SLOVENSKI STANDARD
SIST EN 60127-4:2006/A1:2009

01-april-2009

Miniaturne varovalke 4. del: Univerzalni modularni taljivi vložki - Skoznji vložki in vložki za površinsko montažo (IEC 60127-4:2005/A1:2008)

Miniature fuses - Part 4: Universal modular fuse-links (UMF) - Through-hole and surface mount types (IEC 60127-4:2005/A1:2008)

Geräteschutzsicherungen - Teil 4: Welteinheitliche modulare Sicherungseinsätze (UMF) - Bauarten für Steck- und Oberflächenmontage (IEC 60127-4:2005/A1:2008)

Coupe-circuit miniatures - Partie 4: Eléments de remplacement modulaires universels (UMF) - Types de montage en surface et montage par trous (CEI 60127-4:2005/A1:2008)

Ta slovenski standard je istoveten z: **EN 60127-4:2005/A1:2009**

ICS:

29.120.50	Varovalke in druga medtokovna zaģļ ita	Fuses and other overcurrent protection devices

SIST EN 60127-4:2006/A1:2009 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60127-4/A1

February 2009

ICS 29.120.50

English version

Miniature fuses - Part 4: Universal modular fuse-links (UMF) - Through-hole and surface mount types (IEC 60127-4:2005/A1:2008)

Coupe-circuit miniatures -
Partie 4: Eléments de remplacement modulaires universels (UMF) -
Types de montage en surface et montage par trous
(CEI 60127-4:2005/A1:2008)

Geräteschutzsicherungen -
Teil 4: Welteinheitliche modulare Sicherungseinsätze (UMF) -
Bauarten für Steck- und Oberflächenmontage
(IEC 60127-4:2005/A1:2008)

This amendment A1 modifies the European Standard EN 60127-4:2005; it was approved by CENELEC on 2009-02-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 32C/411/FDIS, future amendment 1 to IEC 60127-4:2005, prepared by SC 32C, Miniature fuses, of IEC TC 32, Fuses, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60127-4:2005 on 2009-02-01.

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)	2009-11-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2012-02-01

Endorsement notice

The text of amendment 1:2008 to the International Standard IEC 60127-4:2005 was approved by CENELEC as an amendment to the European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61190-1-2 NOTE Harmonized as EN 61190-1-2:2007 (not modified).

IEC 60127-4

Edition 3.0 2008-05

INTERNATIONAL STANDARD

AMENDMENT 1

Miniature fuses – Part 4: Universal modular fuse-links (UMF) – Through-hole and surface mount types

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRICE CODE G

ICS 29.120.50

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FOREWORD

This amendment has been prepared by subcommittee 32C: Miniature fuses, of IEC technical committee 32: Fuses.

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

FDIS	Report on voting
32C/411/FDIS	32C/412/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 this amendment and the base publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.

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7.3 Fuse-bases for tests

7.3.1 General requirements

Replace, in the second paragraph, the second dashed item commencing "… the nominal thickness of copper layer … " *by the following:*

- the nominal thickness of copper layer shall be 0,035 mm (0.070 mm for rated currents above 5 A).

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8.6 Solderability of terminations

Add, after the title, the following new sentence:

For the tests described in 8.6.1 to 8.6.2, lead-free solder as described in Table 2 of IEC 60068-2-58 shall be used in the solder bath.

8.6.1 Through-hole fuse-links

In the list of test conditions, replace the second condition (immersion conditions) as follows:

Immersion conditions: 250 °C ± 3 °C, 3 s ± 0,3 s

8.6.2 Surface mount fuse-links

Replace the first sentence as follows:

The fuse-links shall be tested according to 6.2 of IEC 60068-2-58, with the following conditions:

In the list of test conditions, replace the second condition (immersion conditions) as follows:

Immersion conditions: 250 °C ± 3 °C, 3 s ± 0,3 s

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8.7.2 Surface mount fuse-links

Replace the first sentence as follows:

The fuse-links shall be tested according to 6.2 of IEC 60068-2-58, with the following conditions:

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9.7 Fuse-link temperature

In item a) replace the second sentence “The temperature rise shall not exceed 70 K for rated current up to and including 6,3 A, and 85 K for rated current above 6,3 A;” *by the following:*

The temperature rise shall not exceed 75 K for fuse-links with rated current up to and including 6,3 A and 95 K for rated current above 6,3 A;

In item b) replace the last sentence “The temperature rise shall not exceed 85 K.“ *by the following:*

The temperature rise shall not exceed 95 K.

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Figure 2 – Test board for through-hole fuse-links

Replace, in the key to Figure 2, all three occurrences of “6,3 A” *by* ”5 A”.

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Figure 3 – Test board for surface mount fuse-links

Replace, in the key to Figure 3, the two references to "6,3 A" *by* "5 A".

