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Partie 2:
Définitions
Chapitre 21: Guide pour les termes généraux

Electrical installations of buildings

Part 2:
Definitions
Chapter 21: Guide to general terms

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ELECTRICAL INSTALLATIONS OF BUILDINGS

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FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is a future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

Technical reports of types 1 and 2 are subject to review within three years of publication to decide whether they can be transformed into International Standards. Technical reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

IEC 364-2-21, which is a technical report of type 3, has been prepared by IEC technical committee 64: Electrical installations of buildings. It is of a purely informative nature and is not to be regarded as an International Standard.

The text of this technical report is based on the following documents:

Six Months' Rule	Report on Voting
64(CO)172	64(CO)204

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

ELECTRICAL INSTALLATIONS OF BUILDINGS

Part 2: Definitions
Chapter 21: Guide to general terms

21.0 Scope

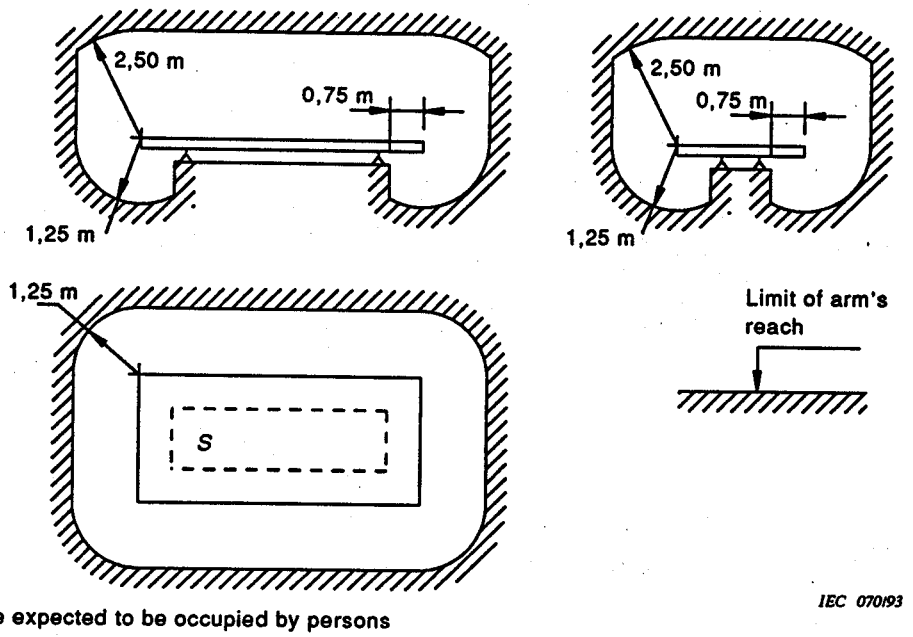
This guide is applicable to electrical installations of buildings. It contains explanatory notes on terms used in IEC 364, listed in sections 01 to 08 of IEC 50(826)*. The notes are intended to facilitate the application of terms.

	Term	Note
21.1	**Characteristics of installations (section 01)**	
21.1.1	*Origin of an electrical installation; Service entrance* (USA) (826-01-02)	An electrical installation may have more than one origin.
21.1.2	*Neutral conductor* (symbol N) (826-01-03)	The neutral point (of a polyphase system) is defined in IEV (601) as follows: "Common point of the *n*-windings in a star-connected power transformer or earthing transformer, in a substation." In certain instances, and under specified conditions, the functions of neutral conductor and protective conductor may be combined in a single conductor (see definition of PEN conductor [826-04-06]).
21.1.3	*Ambient temperature* (826-01-04)	It is assumed that the ambient temperature includes the effects of all other equipment installed in the same location. The ambient temperature to be considered for the equipment is the temperature at the place where the equipment is to be installed resulting from the influence of all other equipment and heat sources in the same location, when operating, not taking into account the thermal contribution of the equipment to be installed.

