



SLOVENSKI STANDARD
SIST EN 60127-2:2015/oprA1:2019
01-oktober-2019

Miniaturne varovalke - 2. del: Taljivi vložki varovalke

Miniature fuses - Part 2: Cartridge fuse-links

Geräteschutzsicherungen - Teil 2: Feinsicherungseinsätze

Coupe-circuit miniatures - Partie 2: Cartouches

Ta slovenski standard je istoveten z: EN 60127-2:2014/prA1:2019

[SIST EN 60127-2:2015/kpra1:2020](https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020)

<https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020>

ICS:

29.120.50	Varovalke in druga medtokovna zaščita	Fuses and other overcurrent protection devices
-----------	---------------------------------------	--

SIST EN 60127-2:2015/oprA1:2019 **en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60127-2:2015/kprA1:2020

<https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020>



32C/570/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:

IEC 60127-2/AMD1 ED3

DATE OF CIRCULATION:

2019-08-16

CLOSING DATE FOR VOTING:

2019-11-08

SUPERSEDES DOCUMENTS:

32C/552/CD,32C/566/CC

IEC SC 32C : MINIATURE FUSES	
SECRETARIAT: China	SECRETARY: Mr Jianqiang Zou
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: <input type="checkbox"/> Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: <input type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input checked="" type="checkbox"/> SAFETY	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING	<input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING
<p>Attention IEC-CENELEC parallel voting SIST EN 60127-2:2015/kpra1:2020 https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-149c6570365a/iec-60127-2-2015-kpra1-2020</p> <p>The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.</p> <p>The CENELEC members are invited to vote through the CENELEC online voting system.</p>	

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

Miniature fuses - Part 2: Cartridge fuse-links

PROPOSED STABILITY DATE: 2022

NOTE FROM TC/SC OFFICERS:

Copyright © 2019 International Electrotechnical Commission, IEC. All rights reserved. It is permitted to download this electronic file, to make a copy and to print out the content for the sole purpose of preparing National Committee positions. You may not copy or "mirror" the file or printed version of the document, or any part of it, for any other purpose without permission in writing from IEC.

1 **Amendment 1 to IEC 60127-2 Ed.3.0 Miniature fuses - Part 2: Cartridge fuse-links**

2

3 Page 44

4 Adding Annex B

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60127-2:2015/kprA1:2020](https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020)

<https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020>

Annex B (normative)

Cartridge fuse-links with d.c. ratings

B.1 General

This annex supplements the requirements of this standard and is to be applied to already tested and approved 5 mm × 20 mm or 6,3 mm × 32 mm fuse-links which are available without or with wire terminations.

This annex relates to requirements applicable to cartridge fuse-links used for the protection of electric appliances, electronic equipment and component parts thereof, normally intended to be used indoors.

The object of this annex is to define additional test methods for cartridge fuse-links with optional d.c. ratings.

B.2 General notes on tests

In addition to the requirements of Clause 7 in IEC 60127-1, the following criteria shall be observed.

B.2.1 Type tests

Replace 7.2.1:

15 additional samples chosen at random are required.

The schedule for testing cartridge fuse-links with d.c. ratings shall be according to Table B.1.

The requirements of 7.2.3 in IEC 60127-1 are not applicable.

No failure is allowed in any of the additional tests specified in this annex.

SIST EN 60127-2:2015/kprA1:2020

<https://standards.iteh.ai/catalog/standards/sist/dac99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kprA1-2020>

Table B.1 – Testing schedule

Sub-clause	Description	Fuse-link number				
		DC1 DC2 DC3	DC4 DC5 DC6	DC7 DC8 DC9	DC10 DC11 DC12	DC13 DC14 DC15
B.4.1	Rated breaking capacity	X				
B.4.1	5 times the rated current 5 I _N		X			
B.4.1	10 times the rated current 10 I _N			X		
B.4.1	50 times the rated current 50 I _N				X	
B.4.1	250 times the rated current 250 I _N					X
B.4.1	Insulation resistance	X	X	X	X	X

NOTE Applicable only when the defined rated breaking capacity is not exceeded.

28 B.2.2 Test bases for tests

29 Cartridge fuse-links shall be tested in a test fuse-base as shown in Figure 3.

30 Cartridge fuse-links with wire terminations shall be tested in a test board as shown in Figure A.1. The
31 test board shall then be mounted on the test base of Figure A.2.

32 B.3 Marking

33 Clause 6 of IEC 60127-1 applies except as follows.

34 6.3

35 *Addition after first paragraph:*

36 Furthermore the d.c. rated breaking capacity in amperes (A) or in kilo amperes (kA) as well as the d.c.
37 rated voltage (Vd.c.) shall be marked on the package label.

