



ENTWURF OVE HD 60364-1

Ausgabe: 2024-03-15

Low-voltage electrical installations Part 1: Fundamental principles, assessment of general characteristics, definitions (IEC 64/2651/CDV)

Hinweis:

Aufgrund von Stellungnahmen kann die endgültige Fassung dieser OVE-Norm vom vorliegenden Entwurf abweichen. Stellungnahmen (schriftlich) bis 2024-04-15 an den OVE.

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Erläuterungen zum Entwurf

Die von IEC TC 64 ausgearbeitete Internationale Norm wurde als Entwurf zu einer Europäischen Norm **HD 60364-1** den CENELEC-Mitgliedern zur Abstimmung vorgelegt. Im Falle eines positiven Abstimmungsergebnisses im Sinne der CENELEC-Regeln wird dieser Entwurf zu einem HD führen.

Wie alle Mitgliedsorganisationen von CENELEC ist der OVE grundsätzlich verpflichtet, Europäische Normen und Harmonisierungsdokumente in das nationale Normenwerk zu übernehmen und entgegenstehende Normen zurückzuziehen. In Österreich erfolgt die Übernahme mit Neuausgabe der OVE E 8101.

Der OVE legt hiermit diesen Entwurf eines europäischen Normungsdokumentes der Öffentlichkeit zur Information und Stellungnahme als OVE-Entwurf vor.

Da eine Übersetzung in die deutsche Sprache zu diesem Zeitpunkt noch nicht vorhanden ist, wird – um die von CENELEC vorgegebene Einspruchsfrist einzuhalten – die englischsprachige Fassung des IEC 64/2651/CDV zur Information und Stellungnahme vorgelegt.

Interessenten können das gegenständliche Dokument beim Österreichischen Verband für Elektrotechnik beziehen bzw. in den Text Einsicht nehmen.



64/2651/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

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IEC 60364-1 ED6

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64/2627/CDV, 64/2650/RVC

IEC TC 64 : ELECTRICAL INSTALLATIONS AND PROTECTION AGAINST ELECTRIC SHOCK

SECRETARIAT:

Germany

SECRETARY:

Mr Wolfgang Niedenzu

OF INTEREST TO THE FOLLOWING COMMITTEES:

TC 8,SC 8B,TC 9,TC 17,TC 18,TC 20,TC 22,SC 22E,SC 22G,SC 22H,TC 23,SC 23B,SC 23E,SC 23H,SC 23K,TC 32,SC 32B,TC 34,SC 37A,TC 61,TC 69,TC 73,TC 81,TC 82,TC 85,TC 95,TC 99,TC 108,TC 109,PC 118,TC 120,TC 121,SC 121A,SC 121B,PC 128,SyC LVDC

PROPOSED HORIZONTAL STANDARD:



Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

☐ EMC☐ ENVIRONMENT☐ QUALITY ASSURANCE☒ SAFETY☒ SUBMITTED FOR CENELEC PARALLEL VOTING☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING**Attention IEC-CENELEC parallel voting**

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant "In Some Countries" clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

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

PROPOSED STABILITY DATE: 2030

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NOTE FROM TC/SC OFFICERS:

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CONTENTS

1		
2		
3	FOREWORD	5
4	1.1 Scope	7
5	1.1.1 Scope of this document	7
6	1.1.2 Scope of the IEC 60364 series	7
7	1.2 Normative references	8
8	1.3 Terms and definitions	8
9	1.4 Structure of the IEC 60364 series	9
10	1.5 Fundamental principles	9
11	1.5.1 Protection for safety	9
12	1.5.2 Design	11
13	1.5.3 Selection of electrical equipment	15
14	1.5.4 Erection and verification of electrical installations	17
15	1.6 Assessment of general characteristics	17
16	1.7 Electrical installations	18
17	1.7.1 General structure of an electrical installation	18
18	1.7.2 Maximum demand and diversity	18
19	1.8 Conductor arrangement	18
20	1.8.1 General	18
21	1.8.2 Live conductors	18
22	1.8.3 Protective conductors	21
23	1.8.4 System-referencing conductors	22
24	1.9 Types of electrical systems	22
25	1.9.1 General	22
26	1.9.2 Types of electric systems for alternating current	25
27	1.9.3 Types of electric systems for direct current	36
28	1.10 Compatibility	43
29	1.10.1 Compatibility of characteristics	43
30	1.10.2 Electromagnetic compatibility	43
31	1.11 Maintainability	43
32	1.12 Safety services	43
33	1.13 Continuity of service	44
34	Annex A (informative) Structure of the IEC 60364 series	45
35	Annex B (informative) List of notes concerning certain countries	49
36	Bibliography	50
37		
38	Figure 1 – Single-phase two-wire system	19
39	Figure 2 – Single-phase two-wire system	19
40	Figure 3 – Single-phase three-wire system	19
41	Figure 4 – Two-phase three-wire system	20
42	Figure 5 – Three-phase three-wire system	20
43	Figure 6 – Three-phase four-wire system	20
44	Figure 7 – Two-wire system	21
45	Figure 8 – Three-wire system	21