* IEC 50(826): 1982, *International Electrotechnical Vocabulary (IEV) – Chapter 826: Electrical installations of buildings.*

	Term	Note
21.1.4	*(Supply system for) Safety services; Emergency power system* (USA) (826-01-05)	Safety services are often a statutory requirement in premises open to the public, in very high buildings and in certain industrial premises.
21.1.5	*Standby supply system* (826-01-06)	Standby supplies are necessary, for example, to avoid interruption of continuous industrial processes or data processing.
21.2	**Voltages** (section 02)	
21.2.1	*Nominal voltage (of an installation)* (826-02-01)	Transient overvoltages, due for example to switching operations, and temporary variations in the voltage due to abnormal conditions, such as faults in the supply system, are ignored.
21.3	**Electric shock** (section 03)	
21.3.1	*Extraneous-conductive-part* (826-03-03)	Extraneous-conductive-parts may be: – metallic parts of the building structure; – metal pipe systems for gas, water, heating, etc.; – non-insulating floors and walls.
21.3.2	*Simultaneously accessible parts* (826-03-10)	In the context of protection against direct contact, a live part may be accessible with: – another live part; or – an exposed-conductive-part; or – an extraneous-conductive-part; or – a protective conductor. The following may constitute simultaneously accessible parts in the context of protection against indirect contact: – exposed-conductive-parts; – extraneous-conductive-parts; – protective conductors.

Term	Note
	In relation to the definition of IEV 826-03-10, it should be noted that the word touched signifies any contact with any part of the body (hand, foot, head, etc.).
21.3.3 *Arm's reach* (826-03-11)	This space is by convention limited as shown in figure 21a.



S = surface expected to be occupied by persons

Figure 21a – Zone of arms' reach

21.4	**Earthing** (section 04)	
21.4.1	*Earth;* *Ground* (USA) (826-04-01)	In the proximity of earth electrodes the potential may not be zero.
21.4.2	*Earthing conductor;* *Grounding electrode conductor* (USA) (826-04-07)	The non-insulated parts of earthing conductors which are buried in the ground are regarded as forming part of the earth electrode.
21.4.3	*Equipotential bonding* (826-04-09)	Distinction is made between: – the main equipotential bonding; – supplementary equipotential bonding; – earth-free equipotential bonding. Supplementary equipotential bonding is also known as local bonding.

	Term	Note
21.5	**Electrical circuits** (section 05)	
21.5.1	*(Electrical) Circuit (of an installation)* (826-05-01)	A circuit comprises live conductors, protective conductors (if any) and associated switchgear, controlgear and accessories. A protective conductor may be common to several circuits.
21.5.2	*Design current (of a circuit)* (826-05-04)	The design current is determined taking into account diversity. When conditions are variable, the design current is the continuous current which would bring the circuit components to the same temperature. This current is denoted I_B.
21.5.3	*(Continuous) Current-carrying capacity (of a conductor); Ampacity* (USA) (826-05-05)	This current is denoted I_Z.
21.5.4	*Overcurrent* (826-05-06)	An overcurrent may or may not have harmful effects, depending on its magnitude and duration. Overcurrents may be the result of overloads in current-using equipment or faults such as short-circuits or earth faults.
21.5.5	*Conventional operating current (of a protective device)* (826-05-09)	The conventional operating current is greater than the rated current or current setting of the device, and the conventional time varies according to the type and rated current of the protective device. For fuses this current is called the "conventional fusing current". For circuit-breakers this current is called the "conventional operating current".

	Term	Note
21.7	**Other equipment** (section 07)	
21.7.1	*Hand-held equipment* (826-07-05)	This means equipment whose functioning relies on constant manual support or guidance.
21.7.2	*Stationary equipment* (826-07-06)	Example: The value of this mass is 18 kg in IEC standards relating to household appliances.
21.8	**Isolation and switching** (section 08)	
21.8.1	*Isolation* (826-08-01)	The function of isolation contributes to provide the safety of personnel prior to the execution of work, repairs, fault location or the replacement of equipment.