

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Devices for the connection of luminaires for household and similar purposes –
Part 1: General requirements**

**Dispositifs de connexion pour luminaires pour usage domestique et analogue –
Partie 1: Exigences générales**

IEC 61995-1:2005

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**DEVICES FOR THE CONNECTION OF LUMINAIRES
FOR HOUSEHOLD AND SIMILAR PURPOSES –****Part 1: General requirements**

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IEC 61995-1 edition 1.1 contains the first edition (2005-03) [documents 23B/776/FDIS and 23B/782/RVD] and its amendment 1 (2016-05) [documents 23B/1208/FDIS and 23B/1212/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61995-1 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 61995 consists of the following parts, under the general title *Devices for the connection of luminaires for household and similar purposes*:

Part 1: General requirements

Part 2: Standard sheets

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability 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

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DEVICES FOR THE CONNECTION OF LUMINAIRES FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 1: General requirements

1 Scope

This part of IEC 61995-1 applies to devices for the connection of luminaires (DCL) intended for household and similar purposes, for the electrical connection of fixed luminaires of class I or class II to final circuits rated at not more than 16 A without providing a mechanical support for the luminaire. DCLs are intended for use according to their IP rating ~~per~~ as specified in IEC 60529.

Outlets have an earthing contact and a rated current of 6 A. Plugs ~~are~~ have a rated current ~~at~~ of 6 A, ~~unless otherwise specified in the relevant part 2.~~

The rated voltage is 125 V or 250 V at 50/60 Hz.

NOTE 1 This standard does not cover integrated DCL-plugs (under consideration).

This standard can also be applied to types other than those with standardised interface.

NOTE 2 In the following countries only types with a standardised interface according to IEC 61995-2 (under consideration) are allowed: IT.

DCL plugs and DCL outlets complying with this standard are suitable for use under the following conditions:

- an ambient temperature not normally exceeding 25 °C, but occasionally reaching 35 °C;

NOTE 3 The effect of the heat generated by the luminaire may affect the ambient temperature local to the DCL.

- a temperature not exceeding 70 °C at the terminals of the DCL outlet including the effect of heat generated by the luminaire and the passage of current.

NOTE 4 The requirements and tests of this standard may also be used as a guide when testing DCL's which have different interface configurations or ratings.

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 60068-2-32:1975, *Environmental testing – Part 2: Tests – Test Ed: Free fall*

IEC 60068-2-75:1997, *Environmental testing – Part 2: Tests – Test Eh: Hammer test*

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60227-5, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V – Part 5: Flexible cables (cords)*

IEC 60417-DB:¹⁾, *Graphical symbols for use on equipment*

IEC 60529, *Degrees of protection provided by enclosures*

IEC 60695-2-11, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products*

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

Where the terms voltage and current are used, they imply r.m.s. values, unless otherwise specified.

Throughout this standard the word "earthing" is used for "protective earthing".

3.1 device for connecting a luminaire DCL

system comprising a DCL outlet and a DCL plug providing a fixed luminaire with electrical connection to and disconnection from a fixed installation

NOTE The designations DCL, DCL outlet or DCL plug, are used when it is necessary to specify particular requirements and test specifications.

3.2 DCL outlet

device for connecting a luminaire having socket-contacts designed to engage with the pins of a DCL plug and having terminals for the connection of cable

3.3 DCL plug

device for connecting a luminaire having pins designed to engage with the contacts of a DCL outlet, also incorporating means for the electrical connection and mechanical retention of flexible cable

3.4 rewirable DCL plug

DCL plug so constructed that the flexible cable can be replaced

3.5 non-rewirable DCL plug

DCL plug so constructed that it forms a complete unit with the flexible cable after connection and assembly by the manufacturer of the plug (see also 14.1)

3.6 moulded-on DCL plug

non-rewirable DCL plug, the manufacture of which is completed by insulating material moulded around pre-assembled component parts and the terminations of the flexible cable

1) "DB" refers to the IEC on-line database.

3.20**DCL temporary lampholder**

independent lampholder designed in order to be temporarily connected to a DCL outlet, in compliance with the corresponding standards, and provided with a DCL rewirable plug (2P + E) for future connection of a luminaire

3.7**rated voltage**

voltage assigned to the DCL plug or DCL outlet by the manufacturer

3.8**rated current**

current assigned to the DCL plug or DCL outlet by the manufacturer

3.9**mounting box**

box in or on a wall or ceiling, etc., for flush or surface application, intended to house a DCL outlet

3.10**terminal**

insulated or non-insulated connecting device intended for reusable electrical connection of the external conductors

3.11**termination**

insulated or non-insulated connecting device intended for non-reusable electrical connection of the external conductors

3.12**clamping unit**

part or parts of a terminal necessary for the mechanical clamping and the electrical connection of the conductor(s)

3.13**screw-type terminal**

terminal for the connection and subsequent disconnection of a conductor or the interconnection of two or more conductors capable of being dismantled, the connection being made, directly or indirectly, by means of screws or nuts of any kind

3.14**pillar terminal**

terminal with screw clamping in which the conductor is inserted into a hole or cavity, where it is clamped under the shank of the screw or screws. The clamping pressure may be applied directly by the shank of the screw or through an intermediate member to which pressure is applied by the shank of the screw

NOTE Examples of pillar terminals are shown in IEC 60999-1.

