

Connecting devices for low voltage circuits for household and similar purposes

Part 2-1 Particular requirements for connecting devices as separate entities with screw-type clamping units

The European Standard EN 60998-2-1 : 1993 has the status of a British Standard

Dispositifs de connexion pour circuits basse tension pour usage domestique et analogue
Partie 2-1. Règles particulières pour dispositifs de connexion en tant que parties séparées à organes de serrage à vis

Verbindungsmaterial für Niederspannungs-Stromkreise für Haushalt und ähnliche Zwecke
Teil 2-1. Besondere Anforderungen für Verbindungsmaterial als selbstständige Betriebsmittel mit Schraubklemmen

UDC 621.315.684:621.315.3:621.316.172

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
France	Portugal
Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

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National foreword

This British Standard has been prepared under the direction of the Power Electrical Engineering Standards Policy Committee and is the English language version of EN 60998-2-1 : 1993 *Connecting devices for low voltage circuits for household and similar purposes. Part 2-1 : Particular requirements for connecting devices as separate entities with screw-type clamping units*, published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived by CENELEC from IEC 998-2-1 : 1990 published by the International Electrotechnical Commission (IEC).

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by a side line in the margin. Parts of the original IEC text that have been modified by CENELEC have been quoted in national annex NA.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

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Descriptors: Low voltage equipment, home electrical installations, connecting equipment, screw-type clamping units, characteristics, tests

English version

Connecting devices for low voltage circuits for household and similar purposes

Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units

(IEC 998-2-1 : 1990, modified)

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(IEC 998-2-1 : 1990, modifiziert)

This European Standard was approved by CENELEC on 9 March 1993. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 998-2-1 : 1990 could be accepted without textual changes, has shown that some common modifications were necessary for the acceptance as a European Standard.

The reference document, together with the common modifications prepared by the CENELEC Reporting Secretariat SR 23F, was submitted to the CENELEC members for formal vote in August 1992.

The text of the draft was approved by CENELEC on 1993-03-09. The following dates were fixed:

- latest date of publication
of an identical national
standard (dop) 1994-03-01
- latest date of withdrawal
of conflicting standards (dow) 1994-03-01

For products which have complied with the relevant national standard before 1994-03-01 as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-03-01.

This Part 2-1 is intended to be used in conjunction with EN 60998-1, *Connecting devices for low voltage circuits for household and similar purposes, Part 1: General requirements*.

Where a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. Where this standard states 'addition', 'modification' or 'replacement', the relevant text of Part 1 is to be adapted accordingly.

Subclauses and figures which are in addition to those in Part 1 are numbered starting from 101, additional annexes are lettered AA, BB, etc. Annexes added by CENELEC are lettered ZA, ZB, etc.

Annexes designated 'normative' are part of the body of the standard. Annexes designated 'informative' are given only for information. In this standard, annexes AA, BB and ZA are normative, annex CC is informative.

Where reference is made to other international or harmonized standards, the edition of that standard quoted in annex ZA is applicable.

NOTE. In this document, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

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CONNECTING DEVICES FOR LOW VOLTAGE CIRCUITS FOR HOUSEHOLD AND SIMILAR PURPOSES

Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units

1 Scope

This clause of Part 1 is applicable except as follows:

Addition:

This standard applies to connecting devices with screw-type clamping units primarily suitable for connecting unprepared conductors.

2 Normative references

NOTE: Other international publications quoted in this standard are listed in annex ZA (normative).

3 Definitions

This clause of Part 1 is applicable except as follows:

Additional definitions:

3.101 screw-type terminal: A terminal for the connection of two or more conductors by means of screw-type clamping units.

3.101.1 pillar terminal: A terminal in which the conductors are inserted into a hole or cavity, where they are clamped under the shank of a screw or screws. The clamping pressure may be applied directly by the shank of the screw or through an intermediate part to which pressure is applied by the shank of the screw.

Examples of pillar terminals are given in figure 101.

3.101.2 screw terminal: A terminal in which the conductors are clamped under the head of one or more screws. The clamping pressure may be applied directly by the head of a screw or through an intermediate part, such as a washer, a clamping plate or an anti-spread device.

Examples of screw terminals are given in figure 102.

- 3.101.3 stud terminal:** A terminal in which the conductors are 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 an anti-spread device.

Examples of stud terminals are given in figure 102.

- 3.101.4 saddle terminal:** A terminal in which the conductors are clamped under a saddle by means of two or more screws or nuts.

Examples of saddle terminals are given in figure 103.

- 3.101.5 mantle terminal:** A terminal in which the conductors are clamped against the base of a slot in a threaded stud by means of a nut, by a suitably shaped washer placed under the nut, by a central peg if the nut is a cap nut, or by an equally effective means for transmitting the pressure from the nut to the conductors within the slot.

Examples of mantle terminals are given in figure 104.

- 3.102 unprepared conductor:** A conductor which has been cut and the insulation of which has been removed over a certain length for insertion into a terminal.

A conductor the shape of which is arranged for introduction into a terminal, or of which the strands are twisted to consolidate the end, is considered to be an unprepared conductor.

4 General

This clause of Part 1 is applicable.

5 General notes on tests

This clause of Part 1 is applicable except as follows:

5.3 and 5.4 Replacement:

The necessary number of new samples to be submitted to the tests is divided into sets as detailed in annex BB.

The tests are carried out in the sequence listed for each set.

6 Main characteristics

This clause of Part 1 is applicable.

7 Classification

This clause of Part 1 is applicable.

8 Marking

This clause of Part 1 is applicable except as follows:

8.1 *Addition:*

The terminal shall be marked according to 10.103, if applicable.

9 Protection against electric shock

This clause of Part 1 is applicable.

10 Connection of conductors

This clause of Part 1 is applicable.

Additional subclauses:

10.101 Terminals shall accept two or more conductors of the same or of different nominal cross-sectional areas or compositions. Terminals shall accept rigid and/or flexible unprepared conductors.

10.102 Each terminal shall accept conductors of cross-sectional areas and types as indicated in table 101, for the relevant values of the rated connecting capacity. Terminals shall provide, in addition, appropriate connection of at least the two successive smaller cross-sectional areas, for example:

- 1) a terminal having the rated connecting capacity of 1 mm² shall clamp reliably a rigid and/or flexible conductor of 0,5 mm², 0,75 mm² or 1 mm²;
- 2) a terminal having the rated connecting capacity of 10 mm² shall clamp reliably rigid conductors of 4 mm², 6 mm² or 10 mm² and/or flexible conductors of 4 mm² or 6 mm².