
**Connecting devices for low-voltage circuits for household and similar purposes -
Part 2-4: Particular requirements for twist-on connecting devices (IEC 998-2-
4:1993)**

Connecting devices for low-voltage circuits for household and similar purposes -- Part 2-
4: Particular requirements for twist-on connecting devices

Verbindungsmaterial für Niederspannungs-Stromkreise für Haushalt und ähnliche
Zwecke -- Teil 2-4: Besondere Anforderungen an Drehklemmen

Dispositifs de connexion pour circuits basse tension pour usage domestique et analogue
-- Partie 2-4: Règles particulières pour dispositifs de connexion par épissure

Ta slovenski standard je istoveten z: EN 60998-2-4:1993

ICS:

29.120.20 Spojni elementi Connecting devices

SIST EN 60998-2-4:1996**en**

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EUROPEAN STANDARD

EN 60998-2-4

NORME EUROPEENNE

EUROPÄISCHE NORM

June 1993

UDC 621.315.684:621.315.3:621.172

Descriptors: Electrical equipment, low voltage switchgear, home electrical installations, connecting equipment, safety requirements, detail specifications, characteristics, protection against electric shocks, tests, marking

ENGLISH VERSION

Connecting devices for low-voltage circuits for household and similar purposes
Part 2: Particular requirements for twist-on connecting devices
(IEC 998-2-4:1993)

Dispositifs de connexion pour circuits basse tension pour usage domestique et analogue
Partie 2-4: Règles particulières pour dispositifs de connexion par épissure
(CEI 998-2-4:1993)

Verbindungsmaterial für Niederspannungs-Stromkreise für Haushalt und ähnliche Zwecke
Teil 2-4: Besondere Anforderungen an Drehklemmen
(IEC 998-2-4:1993)

STANDARD PREVIEW
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This European Standard was approved by CENELEC on 1992-03-24. 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 text of document 23F(CO)48, as prepared by sub-committee 23F: Connecting devices, of IEC technical committee 23: Electrical accessories, was submitted to the IEC-CENELEC parallel vote in July 1991.

The reference document was approved by CENELEC as EN 6060998-2-4 on 24 March 1992.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-05-01
- latest date of withdrawal of conflicting national standards (dow) 1994-05-01

For products which have complied with the relevant national standard before 1994-05-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-05-01.

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Annexes designated "normative" are part of the body of the standard. In this standard, annex ZA is normative.

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ENDORSEMENT NOTICE

The text of the International Standard IEC 998-2-4:1993 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

| IEC Publication ----- | Date ----- | Title ----- | EN/HD ----- | Date ----- |
|-----------------------------|---------------|--|--|----------------------|
| 112 | 1979 | Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions | HD 214 S2 | 1980 |
| 228, mod | 1978 | Conductors of insulated cables | HD 383 S2* HD 383 S2/A1 HD 383 S2/A2 | 1986 1989 1993 |
| 364 | series | Electrical installations of buildings | HD 384 | series |
| 529 | 1989 | Degrees of protection provided by enclosures (IP Code) | EN 60529 | 1991 |
| 664A | 1981 | Insulation coordination for equipment within low-voltage systems - First supplement | - | - |
| 695-2-1 | 1980 | Fire hazard testing - Part 2: Test methods - Glow-wire test and guidance | HD 444.2.1 S1 | 1983 |
| 999, mod | 1990 | Connecting devices - Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors | EN 60999 | 1993 |

* HD 383 S2 includes IEC 228A to IEC 228

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NORME
INTERNATIONALE
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STANDARD

CEI
IEC
998-2-4

Première édition
First edition
1993-05

Dispositifs de connexion pour
circuits basse tension pour usage
domestique et analogue

Partie 2-4:
Règles particulières pour dispositifs
de connexion par épissure

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

Part 2-4:
Particular requirements for
twist-on connecting devices

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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTING DEVICES FOR
LOW-VOLTAGE CIRCUITS FOR HOUSEHOLD AND
SIMILAR PURPOSES

Part 2-4: Particular requirements for
twist-on connecting devices

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) 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.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

International Standard IEC 998-2-4 has been prepared by sub-committee 23F: Connecting devices, of IEC technical committee 23: Electrical accessories.

It forms the first edition of IEC 998-2-4 and supersedes IEC 685-2-4 (1983).

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

| DIS | Report on Voting |
|-----------|------------------|
| 23F(CO)48 | 23F(CO)51 |

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This part 2-4 is intended to be used in conjunction with IEC 998-1 so as to convert that publication into IEC standard: Requirements for connecting devices as separate entities with twist-on clamping unit for copper conductors (first edition).

Where a particular subclause of part 1 is not mentioned in this part 2-4, that subclause applies as far as is reasonable. Where this first edition states "addition", "modification" or "replacement", the relevant requirement, 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.

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CONNECTING DEVICES FOR LOW-VOLTAGE CIRCUITS FOR HOUSEHOLD AND SIMILAR PURPOSES

Part 2-4: Particular requirements for twist-on connecting devices

1 Scope

This clause of part 1 is replaced as follows.

This standard applies to twist-on connecting devices for connecting two or more unprepared rigid and/or flexible copper conductors having a cross-sectional area of $0,5 \text{ mm}^2$ up to and including 16 mm^2 and complying with IEC 228, the total cross-sectional area of the connected conductors not exceeding 35 mm^2 .

It covers low voltage circuits up to 1 000 V a.c. and 1 500 V d.c. where electrical energy is utilized for household and similar purposes.

This standard is to be used together with part 1.

In this standard, twist-on connecting devices are abbreviated to TOCDs.

This standard covers TOCDs primarily designed for application by hand. However, certain TOCDs, for example for large cross-sections, may require the use of a tool designed for that particular TOCD.

2 Normative references

This clause of part 1 is applicable.

Additional reference:

IEC 999: 1990, *Connecting devices – Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors*

3 Definitions

This clause of part 1 is applicable, except as follows:

Additional definitions:

3.101 twist-on connecting device (TOCD): A terminal which is twisted on the ends of two or more conductors.