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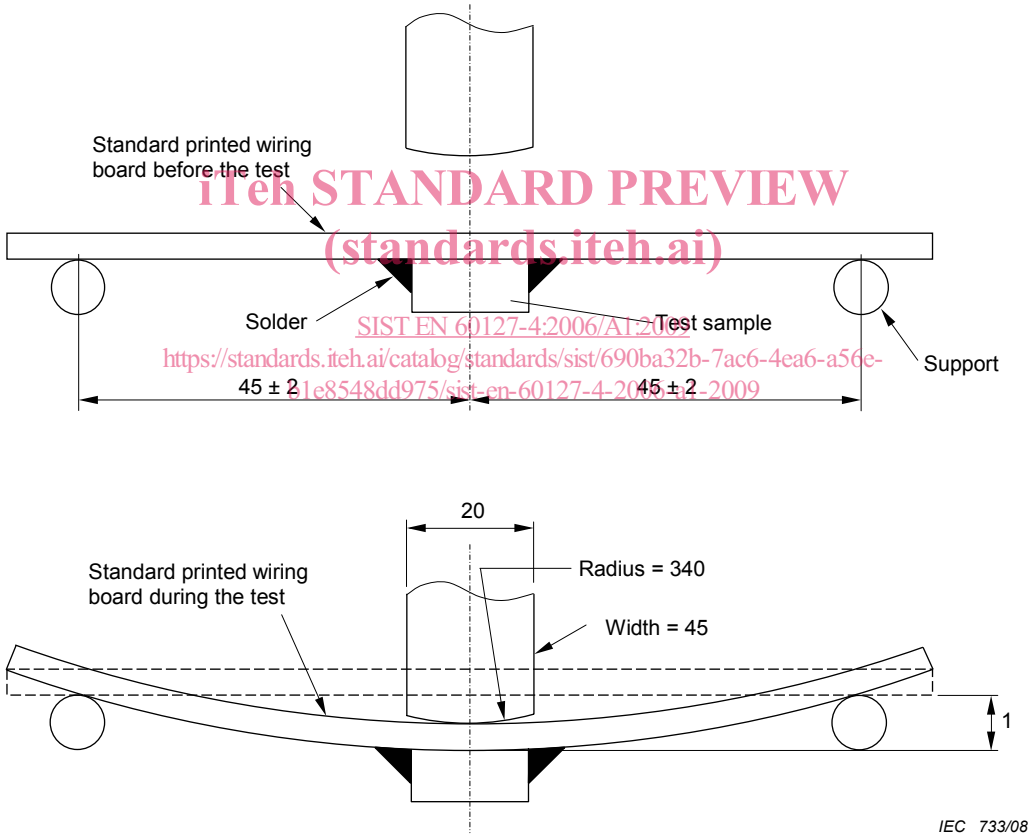
Figure 5– Bending jig for surface-mount fuse-links

Replace the drawings of Figure 5 by the following new drawings:

Dimensions in millimetres



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10.2 Standard sheet 2 – Surface mount fuse-links

Replace, in the table of values, under column "Minimum terminal spacing"*, for fuse-links with rated voltage 250 V (low-breaking capacity) the value* "4" *by the value* "2,5"*.*

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Annex A
(informative)

Mounting for surface mount fuse-links

Replace the text of Annex A by the following new text:

The test fuse-links may be submitted to the test house already soldered to the test boards. However, some tests require fuses to be loose, e.g. "solderability" and "resistance to soldering heat" tests, while through-hole type "bend testing" has to be carried out before soldering. While it is considered acceptable for the test house to be able to solder the through-hole types to the test board for subsequent measurement of voltage drop, there is a difficulty with soldering SMD fuse-links that have been subjected to resistance to soldering heat onto a test board so that the voltage drop can be tested.

Some of the following is taken from IEC 60068-2-58 using "Group 3 Medium High Temperature Solder paste".

a) Choice of solder paste

   1) The alloy composition to be used shall consist of 3,0 wt % Ag (silver), 0,5 wt % Cu (copper) and the remainder of Sn (tin); Sn96,5Ag3,0Cu0,5 is preferred. The solder alloys shall consist of 3,0 wt % to 4,0 wt % Ag, 0,5 wt % to 1,0 wt % Cu, and the remainder of Sn may be used instead of Sn96,5Ag3,0Cu0,5.

      – Solder powder

        The powder size shall be symbol 3, specified in Table 2 of 6.3.2 of IEC 61190-1-2.

        The shape of the solder powder shall be spherical.

      – Flux composition

        The flux to be used shall consist of 30 wt % polymerization rosin (softening point approximately 95 °C), 30 wt % dibasic acid degeneration rosin (softening point approximately 140 °C), 34,7 wt % diethylene glycol monobutyl ether, 0,8 wt % 1,3-diphenylguanidine- HBr, 0,5 wt % adipic acid (chlorine content less than 0,1 %) and 4 wt % stiffening castor oil.

      – Solder paste composition

        The solder paste to be used shall consist of 88 wt % solder powder and 12 wt % flux. The viscosity range shall be (180 ± 50) Pa·s.

   2) The footprints shall be covered with a solder deposit. The thickness of the solder deposit shall be between 100 µm and 250 µm; the thickness shall be specified in the relevant specification

b) Preparation of the specimen