SLOVENSKI STANDARD

SIST EN 60898-1:2004/A1:2006

januar 2006

Električni pribor – Odklopniki za nadtokovno zaščito za gospodinjstvo in podobne inštalacije – 1. del: Odklopniki za izmenični tok (IEC 60898-1:2002/A1:2002, spremenjen)

(istoveten EN 60898-1:2003/A1:2004)

Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1: Circuit-breakers for a.c. operation (IEC 60898-1:2002/A1:2002, modified)

ICS 29.120.50

Referenčna številka
SIST EN 60898-1:2004/A1:2006(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60898-1/A1

August 2004

ICS 29.120.50

English version

Electrical accessories – Circuit breakers for overcurrent protection for household and similar installations Part 1: Circuit-breakers for a.c. operation

(IEC 60898-1:2002/A1:2002, modified)

Petit appareillage électrique – Disjoncteurs pour la protection contre les surintensités pour installations domestiques et analogues Partie 1: Disjoncteurs pour le fonctionnement en courant alternatif (CEI 60898-1:2002/A1:2002, modifiée)

Elektrisches Installationsmaterial - Leitungsschutzschalter für Hausinstallationen und ähnliche Zwecke Teil 1: Leitungsschutzschalter für Wechselstrom (AC) (IEC 60898-1:2002/A1:2002, modifiziert)

This amendment A1 modifies the European Standard EN 60898-1:2003; it was approved by CENELEC on 2004-03-16. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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

Ref. No. EN 60898-1:2003/A1:2004 E

Foreword

The text of amendment 1:2002 to the International Standard IEC 60898-1:2002, prepared by SC 23E, Circuit-breakers and similar equipment for household use, of IEC TC 23, Electrical accessories, together with common modifications prepared by the Technical Committee CENELEC TC 23E, Circuit breakers and similar devices for household and similar applications, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to EN 60898-1:2003 on 2004-03-16.

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2005-04-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2008-10-01

Annex ZC has been added by CENELEC.

Endorsement notice

The text of amendment 1:2002 to the International Standard IEC 60898-1:2002 was approved by CENELEC as an amendment to the European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Annex J

J.1 Scope

Delete the note.

J.3 Definitions

J.3.3 **Delete** the note.

Annex K

K.1 Scope

Delete the note.

K.8 Constructional requirements

K.8.2.2 **Delete** note 1.

Add Annex ZC.

Annex ZC
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause	Special national condition
J.1	**Austria, Czech Republic, Denmark, Germany, Netherlands, Norway and Switzerland**
	The upper limit of current for use of screwless terminals is 16 A.
J.3.3	**Austria, Belgium, Denmark, France, Germany, Italy, Portugal, Spain, Sweden, Switzerland and United Kingdom**
	Only universal screwless type terminals are accepted.
K.1	**Belgium, France, Italy, Portugal, Spain and United Kingdom**
	The use of circuit-breakers with flat quick-connect terminations for rated currents up to and including 20 A is accepted.
K.8.2.2	**Belgium, France, Italy, Portugal, Spain and United Kingdom**
	The use for rated currents up to and including 20 A

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60898-1

2002

AMENDEMENT 1
AMENDMENT 1
2002-05

Amendement 1

Petit appareillage électrique – Disjoncteurs pour la protection contre les surintensités pour installations domestiques et analogues –

Partie 1: Disjoncteurs pour le fonctionnement en courant alternatif

Amendment 1

Electrical accessories – Circuit-breakers for overcurrent protection for household and similar installations –

Part 1: Circuit-breakers for a.c. operation

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE R

Pour prix, voir catalogue en vigueur
For price, see current catalogue

FOREWORD

This amendment has been prepared by subcommittee 23E: Circuit-breakers and similar equipment for household use, of IEC technical committee 23: Electrical accessories.

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

FDIS	Report on voting
23E/484/FDIS	23E/492/RVD

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

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2003. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

CONTENTS

Add the titles of annexes J and K as follows:

4 Classification

4.4 According to the method of connection

Replace, the existing subclause by the following new subclause:

4.4 According to the methods of connection

4.4.1 According to the fixation system:

– circuit-breakers, the electrical connections of which are not associated with the mechanical mounting;

– circuit-breakers, the electrical connections of which are associated with the mechanical mounting.

NOTE Examples of this type are:

– plug-in type;
– bolt-on type;
– screw-in type.

