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STN	Zvodiče prepätia Časť 5: Odporúčania na voľbu a použitie	STN EN IEC 60099-5 35 4870

Surge arresters - Part 5: Selection and application recommendations

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. 01/19

Obsahuje: EN IEC 60099-5:2018, IEC 60099-5:2018

Oznámením tejto normy sa od 23.02.2021 ruší
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EN IEC 60099-5

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English Version

Surge arresters - Part 5: Selection and application recommendations (IEC 60099-5:2018)

Parafoudres - Partie 5: Recommandations pour le choix et l'utilisation
(IEC 60099-5:2018)

Überspannungsableiter - Teil 5: Anleitung für die Auswahl und die Anwendung
(IEC 60099-5:2018)

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CENELEC

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 60099-5:2018 E

European foreword

The text of document 37/437/FDIS, future edition 3 of IEC 60099-5, prepared by IEC/TC 37 "Surge arresters" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60099-5:2018.

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)	2018-11-23
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-02-23

This document supersedes EN 60099-5:2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60099-5:2018 was approved by CENELEC as a European Standard without any modification.

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 60071-1	2006	Insulation co-ordination -- Part 1: Definitions, principles and rules	EN 60071-1	2006
+ A1	2010		+ A1	2010
IEC 60071-2	1996	Insulation co-ordination -- Part 2: Application guide	EN 60071-2	1997
IEC 60099-4	2004	Surge arresters -- Part 4: Metal-oxide surge arresters without gaps for a.c. systems	EN 60099-4	2004
+ A1	2006		+ A1	2006
+ A2	2009		+ A2	2009
IEC 60099-4	2014	Surge arresters - Part 4: Metal-oxide surge arresters without gaps for a.c. systems	EN 60099-4	2014
IEC 60099-6	2002	Surge arresters -- Part 6: Surge arresters containing both series and parallel gapped structures - Rated 52 kV and less	-	-
IEC 60099-8	2011	Surge arresters -- Part 8: Metal-oxide surge arresters with external series gap (EGLA) for overhead transmission and distribution lines of a.c. systems above 1 kV	EN 60099-8	2011
IEC 60507	-	Artificial pollution tests on high-voltage ceramic and glass insulators to be used on a.c. systems	EN 60507	-
IEC 62271-200	-	High-voltage switchgear and controlgear -- Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	EN 62271-200	-
IEC 62271-203	-	High-voltage switchgear and controlgear -- Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV	EN 62271-203	-
IEC/TR 60071-4	-	Insulation co-ordination -- Part 4: Computational guide to insulation co-ordination and modelling of electrical networks	-	-
IEC/TS 60815-1	2008	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions - Part 1: Definitions, information and general principles	-	-

IEC 60099-5

Edition 3.0 2018-01

INTERNATIONAL STANDARD

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Surge arresters –
Part 5: Selection and application recommendations

IEC 60099-5:2018-01(en)

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IEC Glossary - std.iec.ch/glossary
67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

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INTERNATIONAL STANDARD

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Surge arresters –
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SURGE ARRESTERS –

Part 5: Selection and application recommendations

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60099-5 has been prepared by IEC technical committee 37: Surge arresters.

This third edition cancels and replaces the second edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition regarding the new surge arrester classification introduced in IEC 60099-4:2014:

a) Expanded discussion of comparison between the old and new classification and how to calculate or estimate the corresponding charge for different stresses.
b) New annexes dealing with:
   – Comparison between line discharge classes and charge classification
   – Estimation of arrester cumulative charges and energies during line switching

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

FDIS	Report on voting
37/437/FDIS	37/439/RVD

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

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

A list of all parts in the IEC 60099 series, published under the general title *Surge arresters*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

SURGE ARRESTERS –

Part 5: Selection and application recommendations

1 Scope

This part of IEC 60099 provides information, guidance, and recommendations for the selection and application of surge arresters to be used in three-phase systems with nominal voltages above 1 kV. It applies to gapless metal-oxide surge arresters as defined in IEC 60099-4, to surge arresters containing both series and parallel gapped structure – rated 52 kV and less as defined in IEC 60099-6 and metal-oxide surge arresters with external series gap for overhead transmission and distribution lines (EGLA) as defined in IEC 60099-8. In Annex J, some aspects regarding the old type of SiC gapped arresters are discussed.

Surge arrester residual voltage is a major parameter to which most users have paid a lot of attention to when selecting the type and rating. Typical maximum residual voltages are given in Annex F. It is likely, however, that for some systems, or in some countries, the requirements on system reliability and design are sufficiently uniform, so that the recommendations of the present standard may lead to the definition of narrow ranges of arresters. The user of surge arresters will, in that case, not be required to apply the whole process introduced here to any new installation and the selection of characteristics resulting from prior practice may be continued.

Annexes H and I present comparisons and calculations between old line discharge classification and new charge classification.

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 60071-1:2006, *Insulation co-ordination – Part 1: Definitions, principles and rules*
IEC 60071-1:2006/AMD1:2010

IEC 60071-2:1996, *Insulation co-ordination – Part 2: Application guide*

IEC TR 60071-4, *Insulation co-ordination – Part 4: Computational guide to insulation co-ordination and modelling of electrical networks*

IEC 60099-4:2009, *Surge arresters – Part 4: Metal-oxide surge arresters without gaps for a.c. systems*

IEC 60099-4:2014, *Surge arresters – Part 4: Metal-oxide surge arresters without gaps for a.c. systems*

IEC 60099-6:2002, *Surge arresters – Part 6: Surge arresters containing both series and parallel gapped structures – Rated 52 kV and less*

IEC 60099-8:2011, *Surge arresters – Part 8: Metal-oxide surge arresters with external series gap (EGLA) for overhead transmission and distribution lines of a.c. systems above 1 kV*

IEC 60507, *Artificial pollution tests on high-voltage ceramic and glass insulators to be used on a.c. systems*

IEC TS 60815-1:2008, *Selection and dimensioning of high-voltage insulators intended for use in polluted conditions – Part 1: Definitions, information and general principles*

IEC 62271-200, *High-voltage switchgear and controlgear – Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV*

IEC 62271-203, *High-voltage switchgear and controlgear – Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV*