

Connecting devices for low-voltage circuits for household and similar purposes —

Part 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units

The European Standard EN 60998-2-3:2004 has the status of a
British Standard

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National foreword

This British Standard was published by BSI. It is the UK implementation of EN 60998-2-3:2004, incorporating corrigendum November 2006. It was derived by CENELEC from IEC 60998-2-3:2002. It supersedes BS EN 60998-2-3:1994 which is withdrawn.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags (e.g. **Ⓒ** **Ⓒ**).

The UK participation in its preparation was entrusted by Technical Committee PEL/23, Electrical accessories, to Subcommittee PEL/23/2, Connecting devices.

A list of organizations represented on PEL/23/2 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Amendments issued since publication

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**Connecting devices for low-voltage circuits
for household and similar purposes
Part 2-3: Particular requirements for connecting devices
as separate entities with insulation-piercing clamping units
(IEC 60998-2-3:2002, modified)**

Dispositifs de connexion
pour circuits basse tension
pour usage domestique et analogue
Partie 2-3: Règles particulières
pour dispositifs de connexion
en tant que parties séparées
avec organes de serrage
à perçage d'isolant
(CEI 60998-2-3:2002, modifiée)

Verbindungsmaterial
für Niederspannungs-Stromkreise
für Haushalt und ähnliche Zwecke
Teil 2-3: Besondere Anforderungen
für Verbindungsmaterial
als selbständige Betriebsmittel
mit Schneidklemmstellen
(IEC 60998-2-3:2002, 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 60998-2-3:2002, 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 60998-2-3 on 2004-03-01.

This European Standard supersedes EN 60998-2-3:1993.

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 2-3 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 insulation piercing clamping units.

Where a particular subclause of Part 1 is not mentioned in this Part 2-3, 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, the following print types are used:

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

Endorsement notice

The text of the International Standard IEC 60998-2-3:2002 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 2-3: Particular requirements for connecting devices as separate entities with insulation-piercing clamping units

1 Scope

This clause of Part 1 is applicable except as follows:

Addition:

This standard applies to connecting devices with insulation piercing clamping units primarily suitable for connecting insulated unprepared conductors.

In the connecting operation the insulation of the conductor is pierced, bored through, cut through, removed, displaced or made ineffective in some other manner at the point or points of contact.

NOTE In the text of this standard, connecting devices with insulation piercing clamping units are referred to as IPCDs (insulation-piercing connecting devices).

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

IEC 60227 (all parts), *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V*

IEC 60245 (all parts), *Rubber insulated cables*

3 Definitions

This clause of Part 1 is applicable except as follows:

Additional definitions:

3.101

insulation-piercing connecting device IPCD

connecting device for the connection and possible disconnection of one conductor or the interconnection of two or more conductors, the connection being made by piercing, boring through, cutting through, removing, displacing or making ineffective in some other manner the insulation of the conductor(s) without previous stripping

NOTE 1 The removal of the sheath of the cable, if necessary, is not considered as a previous stripping.

NOTE 2 Examples of IPCDs are given in Figure 103.

3.102

reusable IPCD

IPCD that can be used more than once

3.103

non reusable IPCD

IPCD that can be used only once

3.104

non-removable IPCD

PCD that can be used only once and can only be removed from the circuit by cutting the conductors

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 AA.

5.4 Replacement:

The necessary number of new samples to be submitted to the tests is divided into sets as detailed in annex AA 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 except as follows:

Additional subclauses:

7.101 Classification according to reusability and removability

- reusable IPCD;
- non-reusable IPCD;
- non-removable IPCD.

7.102 Classification according to the method of making the connection

- with a general purpose tool;
- with a special tool;
- by hand.

7.103 Classification according to conductor type

- IPCDs for rigid solid conductors only;
- IPCDs for rigid (solid or stranded) conductors only;
- IPCDs for flexible conductors only;
- IPCDs for rigid (solid and/or stranded) and flexible conductors.

7.104 Classification according to conductor insulation

- IPCDs for conductors according to IEC 60227;
- IPCDs for conductors according to IEC 60245;
- IPCDs for special conductors specified by the manufacturer.

7.105 Classification according to the number of cores in the conductor to be connected

- IPCDs for one core conductors;
- IPCDs for multicore cables or cords.

8 Marking

This clause of Part 1 is applicable except as follows:

Additional subclauses:

8.101 The following shall be indicated on the smallest package unit:

- if the IPCD is non-reusable or non-removable (7.101) (absence of marking indicates the IPCD is reusable);
- the connection and disconnection procedure, if necessary (for example, screw torque values if higher than stated in Table 102);
- the combinations of cross-sectional areas and types of conductors according to the classification of 7.103, 7.104 and 7.105 for which the IPCD is designed (method of connection according to 7.102 if necessary).

The manufacturer shall describe the types of cable and of insulation suitable for his system if the contact pressure is being transmitted through this conductor insulation.

8.102 IPCDs classified according to 7.103 shall be marked as follows:

- terminals declared for solid conductors with the letter(s) “s” or “sol”;
- terminals declared for rigid conductors with the letter “r”;
- terminals declared for flexible conductors with the letter “f”.
- terminals declared for rigid (solid and/or stranded) and flexible conductors need not be marked.

This marking shall appear where it is practical on the end product or on the smallest package unit or in technical information and/or catalogues.

9 Protection against electric shock

This clause of Part 1 is applicable.