Some circuit-breakers may be of the plug-in type or bolt-on type on the line side only, the load terminals being usually suitable for wiring connection.

4.4.2 According to the type of terminals:

– circuit-breakers with screw-type terminals for external copper conductors;

– circuit-breakers with screwless type terminals for external copper conductors;

NOTE 1 The requirements for circuit-breakers equipped with this type of terminals are given in annex J.

– circuit-breakers with flat quick-connect terminals for external copper conductors;

NOTE 2 The requirements for circuit-breakers equipped with this type of terminals are given in annex K.

– circuit-breakers with screw-type terminals for external aluminium conductors;

NOTE 3 The requirements for circuit-breakers equipped with this type of terminals are under consideration.

8 Requirements for construction and operation

8.1.5 Terminals for external conductors

8.1.5.1 *Delete the sentence*: "In this standard only ... are considered"

Delete the note.

Replace the last sentence by the following:

Compliance is checked by inspection, by the tests of 9.5 for screw-type terminals, by specific tests for plug-in or bolt-on circuit-breakers included in the standard, or by the tests of annex J or K, as relevant for the type of connection.

8.1.5.2

Replace the existing text of the first note by the following new text:

NOTE 1 Examples of possible designs of screw-type terminals are given in annex F.

Renumber the second note as NOTE 2.

9 Tests

9.5 Test of reliability of terminals for external conductors

Replace the existing title of this subclause by the following new title:

9.5 Tests of reliability of screw-type terminals for external copper conductors

Add the following new annexes:

Annex J
(normative)

Particular requirements for circuit-breakers with screwless type terminals for external copper conductors

J.1 Scope

This annex applies to circuit-breakers within the scope of clause 1, equipped with screwless terminals, for current not exceeding 20 A primarily suitable for connecting unprepared (see J.3.6) copper conductors of cross-section up to 4 mm^2.

NOTE In AT, CZ, DE, DK, NL, NO and CH the upper limit of current for use of screwless terminals is 16 A.

In this annex, screwless terminals are referred to as terminals and copper conductors are referred to as conductors.

J.2 Normative references

Clause 2 applies.

J.3 Definitions

As a complement to clause 3, the following definitions apply:

J.3.1
clamping units
parts of the terminal necessary for mechanical clamping and the electrical connection of the conductors including the parts which are necessary to ensure correct contact pressure

J.3.2
screwless-type terminal
terminal for the connection and subsequent disconnection obtained directly or indirectly by means of springs, wedges or the like

NOTE Examples are given in figure J 2 .

J.3.3
universal terminal
terminal for the connection and disconnection of all types of conductors (rigid and flexible)

NOTE In the following countries only universal screwless type terminals are accepted: AT, BE, CN, DK, DE, ES, FR, IT, PT, SE and CH.

J.3.4
non-universal terminal
terminal for the connection and disconnection of a certain kind of conductor only (e.g. rigid-solid conductors only or rigid-[solid or stranded] conductors only)

J.3.5
push-wire terminal
non-universal terminal in which the connection is made by pushing-in rigid (solid or stranded) conductors

J.3.6
unprepared conductor
conductor which has been cut and the insulation of which has been removed over a certain length for insertion into a terminal

NOTE 1 A conductor the shape of which is arranged for introduction into a terminal or of which the strands may be twisted to consolidate the end, is considered to be an unprepared conductor.

NOTE 2 The term "unprepared conductor" means conductor not prepared by soldering of the wire, use of cable lugs, formation of eyelets, etc., but includes its reshaping before introduction into the terminal or, in the case of flexible conductor, by twisting it to consolidate the end.

J.4 Classification

Clause 4 applies.

J.5 Characteristics of circuit-breakers

Clause 5 applies.

J.6 Marking

In addition to clause 6, the following requirements apply:

Universal terminals:

– no marking.

Non-universal terminals:

– terminals declared for rigid-solid conductors shall be marked by the letters "sol";
– terminals declared for rigid (solid and stranded) conductors shall be marked by the letter "r";
– terminals declared for flexible conductors shall be marked by the letter "f".

The markings should appear on the circuit-breaker or, if the space available is not sufficient, on the smallest package unit or in technical information .

An appropriate marking indicating the length of insulation to be removed before insertion of the conductor into the terminal shall be shown on the circuit-breaker.

The manufacturer shall also provide information, in his literature, on the maximum number of conductors which may be clamped.

J.7 Standard conditions for operation in service

Clause 7 applies.