ICS 29.120.50 SLOVENSKÁ TECHNICKÁ NORMA September 2020

STN	**Vysokonapäťové poistky Časť 4: Dodatočné požiadavky na testovanie vysokonapäťových vylučovacích poistiek využívajúcich polymérové izolátory**	**STN EN IEC 60282-4 35 4720**

High-voltage fuses - Part 4: Additional testing requirements for high-voltage expulsion fuses utilizing polymeric insulators

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/20

Obsahuje: EN IEC 60282-4:2020, IEC 60282-4:2020

131361

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60282-4

May 2020

ICS 29.120.50

English Version

High-voltage fuses - Part 4: Additional testing requirements for high-voltage expulsion fuses utilizing polymeric insulators (IEC 60282-4:2020)

Fusibles à haute tension - Partie 4: Exigences d'essai supplémentaires pour les fusibles à expulsion à haute tension utilisant des isolateurs polymériques (IEC 60282-4:2020)

Hochspannungssicherungen - Teil 4: Zusätzliche Prüfanforderungen an Hochspannungs-Ausblassicherungen mit Polymerisolatoren (IEC 60282-4:2020)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 60282-4:2020 E

European foreword

The text of document 32A/346/FDIS, future edition 1 of IEC 60282-4, prepared by SC 32A "High-voltage fuses" of IEC/TC 32 "Fuses" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60282-4:2020.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2021-02-21
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2023-05-21

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Endorsement notice

The text of the International Standard IEC 60282-4:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62217:2012	NOTE	Harmonized as EN 62217:2013 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60060-1	2010	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	2010
IEC 60282-2	2008	High-voltage fuses - Part 2: Expulsion fuses	-	-
ISO 4287	-	Geometrical Product Specifications (GPS) - Surface texture: Profile method - Terms, definitions and surface texture parameters	EN ISO 4287	-
ISO 4892-2	-	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	EN ISO 4892-2	-
ISO 868	-	Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness)	EN ISO 868	-

IEC 60282-4

Edition 1.0 2020-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

High-voltage fuses –
Part 4: Additional testing requirements for high-voltage expulsion fuses utilizing polymeric insulators

Fusibles à haute tension –
Partie 4: Exigences d'essai supplémentaires pour les fusibles à expulsion à haute tension utilisant des isolateurs polymériques

IEC 60282-4:2020-04(en-fr)

IEC 60282-4

Edition 1.0 2020-04

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INTERNATIONALE

ICS 29.120.50 ISBN 978-2-8322-8089-8

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HIGH-VOLTAGE FUSES –

Part 4: Additional testing requirements for high-voltage expulsion fuses utilizing polymeric insulators

FOREWORD

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International Standard IEC 60282-4 has been prepared by subcommittee 32A: High-voltage fuses, of IEC technical committee 32: Fuses.

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

FDIS	Report on voting
32A/346/FDIS	32A/348/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60282 series, published under the general title *High-voltage fuses*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

High-voltage expulsion fuses are tested according to IEC 60282-2 which recognizes that fuse-bases may use polymer (non-ceramic) insulators. However, very little additional testing is specified for fuses using such insulators. In the case of polymer post insulators and suspension insulators, only artificial pollution tests are required in accordance with IEC 61592 and IEC 61109, respectively. However, for fuses that use insulators not covered by these International Standards, such as certain fuse-cutouts, the additional testing required is by agreement between manufacturer and user. Fuses that need such "additional testing" are expulsion fuses that utilize polymer insulators in which a single mounting bracket is used, either at the centre of an insulator or connected to two insulators (a "cutout fuse-base"). As the market for expulsion fuses using polymer insulators has grown, manufacturers have introduced many tests in addition to artificial pollution tests, covering other aspects of a fuse's performance. This document formalises such testing and provides standardisation and consistency. It should be noted that the document focusses on product testing as opposed to material testing. In addition to drawing on test procedures covered by IEC 62217:2012, *Polymeric HV insulators for indoor and outdoor use – General definitions, test methods and acceptance criteria*, material from IEEE Std C37.41™:2016 (primarily 18.1.2 *Long-term deformation/creep testing*) is also used, with the permission of IEEE.

HIGH-VOLTAGE FUSES –

Part 4: Additional testing requirements for high-voltage expulsion fuses utilizing polymeric insulators

1 Scope

This part of IEC 60282 applies to expulsion fuses complying with IEC 60282-2 and specifies additional testing requirements for fuses employing a cutout fuse-base that utilizes polymeric insulators.

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 60060-1:2010, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60282-2:2008*, High-voltage fuses – Part 2: Expulsion fuses*

ISO 4287, *Geometrical Product Specifications (GPS) – Surface Texture: Profile method – Terms, definitions and surface texture parameters*

ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 868, *Plastics and ebonite – Determination of indentation hardness by means of a durometer (Shore hardness)*