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Amendment 1

Protection against electric shock – Common aspects for installation and equipment

*This **English-language** version is derived from the original **bilingual** publication by leaving out all French-language pages. Missing page numbers correspond to the French-language pages.*

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FOREWORD

This amendment has been prepared by IEC technical committee 64: Electrical installations and protection against electric shock.

The text of this amendment is based on the following documents:

FDIS	Report on voting
64/1402/FDIS	64/1412/RVD

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

The committee has decided that the contents of this amendment and the base 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- withdrawn,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.

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2 Normative references

Insert the following two new references:

IEC 60038:1983, *IEC standard voltages*

IEC 62271-102:2001, *High-voltage switchgear and controlgear – Part 102 : Alternating current disconnectors and earthing switches*

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3 Definitions

Add, on page 31, the following two new definitions:

3.41
isolation
function intended to make dead for reasons of safety all or a discrete section of the electrical installation by separating the electrical installation or section from every source of electric energy

[IEV 826-08-01]

3.42
impulse withstand voltage
highest peak value of impulse voltage of prescribed form and polarity which does not cause breakdown of insulation under specified conditions

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Add, after 8.2, the following new subclause:

8.3 Devices for isolation

8.3.1 General

Devices suitable for isolation shall effectively isolate the circuit concerned from all live supply conductors.

NOTE 1 With regard to low voltage, see also 8.3.2

The position of the contacts or other means of isolation shall, in the isolated position, be either externally visible or clearly and reliably indicated.

NOTE 2 The indication may be achieved by suitable marking to indicate the isolated and closed positions respectively.

Devices suitable for isolation shall be designed and/or erected to prevent unintentional or unauthorized operation.

NOTE 3 Such operation might be caused for example by shocks and vibrations.

8.3.2 Devices for isolation for low voltage

Devices suitable for isolation shall effectively isolate the circuit concerned from all live supply conductors including the neutral. However in TN-S systems where the supply system conditions are such that the neutral conductor can be regarded as being reliably at earth potential, the neutral conductor need not to be isolated.

Devices for isolation shall comply with the following two conditions:

a) When in the new, clean and dry condition, with the contacts in the position for isolation, the device shall withstand between the line and load terminals, the impulse withstand voltage given in Table 2.

Table 2 – Minimum impulse withstand voltage of devices for isolation related to the nominal voltage

Nominal voltage of the supply system [a] V		Minimum impulse withstand voltage [b] kV	
Three-phase systems	**Single-phase systems with middle point**	**Overvoltage category III**	**Overvoltage category IV**
	120 – 240	3	5
230/400, 277/480		5	8
400/690		8	10
1 000		10	15
[a] According to IEC 60038.			
[b] Equipment of overvoltage category II and I are not applicable for isolation.			
NOTE 1 For an explanation of the overvoltage categories, see 2.2.2.1.1 of IEC 60664-1:1992.			
NOTE 2 The impulse withstand voltages are referred to an altitude of 2 000 m.			