

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Low-voltage electrical installations –
Part 4-44: Protection for safety – Protection against voltage disturbances and
electromagnetic disturbances**

**Installations électriques à basse tension –
Partie 4-44: Protection pour assurer la sécurité – Protection contre les
perturbations de tension et les perturbations électromagnétiques**



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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
440.1 Scope.....	8
440.2 Normative references.....	8
441 (Vacant).....	9
442 Protection of low-voltage installations against temporary overvoltages due to earth faults in the high-voltage system and due to faults in the low-voltage system	9
442.1 Scope and object.....	9
442.1.1 General.....	9
442.1.2 Symbols.....	10
442.2 Overvoltages in LV-systems during a high-voltage earth fault	11
442.2.1 Magnitude and duration of power frequency fault-voltage	12
442.2.2 Magnitude and duration of power frequency stress-voltages.....	13
442.2.3 Requirements for calculation of limits	14
442.3 Power frequency stress voltage in case of loss of the neutral conductor in a TN and TT system	14
442.4 Power frequency stress voltage in the event of an earth fault in an IT system with distributed neutral	14
442.5 Power frequency stress voltage in the event of short-circuit between a line conductor and the neutral conductor	14
443 Protection against overvoltages of atmospheric origin or due to switching	14
443.1 General	14
443.2 Classification of impulse withstand voltages (overvoltage categories)	15
443.2.1 Purpose of classification of impulse withstand voltages (overvoltage categories)	15
443.2.2 Relationship between impulse withstand voltages of equipment and overvoltage categories	15
443.3 Arrangements for overvoltage control	16
443.3.1 Inherent overvoltage control	16
443.3.2 Protective overvoltage control.....	16
443.4 Required impulse withstand voltage of equipment.....	18
444 Measures against electromagnetic influences	18
444.1 General	18
444.2 (void).....	19
444.3 Definitions	19
444.4 Mitigation of Electromagnetic Interference (EMI)	20
444.4.1 Sources of EMI.....	20
444.4.2 Measures to reduce EMI.....	21
444.4.3 TN-system	22
444.4.4 TT system	26
444.4.5 IT system	27
444.4.6 Multiple-source supply.....	28
444.4.7 Transfer of supply	31
444.4.8 Services entering a building.....	33
444.4.9 Separate buildings.....	34
444.4.10 Inside buildings	34
444.4.11 Protective devices	36

444.4.12	Signal cables.....	36
444.5	Earthing and equipotential bonding.....	36
444.5.1	Interconnection of earth electrodes.....	36
444.5.2	Interconnection of incoming networks and earthing arrangements.....	37
444.5.3	Different structures for the network of equipotential conductors and earthing conductors.....	37
444.5.4	Equipotential bonding networks in buildings with several floors	39
444.5.5	Functional earthing conductor.....	40
444.5.6	Commercial or industrial buildings containing significant amounts of information technology equipment.....	41
444.5.7	Earthing arrangements and equipotential bonding of information technology installations for functional purposes	41
444.6	Segregation of circuits	42
444.6.1	General.....	42
444.6.2	Design guidelines.....	42
444.6.3	Installation guidelines.....	43
444.7	Cable management systems	44
444.7.1	General.....	44
444.7.2	Design guidelines.....	44
444.7.3	Installation guidelines.....	45
445	Protection against undervoltage	47
445.1	General requirements	47
Annex A (informative)	Explanatory notes concerning 442.1 and 442.2.....	48
Annex B (informative)	Guidance for overvoltage control by SPDs applied to overhead lines.....	50
Annex C (normative)	Determination of the conventional length, d	52
Bibliography		54
Figure 44.A1	– Representative schematic sketch for possible connections to earth in substation and LV-Installation and occurring overvoltages in case of faults	11
Figure 44.A2	– Tolerable fault-voltage due to an earth-fault in the HV system	13
Figure 44.R1	– By-pass conductor for screen reinforcement to provide a common equipotential bonding system	21
Figure 44.R2	– Example of a substitute or by-pass equipotential bonding conductor in a TT-system.....	22
Figure 44.R3A	– Avoidance of neutral conductor currents in a bonded structure by using the TN-S system from the origin of the public supply up to and including the final circuit within a building	23
Figure 44.R3B	– Avoidance of neutral conductor currents in a bonded structure by using a TN-S system downstream of a consumer's private supply transformer	24
Figure 44.R4	– TN-C-S system within an existing building installation	25
Figure 44.R5	– TT system within a building installation	26
Figure 44.R6	– IT system within a building installation	27
Figure 44.R7A	– TN multiple-source power supply with a non-suitable multiple connection between PEN and earth	28
Figure 44.R7B	– TN multiple source power supplies to an installation with connection to earth of the star points at one and the same point	29