46	Figure 9 – Example of an AC TN-S system with separate neutral conductor and protective earthing conductor throughout the system	26
47		
48	Figure 10 – Example of an AC TN-C-S system with a PEN conductor separated into a protective earthing conductor and a neutral conductor	26
49		
50	Figure 11 – Example of an AC TN-C-S single-phase system with a PEN conductor separated into a protective earthing conductor and a mid-point conductor	27
51		
52	Figure 12 – Example of an AC TN-S multiple source system with two local sources and two distribution boards	28
53		
54	Figure 13 – Example of an AC TN-C-S multiple source system with one local source and one external source (e.g. public power supply network)	Error! Bookmark not defined.
55		
56	Figure 14 – Example of an AC TN-C-S multiple source system source system with one external source (e.g. public power supply network) and one local source connectec to a distribution board different from the (main) distribution board	30
57		
58		
59	Figure 15 – Example of an AC TT system	31
60	Figure 16 – Example of an AC TT multiple source system with two local sources	32
61	Figure 17 – Example of an external source in an AC TT supply system with a local source in an installation operating as an IT installation when disconnected from the external source	33
62		
63		
64	Figure 18 – Example of an external source in an AC TT supply system with a local source in an installation operating as a TT installation when disconnected from the external source	34
65		
66		
67	Figure 19 – Example of an external source in an AC TT supply system with a local source in an installation operating as an TN installation when disconnected from the external source	35
68		
69		
70	Figure 20 – Example of an AC IT system with exposed-conductive-parts earthed individually or in groups by protective earthing conductors	36
71		
72	Figure 21 – Example of a DC TN-S system without mid-point.....	37
73	Figure 22 – Example of a DC TN-S system with mid-point.....	38
74	Figure 23 – Example of a DC TN-C system without mid-point	38
75	Figure 24 – Example of a DC TN-C system with mid-point	39
76	Figure 25 – Example of a DC TN-C-S system without mid-point	39
77	Figure 26 – Example of a DC TN-C-S system with mid-point.....	40
78	Figure 27 – Example of a DC TT system without mid-point	41
79	Figure 28 – Example of a DC TT system with mid-point	41
80	Figure 29 – Example of a DC IT system without mid-point.....	42
81	Figure 30 – Example of a DC IT system with mid-point	42
82		
83	Table 1 – Types of electrical systems considered for AC installations	23
84	Table 2 – Types of electric systems considered for DC installations	24
85	Table 3 – Symbols indicating the conductor function	25
86	Table A.1 – Numbering system of the IEC 60364 series	Error! Bookmark not defined.
87	Table A.2 – Structure of the IEC 60364 series – Low-voltage electrical installations	47
88	Table C.1 – Correspondence between IEC 60364-1:2005 and this document. Error! Bookmark not defined.	
89		

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE ELECTRICAL INSTALLATIONS –

**Part 1: Fundamental principles, assessment of
general characteristics and definitions**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60364-1 has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock. It is an International Standard.

This sixth edition cancels and replaces the fifth edition published in 2005. This edition constitutes a technical revision.

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

- a) the entire document has been restructured and numbered in accordance with the directives but preceded with the part number, i.e. 1.1, 1.2 etc.;
- b) the scope has been expanded to include new areas of application and has been restructured;

- c) in 1.5.2.2.2, the topic of safety services and standby electric supply systems has been added;
- d) in 1.5.2.14, the topic of energy efficiency has been included;
- e) in 1.5.2.15, the topic of prosumer electrical installations has been included;
- f) in 1.5.3.5, the requirement for an equivalent safety level for the use of new materials and innovations for which no product standards exist yet has been added. This must be verified by a risk assessment;
- g) in 1.5.4.3, the requirement for the effectiveness of protective measures for people and livestock safety shall be maintained during the entire lifetime of the installation has been added. This should be done by periodic verification;
- h) Table 3 shows the symbol for the newly introduced "system-referencing conductor (SRC)";
- i) the number of figures showing the type of earth connection in AC and DC systems is limited to those which are most commonly employed. Some figures have been added for DC systems;
- j) Introduction of **Error! Reference source not found.** which relates the list of content of IEC 60364-1:2005 and the clauses of this document.

