SLOVENSKI STANDARD

SIST EN 60127-1:1995/A1:2000

prva izdaja
april 2000

Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links - Amendment A1 (IEC 60127-1:1988/A1:1999)

ICS 29.120.50

Referenčna številka
SIST EN 60127-1:1995/A1:2000(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60127-1/A1

May 1999

ICS 29.120.50

English version

Miniature fuses
Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links
(IEC 60127-1:1988/A1:1999)

Coupe-circuit miniatures
Partie 1: Définitions pour coupe-circuit miniatures et prescriptions générales pour éléments de remplacement miniatures
(CEI 60127-1:1988/A1:1999)

Geräteschutzsicherungen
Teil 1: Begriffe für die Geräteschutzsicherungen und allgemeine Anforderungen an G-Sicherungseinsätze
(IEC 60127-1:1988/A1:1999)

This amendment A1 modifies the European Standard EN 60127-1:1991; it was approved by CENELEC on 1999-05-01. 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, Czech Republic, 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

Ref. No. EN 60127-1:1991/A1:1999 E

Foreword

The text of document 32C/221/FDIS, future amendment 1 to IEC 60127-1, 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 60127-1:1988 on 1999-05-01.

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)	2000-02-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2002-05-01

Endorsement notice

The text of amendment 1:1999 to the International Standard IEC 60127-1:1988 was approved by CENELEC as an amendment to the European Standard without any modification.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60127-1

1988

AMENDEMENT 1
AMENDMENT 1
1999-03

Amendement 1

Coupe-circuit miniatures –

Partie 1: Définitions pour coupe-circuit miniatures et prescriptions générales pour éléments de remplacement miniatures

Amendment 1

Miniature fuses –

Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links

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CODE PRIX
PRICE CODE J

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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/221/FDIS	32C/224/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.

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CONTENTS

Add the title of the new annex C as follows:

Annex C (informative) Audit testing and surveillance – Guidelines for the application of the principles of IECEE 03 (CB-FCS) to miniature fuse-links

Page 31

9.3 Breaking capacity

Replace in 9.3.1 the existing text of the third paragraph by the following new text:

The recovery voltage shall be between 1,02 and 1,05* times the rated voltage of the fuse-links and shall be maintained for 30 s after the fuse has operated.

Add, at the bottom of page 31, the following footnote:

* This tolerance may be exceeded with the manufacturer's consent.

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Add, after appendix B, the following new annex C:

Annex C
(informative)

Audit testing and surveillance – Guidelines for the application of the principles of IECEE 03 (CB-FCS) to miniature fuse-links

Introduction

This annex contains instructions for audit testing and surveillance of fuse-links. The tests and inspections described in this annex are optional. However, if they are carried out, it is essential that the requirements for audit testing and surveillance are met.

C.1 Scope

This annex describes the obligations of the fuse-link manufacturers and the National Certification Body (NCB) for audit testing and surveillance of fuse-link production.

It covers the preparation of the Conformity Assessment Report and the audit testing and surveillance considered to be the minimum requirements of the NCB. Such inspections, tests, and measures are implemented by the NCB as an audit of the means that the manufacturer exercises to determine the conformance of products with the requirements of the appropriate parts of IEC 60127.

C.2 Definitions

For the purpose of this annex, the following definitions apply.

C.2.1
applicant
party who requests the conformity assessment, and controls the manufacturing of the product

C.2.2
conformity assessment
any activity concerned with determining directly or indirectly that relevant requirements are fulfilled

[IECEE 03:1995, definition 3.3]

C.2.3
significant sample
sample taken to be representative of a homogeneous series of fuse-links

C.2.4
Conformity Assessment Report
a document containing product and factory conformity assessment information issued by Body A to the applicant

[IECEE 03:1995, definition 3.5]

