................................................................................................................. 19
533.2.2 Presence of harmonic currents ............................................................................. 20
533.2.3 Unequal current sharing between parallel conductors ......................................... 20
533.3 Selection of devices for protection against short-circuit current ............................... 20
533.3.1 Thermal stresses ................................................................................................... 20
533.3.2 Breaking capacity ................................................................................................ 21
533.4 Positioning of overcurrent protection devices ........................................................ 21
533.4.1 General .................................................................................................................. 21
533.4.2 Positioning of devices for overload protection ....................................................... 21
533.4.3 Positioning of devices for short-circuit protection ................................................ 22
533.5 Co-ordination of overload and short-circuit protective functions ................................ 23
533.5.1 Protective functions provided by one device ......................................................... 23
533.5.2 Protective functions provided by separate devices ............................................... 23
534 Devices for protection against transient overvoltages ................................................ 23
534.1 General ..................................................................................................................... 23
534.2 Void ......................................................................................................................... 24
534.3 Void ......................................................................................................................... 24
534.4 Selection and erection of SPDs .............................................................................. 24
  534.4.1 SPD location and SPD test class ................................................................. 24
  534.4.2 Transient overvoltage protection requirements ......................................... 25
  534.4.3 Connection types ......................................................................................... 25
  534.4.4 Selection of SPDs ......................................................................................... 27
  534.4.5 Protection of the SPD against overcurrent ............................................... 31
  534.4.6 Fault protection ........................................................................................... 33
  534.4.7 SPDs installation in conjunction with RCDs ............................................. 34
  534.4.8 Connections of the SPD ............................................................................ 34
  534.4.9 Effective protective distance of SPDs ....................................................... 36
  534.4.10 Connecting conductors of SPDs .............................................................. 37
535 Co-ordination of protective devices ...................................................................... 37
  535.1 Selectivity between overcurrent protective devices ...................................... 37
    535.1.1 General ....................................................................................................... 37
    535.1.2 Partial selectivity ....................................................................................... 38
    535.1.3 Full selectivity ............................................................................................ 38
    535.1.4 Total selectivity .......................................................................................... 38
    535.1.5 Enhanced selectivity ................................................................................. 38
  535.2 Co-ordination between residual current protective devices and OCPDs ...... 39
  535.3 Selectivity between residual current protective devices ................................ 39
  535.4 Selectivity of RCD and OCPD ....................................................................... 39
  535.5 Combined short-circuit protection of OCPDs .................................................. 39
536 Isolation and switching ............................................................................................ 40
  536.2 Isolation .............................................................................................................. 40
    536.2.1 General ....................................................................................................... 40
    536.2.2 Devices for isolation .................................................................................. 41
  536.3 Switching-off for mechanical maintenance ...................................................... 42
    536.3.1 General ....................................................................................................... 42
    536.3.2 Devices for switching-off for mechanical maintenance .......................... 42
  536.4 Emergency switching ....................................................................................... 43
    536.4.1 General ....................................................................................................... 43
    536.4.2 Devices for emergency switching-off ....................................................... 43
    536.4.3 Devices for emergency stopping ............................................................... 44
  536.5 Functional switching (control) ......................................................................... 44
    536.5.1 General ....................................................................................................... 44
    536.5.2 Devices for functional switching ................................................................ 44
537 Monitoring .................................................................................................................. 45
  537.1 General .............................................................................................................. 45
    537.1.1 Monitoring devices ..................................................................................... 45
    537.1.2 Selection of insulation monitoring devices (IMDs) ................................ 45
    537.1.3 Selection of residual current monitoring devices (RCMs) ...................... 45
  537.2 IT systems for continuity of supply ................................................................... 45
    537.2.1 General ....................................................................................................... 45
    537.2.2 Insulation monitoring devices (IMDs) ......................................................... 46
    537.2.3 Installation of IMDs ................................................................................... 46
  537.3 IT public distribution system .............................................................................. 46
537.4 Off-line systems in TN, TT and IT systems ............................................................ 46
Annex A (informative) Position of devices for overload protection ........................................ 48
  A.1 General .................................................................................................................. 48
  A.2 Cases where overload protection need not be placed at the origin of the branch circuit ........................................................................................................ 48
Annex B (informative) Position of devices for short-circuit protection ................................ 50
  B.1 General .................................................................................................................. 50
  B.2 Cases where short-circuit protection need not be placed at the origin of branch circuit ........................................................................................................ 50
Annex C (informative) SPD installation – Examples of installation diagrams according to system configurations ................................................................. 52
  C.1 TT system – 3 phase supply plus neutral .................................................................. 52
  C.2 TN-C and TN-C-S systems – 3 phase supply ........................................................... 56
  C.3 TN-S system – 3 phase supply plus neutral ............................................................ 60
  C.4 IT system – 3 phase supply with or without neutral ................................................ 62
Annex D (informative) Installation supplied by overhead lines .............................................. 65
Annex E (normative) Reference standards for devices for isolation and switching ................ 66
Annex F (informative) List of notes concerning certain countries .......................................... 68
Bibliography ...................................................................................................................... 75