3.15**screw terminal**

terminal with screw clamping in which the conductor is clamped under the head of the screw. The clamping pressure may be applied directly by the head of the screw or through an intermediate part, such as a washer, clamping plate or anti-spread device

NOTE Examples of screw terminals are shown in IEC 60999-1.

**3.16
stud terminal**

terminal with screw clamping in which the conductor is clamped under a nut. The clamping pressure may be applied directly by a suitably shaped nut or through an intermediate part, such as a washer, clamping plate or anti-spread device

NOTE Examples of stud terminals are shown in IEC 60999-1.

**3.17
mantle terminal**

terminal with screw clamping in which the conductor is clamped against the base of a slot in a threaded stud by means of a nut. The conductor is clamped against the base of the slot by a suitably shaped washer under the nut, by a central peg if the nut is a cap nut, or by equally effective means for transmitting the pressure from the nut to the conductor within the slot

NOTE Examples of mantle terminals are shown in IEC 60999-1.

**3.18
screwless terminal**

connecting device for the connection and subsequent disconnection of a rigid (solid or stranded) or flexible conductor or the interconnection of two or more conductors capable of being dismantled, the connection being made, directly or indirectly, by means of springs, parts of angled, eccentric or conical form, etc., without special preparation of the conductor concerned, other than removal of insulation

**3.19
loop terminal**

supply terminal intended for the interconnection of live conductors

4 General requirements

DCL systems shall be so designed and constructed that in normal use their performance is reliable and without danger to the user or surroundings.

Compliance is checked by carrying out all the relevant tests specified.

5 General notes on tests

5.1 *Tests according to this standard are type tests.*

5.2 *Unless otherwise specified, the specimens are tested as delivered and under normal conditions of use.*

Non-rewirable DCL plugs are tested with the type and size of flexible cable as delivered.

5.3 *Unless otherwise specified, the tests are carried out in the order of the clauses, at an ambient temperature between 15 °C and 35 °C. In case of doubt the tests are made at an ambient temperature of (20 ± 5) °C.*

Plugs and outlets are tested separately, unless otherwise specified.

The neutral is treated as a pole.

5.4 *Unless otherwise specified, three specimens are subjected to all the relevant tests.*

For the purpose of the test of 12.3.11 three new specimens are required.

For the purpose of the test of Clause 20 one additional specimen is required.

5.5 *The specimens are submitted to all the relevant tests and the requirements are satisfied if all these tests are met.*

If one specimen does not satisfy a test due to an assembly or manufacturing fault, that test and any preceding one which may have influenced the results of the test shall be repeated and also the tests which follow shall be made in the required sequence on another full set of specimens, all of which shall comply with the requirements.

NOTE The applicant may submit, together with the number of specimens specified in 5.4, an additional set of specimens which may be required, should one specimen fail. The testing station will then, without further request, test the additional specimens and will only reject them if a further failure occurs. If the additional set of specimens is not submitted at the same time, the failure of one specimen will entail rejection.

6 Ratings

DCL plugs and DCL outlets shall have a rated voltage of 125 V a.c. or 250 V a.c. and a rated current of 6 A.

Compliance is checked by inspection of the marking and by the tests described in this standard.

7 Classification

7.1 DCLs are classified according to their interface design:

- a) complying with the relevant part 2 of this standard;
- b) other types (not complying with any relevant part 2 of this standard).

7.2 DCL outlets shall have an earthing contact and are classified:

7.2.1 according to the method of application:

- fixed type;
- floating type;

7.2.2 according to the type of terminals:

- DCL outlets with screw-type terminals;
- DCL outlets with screwless terminals for rigid conductors only;
- DCL outlets with screwless terminals for rigid and flexible conductors;

7.2.3 according to the provision of a loop terminal:

- DCL outlets with a loop terminal;
- DCL outlets without a loop terminal;

NOTE The loop terminal may be needed for the continuity of the live conductor.

7.2.4 according to the method of mounting as a consequence of design:

- design A – DCL outlets where the cover or cover-plate or parts of them can be removed without displacement of the conductors;
- design B – DCL outlets where the cover or cover-plate or parts of them cannot be removed without displacement of the conductors.