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# INTERNATIONAL STANDARD

REDLINE VERSION

**Miniature fuses -**
**Part 7: Miniature fuse-links for special application**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# Miniature fuses - Part 7: Miniature fuse-links for special application

## FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60127-7:2015. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 60127-7 has been prepared by subcommittee 32C: Miniature fuses, of IEC technical committee 32: Fuses. It is an International Standard.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) alignment with IEC 60127-1:2023 (third edition);
b) change of the rated current of miniature fuse-links for special application to 125A and provision of relevant requirements;
c) addition of a test board for surface mount fuse-links (Figure 2);
d) addition of test schedules for homogenous series.

This part of IEC 60127 is to be read in conjunction with Part 1. It supplements or modifies the corresponding clauses of Part 1. Where the text indicates an "addition" to or a "replacement" of the relevant provision of Part 1, these changes are made to the relevant text of Part 1. When a particular subclause of Part 1 is not mentioned in this part, that subclause applies as far as is reasonable.

Additional specific provisions to those in Part 1, given as individual clauses or subclauses, are numbered starting from 101.

NOTE The following numbering system is used:

– subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
– unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
– additional annexes are lettered AA, BB, etc.

The text of this International Standard is based on the following documents:

| Draft | Report on voting |
|---|---|
| 32C/679/FDIS | 32C/681/RVD |

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

The language used for the development of this International Standard is English.

A list of all parts in the IEC 60127 series, published under the general title *Miniature fuses*, can be found on the IEC website.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

# INTRODUCTION

According to the wish expressed by the users of miniature fuses, all standards, recommendations and other documents relating to miniature fuses ~~should~~ have the same publication number in order to facilitate reference to fuses in other specifications, for example, equipment specifications.

Furthermore, a single publication number and subdivision into parts would facilitate the establishment of new standards, because clauses and subclauses containing general requirements need not be repeated.

The new IEC 60127 series~~, under the general heading *Miniature fuses*,~~ is thus subdivided as follows:

IEC 60127, *Miniature fuses* (general title)

IEC 60127-1, *Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links*

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

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

IEC 60127-4, *Miniature fuses - Part 4: Universal modular fuse-links (UMF) - Through-hole and surface mount types*

IEC 60127-5, *Miniature fuses - Part 5: Guidelines for quality assessment of miniature fuse- links*

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

IEC 60127-7, *Miniature fuses - Part 7: Miniature fuse-links for special applications*

IEC 60127-8, ~~(Free for further documents)~~ *Miniature fuses - Part 8: Fuse resistors with particular overcurrent protection*

IEC 60127-9, ~~(Free for further documents)~~ *Miniature fuses - Part 9: Miniature fuse-links for special applications with partial-range breaking capacity*

IEC 60127-10, ~~*Miniature fuses – Part 10: User guide for miniature fuses*~~ (withdrawn)

This part of IEC 60127 covers additional requirements, test equipment and standard sheets. The SI system of units is used throughout this document.

## 1 Scope

This part of IEC 60127 covers requirements for miniature fuse-links for special applications.

This part of IEC 60127 is applicable to fuse-links with a rated voltage not exceeding 1 000 V, a rated current not exceeding ~~20~~ 125 A and a rated breaking capacity not exceeding 50 kA.

NOTE Nominal currents above 20 A are intended for protection of low power electric devices at low voltage and not for energy distribution.

It does not apply to fuses completely covered by the subsequent parts of IEC 60269-1.

It does not apply to miniature fuse-links for appliances intended to be used under special conditions, such as in corrosive or explosive atmospheres.

This part of IEC 60127 applies in addition to the requirements of IEC 60127-1:2023.

Miniature fuse-links for special applications are not intended to be replaced by the end-user of an electrical / electronic appliance.

The object of this part of IEC 60127 is to establish uniform test methods for miniature fuse-links for special applications, so as to allow verification of the values (for example melting time and breaking capacity values) specified by the manufacturer.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-2-21:~~2006~~2021, *Environmental testing - Part 2-21: Tests - Test U: Robustness of terminations and integral mounting devices*

IEC 60127-1:~~2006~~2023, *Miniature fuses - Part 1: Definitions for miniature fuses and general requirements for miniature fuse-links*
~~IEC 60127-1:2006/AMD1:2011~~
~~IEC 60127-1:2006/AMD2:2015~~

IEC 60127-4:~~2005~~2026, *Miniature fuses - Part 4: Universal modular fuse-links (UMF) - Through-hole and surface mount types*
~~IEC 60127-4:2005/AMD1:2008~~
~~IEC 60127-4:2005/AMD2:2012~~

IEC 60127-6:~~2014~~2023, *Miniature fuses - Part 6: Fuse-holders for miniature fuse-links*

IEC 60664-1:~~2007~~2020, *Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests*

IEC 60695-2-12:~~2010~~2021, *Fire hazard testing - Part 2-12: Glowing/hot-wire based test methods - Glow-wire flammability index (GWFI) test method for materials*
~~IEC 60695-2-12:2010/AMD1:2014~~

IEC 60695-2-13:~~2010~~2021, *Fire hazard testing - Part 2-13: Glowing/hot-wire based test methods - Glow-wire ignition temperature (GWIT) test method for materials*
~~IEC 60695-2-13:2010/AMD1:2014~~