38

39 B.4 Electrical requirements

40 B.4.1 Breaking capacity

41 *Replace 9.3.1:*

42 *Fuse-links shall operate satisfactorily without endangering the surroundings when breaking
43 prospective currents is between the conventional non-fusing current and rated breaking capacity.*

44 *The recovery voltage shall be between 1,02 and 1,05 times the rated voltage of the fuse-links (the
45 upper tolerance may be exceeded with the manufacturer's consent) and shall be maintained for 30 s
46 after the fuse has operated.*

47 Typical test circuits for d.c. are given in Figure B.1.

48 For tests at lower prospective currents (5 I_N, 10 I_N, 50 I_N, 250 I_N), the inductance of the circuit shall
49 remain constant and the current shall be adjusted by changing the resistance only.

50 In principle, the d.c. rated voltage, rated breaking capacity and associated time constant, respectively,
51 shall be specified by the manufacturer.

52 The values given in the table B.2 below are reference values only.

53 Unless otherwise stated by the manufacturer, the time constant of the test circuit shall be chosen from
54 Table B.2.

55

56

57

Table B.2 –Time constant

Test current	Time constant
up to 100 A	<1 ms
above 100 A up to 500 A	1 ms to 1,7 ms
above 500 A up to 1500 A	2 ms to 2,5 ms

Compliance is checked by

- Rated breaking capacity, but not be less than 35 A, $10I_n$ or as specified by the manufacturer, whichever is greater.
- Prospective currents of approximately 5, 10, 50 and 250 times the rated current, but not exceeding the rated breaking capacity.

After the above test, the insulation resistance between the fuse-link terminations shall be measured with a d.c. voltage equal to twice the rated voltage of the fuse-link, but not less than 250 V. The resistance shall be not less than 0,1 M Ω .

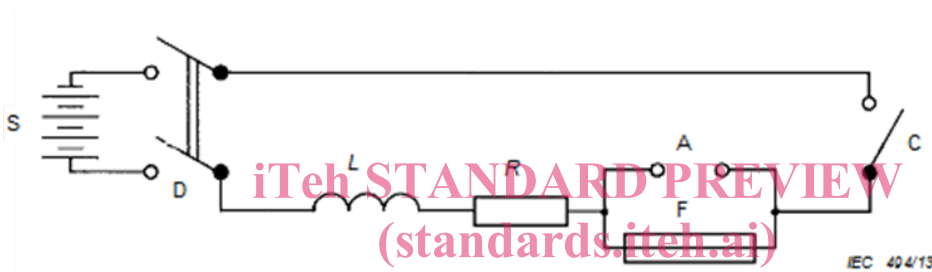


Figure B.1a – Typical test circuit for breaking capacity tests for fuse-links with breaking capacity greater than 100 A

<https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpral-2020>

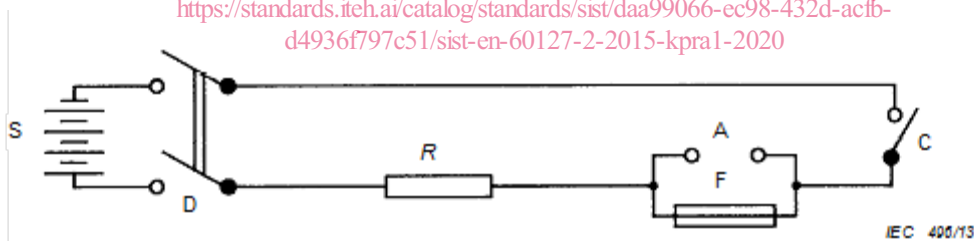


Figure B.1b – Typical test circuit for breaking capacity tests for fuse-links with breaking capacity less than or equal to 100 A

Components

A	removable link used for calibration	S	source of supply, impedance less than 10 % of the total impedance of the circuit
C	contactor that makes the circuit	L	air-cored inductance
D	switch to disconnect the source of supply	R	series resistor, adjusted to obtain correct prospective current
F	fuse-link under test		

Figure B.1 – Test circuits for breaking capacity tests

B.4.2 Criteria for satisfactory performance

In addition to the failure criteria described in 9.3.2 of IEC 60127-1, the fuse-link shall operate satisfactorily in all tests without any of the following phenomena:

- 82 – fusing together of the contacts;
- 83 – illegibility of marking after test;
- 84 – piercing of end caps (if applicable), visible to the naked eye;
- 85 – piercing of the external surfaces, visible to the naked eye;
- 86 – scorching or melting of organic substances on the external surfaces.
- 87 The following phenomena are neglected:
- 88 – black spots or other marks on the fuse-link terminations;
- 89 – small deformations of the fuse-link;
- 90 – cracking of the fuse-link, unless it causes the fuse-link to fall apart during replacement.
- 91
- 92

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[SIST EN 60127-2:2015/kpra1:2020](https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020)

<https://standards.iteh.ai/catalog/standards/sist/daa99066-ec98-432d-acfb-d4936f797c51/sist-en-60127-2-2015-kpra1-2020>