

Svenska Elektriska Kommissionen, SEK

Fastställt	Utgåva	Sida	Ingår i
2002-04-18	1	1 (1+16)	SEK Område 32C

© Copyright SEK. Reproduction in any form without permission is prohibited.

Finsäkringar – Del 10: Vägledning för apparatkonstruktörer

Miniature fuses –

Part 10: User guide for miniature fuses

Som svensk standard gäller europastandarden EN 60127-10:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60127-10:2002.

Nationellt förord

Europastandarden EN 60127-10:2002

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60127-10, First edition, 2001 - Miniature fuses - Part 10: User guide for miniature fuses**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 29.120.50

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK, som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. Telefax: 08 - 444 14 30
E-post: sek@sekom.se. Internet: www.sekom.se

EUROPEAN STANDARD

EN 60127-10

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2002

ICS 29.120.50

English version

Miniature fuses
Part 10: User guide for miniature fuses
(IEC 60127-10:2001)

Coupe-circuit miniatures
Part 10: Guide d'utilisation
pour coupe-circuit miniatures
(CEI 60127-10:2001)

Geräteschutzsicherungen
Teil 10: Leitfaden für die Anwendung
von Geräteschutzsicherungen
(IEC 60127-10:2001)

This European Standard was approved by CENELEC on 2002-02-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, 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 32C/294/FDIS, future edition 1 of IEC 60127-10, 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 EN 60127-10 on 2002-02-01.

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) 2002-11-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2005-02-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60127-10:2001 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60127-2 + corr. March	1989 1990	Miniature fuses Part 2: Cartridge fuse-links	EN 60127-2	1991
IEC 60127-3	1988	Part 3: Sub-miniature fuse-links	EN 60127-3 ¹⁾ + corr. June	1996 1996
IEC 60127-4	1996	Part 4: Universal Modular Fuse-links (UMF)	EN 60127-4	1996
IEC 60127-6	1994	Part 6: Fuse-holders for miniature fuse- links	EN 60127-6	1994
IEC 60269	Series	Low-voltage fuses	EN 60269	Series

¹⁾ EN 60127-3 includes A1:1991 and its corrigendum October 1994 to IEC 60127-3.

CONTENTS

1	Scope.....	9
2	Normative references	9
3	Properties of miniature fuses	11
4	Different types of fuse-links	11
	4.1 Characteristics	13
	4.2 Breaking capacity.....	13
	4.3 Cartridge fuse-links (IEC 60127-2)	13
	4.4 Sub-miniature fuse-links (IEC 60127-3).....	15
	4.5 Universal Modular Fuse-links (IEC 60127-4)	17
5	Applications.....	17
	5.1 Applications – Fuse selection criteria	17
	5.2 Electrical criteria	19
	5.3 Mechanical/physical dimensions.....	19
6	Protection by I^2t limitation and pulse operation.....	19
	6.1 I^2t value	19
	6.2 Pulse operation	21
	6.3 I^2t limitation	21
7	Direct current (d.c.) applications.....	21
	7.1 General information.....	21
	7.2 Battery circuits	23
	7.3 Inductive load circuits.....	23
8	Fuse-holders	23
	8.1 Features	23
	8.2 Safety aspects	23
	8.3 Selection of a fuse-holder	23
	8.4 Exchange of fuse-links under load.....	25
9	Performance on extra-low voltages.....	25
10	Influence of ambient temperature	27
	Bibliography.....	31

MINIATURE FUSES –

Part 10: User guide for miniature fuses

1 Scope

This part of IEC 60127 relates to miniature fuses for the protection of electric appliances, electronic equipment and component parts thereof, normally intended to be used indoors, as specified in IEC 60127-2, 60127-3 and 60127-4.

This standard does not apply to fuses for appliances intended to be used under special conditions, such as in a corrosive or explosive atmosphere.

It relates to fuse-holders for miniature fuse-links according to IEC 60127-6.

The object of this guide is to introduce the user to the important properties of miniature fuse-links and fuse-holders for miniature fuses-links and to give some guidance on applying them.

NOTE 1 If the performance of IEC 60127 fuses proves inadequate, refer to IEC 60269.

NOTE 2 Fuse-links of the same type and rating may, due to differences in design, have different voltage drops and different behaviours. Therefore, in practice, they may not be interchangeable when used in applications with low-circuit voltages, especially in combination with fuse-links of lower rated currents.

NOTE 3 Contact the manufacturer for further information.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60127. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60127 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60127-2:1989, *Miniature fuses – Part 2: Cartridge fuse-links*

IEC 60127-3:1988, *Miniature fuses – Part 3: Sub-miniature fuse-links*

IEC 60127-4:1996, *Miniatures fuses – Part 4: Universal Modular Fuse-links (UMF)*

IEC 60127-6:1994, *Miniature fuses – Part 6: Fuse-holders for miniature cartridge fuse-links*

IEC 60269 (all parts), *Low-voltage fuses*