SLOVENSKI STANDARD
SIST EN 60644:2010/oprA1:2018

01-december-2018

Specifikacija visokonapetostnih taljivih vložkov za električna vezja motorjev

Specification for high-voltage fuse-links for motor circuit applications

Spécification relative aux éléments de remplacement à haute tension destinés à des circuits comprenant des moteurs

Ta slovenski standard je istoveten z: **EN 60644:2009/prA1:2018**

ICS:

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

SIST EN 60644:2010/oprA1:2018 **en,fr,de**

32A/340/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 60644/AMD1 ED2**	
DATE OF CIRCULATION: **2018-10-12**	CLOSING DATE FOR VOTING: **2019-01-04**
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IEC SC 32A : HIGH-VOLTAGE FUSES	
SECRETARIAT: France	SECRETARY: Mr Raphaël Buisson
OF INTEREST TO THE FOLLOWING COMMITTEES: SC 17A	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT	☐ QUALITY ASSURANCE ☐ SAFETY
☒ SUBMITTED FOR CENELEC PARALLEL VOTING **Attention IEC-CENELEC parallel voting** 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. The CENELEC members are invited to vote through the CENELEC online voting system.	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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:

Specification for high-voltage fuse-links for motor circuit applications

PROPOSED STABILITY DATE: 2025

NOTE FROM TC/SC OFFICERS:

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATION FOR HIGH-VOLTAGE FUSE-LINKS FOR MOTOR CIRCUIT APPLICATIONS

FOREWORD

This amendment has been prepared by subcommittee 32A: High-voltage Fuses, of IEC technical committee 32: Fuses.

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

FDIS	Report on voting
32A/XXX/FDIS	32A/XXX/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 stability 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.

1 Scope

Replace the existing text by the following new text:

This standard applies to fuse-links complying with IEC 60282-1 that are used with motors started direct-on-line on alternating current systems of 50 Hz and 60 Hz.

Fuse-links according to this specification are intended to withstand normal service conditions and motor starting pulses.

The purpose of this standard is to standardize time-current characteristics and to formulate pulse withstand requirements regarding testing.

This standard also applies to fuse-links used with motors that use assisted starting when appropriate care has been taken with selecting the rated current of the fuse-link (using advice from 5.2.3 of IEC/TR 62655:2013 and from the fuse manufacturer).

2 Normative references

Replace the existing text by the following new text:

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 60282-1:2014, High-voltage fuses – Part 1: Current-limiting fuses

3 Fuse-link time-current characteristics

Replace the existing text of Clause 3 by the following new text:

Compared to fuses typically used for distribution system protection, fuses for motor circuit protection should have:

– relatively high melting current (slow operation) in the 10 s region of the pre-arcing time-current characteristic to give maximum withstand against motor starting current;

– relatively low melting current (fast operation) in the region below 0,1 s to give maximum short-circuit protection to associated switching devices, cables and motors and their terminal boxes.

Therefore pre-arcing time-current characteristics of fuse-links for motor circuit applications shall be within the following limits:

$$I_{f_{10}} / I_{\mathrm{r}} \geq 3 \quad \text{for} \quad I_{\mathrm{r}} \leq 100$$

$$I_{f_{10}} / I_{\mathrm{r}} \geq 4 \quad \text{for} \quad I_{\mathrm{r}} > 100$$

$$I_{f_{0,1}} / I_{\mathrm{r}} \leq 20 \left(I_{\mathrm{r}}/100\right)^{0,25} \quad \text{for all current ratings}$$

where

I_{r} is the numerical value of the rated current, expressed in amperes, of the fuse-link;

I_{f10} and $I_{f0,1}$ are the numerical values of the pre-arcing currents, expressed in amperes, corresponding to 10 s and 0,1 s respectively, as mean values with the tolerances specified in 4.11 of IEC 60282-1.

The term $\left(I_{\mathrm{r}}/100\right)^{0,25}$ is introduced to take account of the fact that the pre-arcing time-current characteristics for a range of fuse-links diverge as they approach the short-time region.

8 Selection of fuse-links for motor circuit applications and correlation of fuse-link characteristics with those of other components of the circuit

Replace the existing text of Clause 8 by the following new text:

For application information see 5.2.3 of IEC/TR 62655:2013, which discusses motor-circuit applications.

Bibliography

Remove reference to IEC 60470 and add the following new reference

IEC/TR 62655:2013, Tutorial and application guide for high-voltage fuses