The text of this International Standard is based on the following documents:

Draft	Report on voting
64/XX/FDIS	64/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 reader's attention is drawn to the fact that Annex B lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this standard.

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

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document 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 1: Fundamental principles, assessment of general characteristics and definitions

1.1 Scope

1.1.1 Scope of this document

This part of IEC 60364 defines the scope and objective of the IEC 60364 series and specifies the fundamental safety requirements for an electrical installation.

This document addresses the fundamental principles, assessment of general characteristics and definitions of low-voltage electrical installations.

1.1.2 Scope of the IEC 60364 series

The International Standards of the IEC 60364 series specify the rules for the design, erection, and verification of low-voltage electrical installations. The rules are provided for the safety of human beings (persons), livestock and property against dangers and damage which can arise from the intended use of low-voltage electrical installations and for the proper functioning of those installations.

EXAMPLES: A non-comprehensive list of electrical installations or systems includes:

- residential premises;
- commercial premises;
- public premises;
- industrial premises;
- agricultural and horticultural premises;
- prefabricated buildings;
- caravans, caravan sites and similar sites;
- construction sites, exhibitions, fairs and other installations for temporary purposes;
- marinas;
- external lighting and similar installations;
- medical locations;
- mobile or transportable units;
- photovoltaic systems;
- stationary secondary batteries;
- low-voltage generating sets;
- temporary connected batteries (e.g. EV).

NOTE 1 "Premises" covers the land and all facilities including buildings belonging to it.

The International Standards of the IEC 60364 series covers

- circuits supplied at nominal voltages up to and including 1000 V AC or 1500 V DC; for AC, the preferred frequencies which are taken into account in this standard are 50 Hz and 60 Hz. The use of other frequencies is not excluded.
- circuits, other than the internal wiring of apparatus, operating at voltages exceeding 1000 V AC or 1500 V DC and derived from an installation having a nominal voltage not exceeding 1000 V AC or 1500 V DC, for example, discharge lighting, electrostatic precipitators;
- fixed wiring for information and communication technology (ICT), signalling, etc., including installation and support of fibre optic cables;
- Wiring systems and cables not specifically covered by the standards for appliances.

The International Standards of the IEC 60364 series applies to:

- alterations or extensions of the installation, or both;
- parts of the existing installation affected by modifications, extensions or alterations;
- the design of functional aspects, such as energy efficiency, local production and storage of energy (prosuming).

The International Standards of the IEC 60364 series applies to any kind of low-voltage electrical installation or system, except:

- a) electric traction equipment, including rolling stock and signalling equipment;
- b) electrical circuits and equipment for automotive purposes within motor vehicles;
- c) electrical installations of ships and of mobile and fixed offshore units;
- d) electrical installations in aircraft;
- e) public street-lighting installations which are part of the public electric power network;
- f) installations in mines and quarries.

Electrical equipment is dealt with only in so far as its selection and application in the installation are concerned.

The International Standards of the IEC 60364 series does not apply to the selection and erection of the following electrical equipment:

- i) radio interference suppression equipment, except where it affects the safety of the installation;
- ii) electric fences;
- iii) external lightning protection systems for buildings (LPS);

NOTE 2 Atmospheric phenomena are covered in IEC 60364-1 but only in so far as effects on the electrical installations are concerned (for example, with respect to selection of surge protective devices).

- iv) electrical equipment of machines.

The International Standards of the IEC 60364 series is not intended to apply to low-voltage public distribution networks.

1.2 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 60050-195, *International Electrotechnical Vocabulary (IEV) – Part 195: Earthing and protection against electric shock*, available at <http://www.electropedia.org>

IEC 60050-826, *International Electrotechnical Vocabulary (IEV) – Part 826: Electrical installations*, available at <http://www.electropedia.org>

1.3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-195 and IEC 60050-826 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

1.3.1

diversity

prospective simultaneous demand of a group of electrical loads