

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 60998-2-1:2004 has the status of a
British Standard

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National foreword

This British Standard is the official English language version of EN 60998-2-1:2004. It was derived by CENELEC from IEC 60998-2-1:2002. It supersedes BS EN 60998-2-1:1993 which will be withdrawn on 1 April 2006.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags [C] <C>.

The UK participation in its preparation was entrusted by Technical Committee PEL/23, Electrical accessories, to Subcommittee PEL/23/2, Connecting devices, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Cross-references

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Summary of pages

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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
(IEC 60998-2-1:2002, modified)**

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
(CEI 60998-2-1:2002, modifiée)

Verbindungsmaterial
für Niederspannungs-Stromkreise
für Haushalt und ähnliche Zwecke
Teil 2-1: Besondere Anforderungen
für Verbindungsmaterial als selbständige
Betriebsmittel mit Schraubklemmen
(IEC 60998-2-1:2002, modifiziert)

This European Standard was approved by CENELEC on 2004-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 60998-2-1:2002, prepared by SC 23F, Connecting devices, of IEC TC 23, Electrical accessories, together with common modifications prepared by the CENELEC Reporting Secretariat SR 23F, was submitted to the formal vote and was approved by CENELEC as EN 60998-2-1 on 2004-03-01.

This European Standard supersedes EN 60998-2-1:1993.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2005-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2007-03-01

This Part 2-1 is intended to be used in conjunction with EN 60998-1:2004.

It supplements or modifies the corresponding clauses in EN 60998-1, so as to convert it into the European Standard: Particular requirements for connecting devices as separate entities with screw-type clamping units.

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

In this standard,

a) the following print types are used:

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

b) Subclauses and figures which are additional to those in Part 1 are numbered starting from 101; additional annexes are lettered AA, BB, etc.

Endorsement notice

The text of the International Standard IEC 60998-2-1:2002 was approved by CENELEC as a European Standard with agreed common modifications.

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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

This clause of Part 1 is applicable.

3 Definitions

This clause of Part 1 is applicable except as follows:

Additional definitions:

3.101

screw-type terminal

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

3.101.1

pillar terminal

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

NOTE Examples of pillar terminals are given in Figure 101.

3.101.2

screw terminal

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

NOTE Examples of screw terminals are given in Figure 102.

3.101.3**stud terminal**

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

NOTE Examples of stud terminals are given in Figure 102.

3.101.4**saddle terminal**

terminal in which the conductors are clamped under a saddle by means of two or more screws or nuts

NOTE Examples of saddle terminals are given in Figure 103.

3.101.5**mantle terminal**

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

NOTE Examples of mantle terminals are given in Figure 104.

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 Replacement:

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

5.4 Replacement of the first sentence by the following:

The necessary number of new samples to be submitted to the tests is divided into sets as detailed in annex BB and this standard is met if all tests are satisfied.

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.

Additional subclauses:

8.101 If the manufacturer declares that the performance of his devices exceeds the minimum requirements of subclauses 10.101 and 10.102 then he shall state in his data sheets or catalogue or on his packaging the types, the maximum and minimum cross-sectional area of conductors that can be connected and the maximum number of conductors that can be connected simultaneously to each clamping unit.

9 Protection against electric shock

This clause of Part 1 is applicable.

10 Connection of conductors

This clause of Part 1 is applicable except as follows:

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,

- a) 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 and 1 mm²;
- b) a terminal having the rated connecting capacity of 10 mm² shall clamp reliably rigid conductors of 4 mm², 6 mm² and 10 mm² and/or flexible conductors of 4 mm² and 6 mm².
- c) a terminal having the rated connecting capacity of 25 mm² shall clamp reliably rigid conductors of 10 mm², 16 mm² and 25 mm² and/or flexible conductors of 6 mm², 10 mm² and 16 mm².
- d) a terminal for flexible conductors only and having a rated connecting capacity of 25 mm² shall clamp reliably flexible conductors of 10 mm², 16 mm² and 25 mm².