Figure 44.R8 – TT multiple-source power supplies to an installation with connection to earth of the star points at one and the same point	30
Figure 44.R9A – Three-phase alternative power supply with a 4-pole switch	31
Figure 44.R9B – Neutral current flow in a three-phase alternative power supply with an unsuitable 3-pole switch	32
Figure 44.R9C – Single-phase alternative power supply with 2-pole switch.....	33
Figure 44.R10 – Armoured cables and metal pipes entering the buildings (examples)	34
Figure 44.R11 – Illustration of measures in an existing building	35
Figure 44.R12 – Interconnected earth electrodes.....	36
Figure 44.R13 – Examples of protective conductors in star network	37
Figure 44.R14 – Example of multiple meshed bonding star network	38
Figure 44.R15 – Example of a common meshed bonding star network	39
Figure 44.R16 – Example of equipotential bonding networks in structures without lightning protection systems	40
Figure 44.R17A – Separation between power and information technology cables for cable route lengths ≤ 35 m	43
Figure 44.R17B – Separation between power and information technology cables for cable route lengths > 35 m	43
Figure 44.R18 – Separation of cables in wiring systems.....	44
Figure 44.R19 – Cable arrangements in metal cable-trays	45
Figure 44.R20 – Continuity of metallic system components.....	46
Figure 44.R21 – Location of cables inside metallic construction elements	46
Figure 44.R22 – Connection of metallic sections.....	47
Figure 44.Q – Examples of how to apply d_1 , d_2 and d_3 for the determination of d	53
Table 44.A1 – Power frequency stress voltages and power frequency fault voltage in the low voltage system	12
Table 44.A2 – Permissible power frequency stress-voltage.....	13
Table 44.B – Required rated impulse withstand voltage of equipment	18
Table B.1 – Different possibilities for IT systems.....	51

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –**Part 4-44: Protection for safety –
Protection against voltage disturbances and
electromagnetic disturbances**

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International Standard IEC 60364-4-44 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

This second edition of IEC 60364-4-44 cancels and replaces the first edition published in 2001, amendment 1 (2003) and amendment 2 (2006).

The document 64/1600/FDIS, circulated to the National Committees as Amendment 3, led to the publication of the new edition.

The text of this standard is based on the first edition, its Amendment 1, Amendment 2 and the following documents:

FDIS	Report on voting
64/1600/FDIS	64/1609/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 the parts in the IEC 60364 series, under the general title *Low-voltage electrical installations*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this 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.

INTRODUCTION

Part 4-44 of IEC 60364 covers the protection of electrical installations and measures against voltage disturbances and electromagnetic disturbances.

The requirements are arranged into four clauses as follows:

- Clause 442 Protection of low-voltage installations against temporary overvoltages due to earth faults in the high-voltage system and due to faults in the low-voltage system
- Clause 443 Protection against overvoltages of atmospheric origin or due to switching
- Clause 444 Measures against electromagnetic influences
- Clause 445 Protection against undervoltage

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances

440.1 Scope

The rules of this Part of IEC 60364 are intended to provide requirements for the safety of electrical installations in the event of voltage disturbances and electromagnetic disturbances generated for different specified reasons.

The rules of this part are not intended to apply to systems for distribution of energy to the public, or power generation and transmission for such systems (see the scope of IEC 60364-1) although such disturbances may be conducted into or between electrical installations via these supply systems.

440.2 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 60038:1983, *IEC standard voltages*

IEC 60050-604:1987, *International Electrotechnical Vocabulary – Chapter 604: Generation, transmission and distribution of electricity – Operation*

IEC 60364-1, *Low-voltage electrical installations – Part 1: Fundamental principles, assessment of general characteristics, definitions*

IEC 60364-4-41:2005, *Electrical installations of buildings – Part 4-41: Protection for safety – Protection against electric shock*

IEC 60364-5-54:2002, *Electrical installations of buildings – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements and protective bonding conductors*¹

IEC 60479-1:2005, *Effects of current on human beings and livestock – Part 1: General aspects*

IEC 60664-1:2007, *Insulation co-ordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60950-1, *Information technology equipment – Safety – Part 1: General requirements*

IEC 61000-2-5:1995, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 5: Classification of electromagnetic environments – Basic EMC publication*

IEC 61000-6-1, *Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments*

IEC 61000-6-2, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments*

¹ A third edition is currently in preparation.