C.3 Conformity Assessment Report

C.3.1 Product description

The part of the Conformity Assessment Report regarding product description shall identify only those details of components and dimensions which have a major impact on the performance of the fuse-link. The following are examples of the type of details which may be used to prepare the descriptive part of the Conformity Assessment Report:

a) **fuse-element:** material, thickness, and diagram of overall shape for every ampere rating;

b) **time-delay section:** defines general terms such as spring-loaded, solder slug, etc.; gives details on fusing alloy material, dimensions and any other major components;

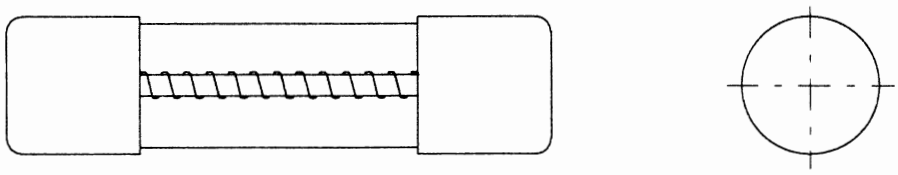
c) **body:** material and minimum wall thickness;

d) **filler:** generic description of filler material; grain size if applicable;

e) **contacts:** material and plating, method of securement, and key dimensions not covered by overall dimension requirements;

f) **miscellaneous:** description of other components which have a major impact on the fuse-link design and performance.

An example of product description is included in figure C.1.



IEC 472/99

Cylindrical fuse-links 20 mm long by 5 mm in diameter containing a wire element helically wound on a ceramic core. The wire element is soldered to the contacts at each end of the fuse.

a) **Contacts:** cyclindrical end caps of plated or unplated copper alloy with a minimum wall thickness of 0,25 mm.

b) **Core:** ceramic.

c) **Fuse-element:** wire helically wound on a supporting core.

Ampere rating:	6,3 A
Wire diameter:	0,40 mm
Basic material:	copper alloy
Plating material	tin

d) **Filler:** quartz sand; grain size 100 µm to 300 µm.

e) **Tube:** glass with a minimum wall thickness of 0,50 mm.

f) **Miscellaneous items:** none.

Figure C.1 – Example of a fuse-link description

C.3.2 Identification of significant samples

When the reduced sampling plan is used, the Conformity Assessment Report shall identify the significant samples which are necessary for testing, chosen on the basis of their representation of a homogeneous series. If a certain fuse-link rating requires no testing or only a partial test programme due to similarities with another fuse-link which is already scheduled for tests, this shall be noted.

C.4 Use of the standard

The requirements of IEC 60127-1 and the relevant subsequent parts shall be applied for the audit testing and surveillance, except where information in the Conformity Assessment Report specifically overrides these requirements. Specific references are noted in tables C.1 and C.2.

C.5 Audit test and surveillance programme options

Four programme options are available to verify the ability of the applicant to supply fuse-links which continue to meet the requirements of the relevant part of IEC 60127. The applicant shall choose one of these options. The programmes are not intended for combined use, though different programmes may be chosen for different fuse-link series.

Option 1: a complete test programme according to the relevant part of IEC 60127 shall be performed on every ampere rating of each fuse-link series. The complete programme shall be repeated at 10 year intervals according to C.5.1 below.

Option 2: a complete test programme according to the relevant part of IEC 60127 shall be performed on every ampere rating of each fuse-link series. The complete programme shall be repeated at 10 years intervals, and the applicant's quality control system shall be utilized according to C.5.2 below.

Option 3: a test program which uses the homogeneous series (significant sample) approach shall be performed according to C.5.3 below.

Option 4: a test program which uses the homogeneous series (significant sample) approach and the applicant's quality control system shall be performed according to C.5.4 below.

The following points apply to each option:

a) the scheduling of the audit testing and surveillance may be staggered;

b) the NCB shall be responsible for surveillance and audit activities;

c) the applicant shall give proof of continuous conformance with the requirements of the appropriate part of IEC 60127;

d) the selection of samples for audit testing and surveillance shall be random, if possible;

e) it is recommended that spare samples be selected for audit testing, in order to reduce the delay if additional tests are needed;