
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)

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

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

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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

Ta slovenski standard je istoveten z: EN 60998-2-1:1993

ICS:

29.120.20 Spojni elementi Connecting devices

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EUROPEAN STANDARD

EN 60998-2-1

NORME EUROPÉENNE

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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)

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 998-2-1:1990, modifiée)

Verbindungsmaterial für
Niederspannungs-Stromkreise für
Haushalt und ähnliche Zwecke

Teil 2-1: Besondere Anforderungen für
Verbindungsmaterial als selbstständige
Betriebsmittel mit Schraubklemmen
(IEC 998-2-1:1990, modifiziert)

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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

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

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 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 60988-1, 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;
- instructions for modification of the reference document: **in bold type.**

Endorsement notice

The text of the International Standard IEC 998-2-1:1990 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

2 Normative references

Replace the text of clause 2 by:

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

10 Connection of conductors

- Table 101 Delete all about AWG conductors (second part of table and notes 1 and 2).
Replace "IEC 228A" by "HD 383" (twice).
- 10.106 Replace "IEC 228" by "HD 383".

Annexes

- Annex AA Replace the first sentence below the table by:
The test is carried out with one of the gauges specified above, according to the manufacturer's requirements.
In note 1, replace "IEC 228A" by "HD 383".
Delete Note 2.
- Annex CC Replace "IEC 228" by "HD 383".
- Annex DD Delete.

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Annex ZA (normative)**Other international publications quoted in this standard
with the references of the relevant European publications**

Add to the list of publications quoted in Part 1:

| <u>IEC</u> <u>Publication</u> | <u>Date</u> | <u>Title</u> | <u>EN/HD</u> | <u>Date</u> |
|----------------------------------|-------------|---|--------------|-------------|
| 228A (mod) * | 1982 | Conductors of insulated cables First supplement: Guide to the dimensional limits of circular conductors | - | - |

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* included in HD 383 S2:1986

NORME
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CEI
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998-2-1

Première édition
First edition
1990-04

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

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class/B8176/sist-en-60998-2-1-1996

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



Numéro de référence
Reference number
CEI/IEC 998-2-1: 1990

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTING DEVICES FOR LOW VOLTAGE CIRCUITS
FOR HOUSEHOLD AND SIMILAR PURPOSESPart 2-1: Particular requirements for connecting devices
as separate entities with screw-type clamping units

FOREWORD

- 1) 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.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

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This publication has been prepared by Sub-Committee 23F: Connecting devices, of IEC Technical Committee No. 23: Electrical accessories.

It forms the first edition of IEC 998-2-1 and supersedes Publication 685-2-2 (1983).

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

| Six Months' Rule | Report on Voting | Two Months' Procedure | Report on Voting |
|------------------|------------------|-----------------------|------------------|
| 23F(C0)30 | 23F(C0)37 | 23F(C0)41 | 23F(C0)43 |

Full information on the voting for the approval of this publication can be found in the Voting Reports indicated in the above table.

This Part 2-1 is intended to be used in conjunction with IEC 998-1 so as to convert that publication into the IEC standard: Safety requirements for connecting devices as separate entities with screw-type clamping units (first edition).

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 first edition states "addition", "modification" or "replacement", the relevant requirements, test specification or explanatory matter in Part 1 should be adapted accordingly.

In this publication:

- 1) the following print types are used:
 - requirements proper: in roman type;
 - *test specifications: in italic type;*
 - explanatory matter: in smaller roman type.
- 2) Subclauses and figures which are additional to those in Part 1 are numbered starting from 101; additional annexes are lettered AA, BB, etc.

Annexes AA and BB of this publication are normative.

Annexes CC and DD of this publication are informative.

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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 except as follows:

IEC publications quoted:

Addition:

228A (1982): **Conductors of insulated cables. First supplement: Guide to the dimensional limits of circular conductors.**

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.