Figure 1 – Example of installation of class I, class II and class III tested SPDs ........................... 25
Figure 2 – Connection type CT1 (4+0-configuration) for a three-phase system with neutral ........................................................................................................ 26
Figure 3 – Connection type CT1 (3+0-configuration) for a three-phase system ....................... 26
Figure 4 – Connection type CT2 (e.g. 3+1-configuration) for a three-phase system with neutral ........................................................................................................ 27
Figure 5 – Connection points of an SPD assembly .................................................................. 31
Figure 6 – Example of overcurrent protection in the SPD branch by using a dedicated external overcurrent protective device ................................................................. 32
Figure 7 – Protective device, which is a part of the installation, also used to protect the SPD ......................................................................................................................... 33
Figure 8 – Connection of the SPD ....................................................................................... 35
Figure 9 – Example of installation of an SPD in order to decrease lead length of SPD supply conductors ......................................................................................................... 36
Figure 10 – Example of selectivity ...................................................................................... 38
Figure 11 – Example of currents and their correlation to selectivity ......................................... 39
Figure 12 – Example of combined short-circuit protection of OCPDs .................................... 40
Figure A.1 – Overload protective device (P2) not at the origin of branch circuit (B) .................... 48
Figure A.2 – Overload protective device (P2) installed within 3 m of the origin of the branch circuit (B) ............................................................................................... 49
Figure B.1 – Limited change of position of short-circuit protective device (P2) on a branch circuit .................................................................................................................. 50
Figure B.2 – Short-circuit protective device P2 installed at a point on the supply side of the origin of a branch circuit .................................................................................. 51
Figure C.1 – Example of SPDA installation with connexion type CT2 on the supply side (upstream) of the main RCD in TT system ............................................................. 52
Figure C.2 – Example of SPD installation with connexion type CT2 on the supply side (upstream) of the main RCD in TT system ........................................................................ 53
Figure C.3 – Example of SPDA installation on the load side (downstream) of the main RCD in TT system ................................................................. 54
Figure C.4 – Example of SPD installation on the load side (downstream) of the RCD in TT system .......................................................... 55
Figure C.5 – Example of SPDA installation in TN-C system .......................................................... 56
Figure C.6 – Example of SPD installation with connexion type CT1 in TN-C system ................. 57
Figure C.7 – Example of SPD installation in TN-C-S system where the PEN is separated into PE and N at the origin of the installation (upstream of the SPD) ................................................. 58
Figure C.8 – Example of SPDs installation in TN-C-S in different distribution boards .......... 59
Figure C.9 – Example of SPDA installation in TN-S system ........................................................ 60
Figure C.10 – Example of SPDs installation in TN-S ............................................................... 61
Figure C.11 – Example of SPDA installation in IT system with neutral ...................................... 62
Figure C.12 – Example of SPD installation in IT system without neutral .................................. 63
Figure C.13 – Example of SPD installation in IT system with neutral ...................................... 64
Figure F.1 – Single user ........................................................................................................... 71
Figure F.2 – Several users ..................................................................................................... 71
Figure F.3 – Lamp control circuit with switching in the neutral conductor ............................. 73

Table 1 – Required rated impulse voltage of equipment .......................................................... 28
Table 2 – Uc of the SPD dependent on supply system configuration ........................................ 29
Table 3 – Nominal discharge current (I_n) in kA depending on supply system and connection type .................................................................................................................. 30
Table 4 – Selection of impulse discharge current (I_imp) where the building is protected against direct lightning strike .................................................................................................. 30
Table 5 – Connection of the SPD dependent on supply system ............................................... 34
Table D.1 – Selection of impulse discharge current (I_imp) ..................................................... 65
Table E.1 – Devices for isolation and switching ....................................................................... 66
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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<tr>
<th>FDIS</th>
<th>Report on voting</th>
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<td>64/2359/RVD</td>
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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.

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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 60364-4-42:2010, 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
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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 60664-1:2007, Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests

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 60947-2:2016, Low-voltage switchgear and controlgear – Part 2: Circuit-breakers

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-starter – 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 60364-5-53:2019 © IEC 2019

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