SLOVENSKI STANDARD
SIST EN IEC 60938-2:2021

01-november-2021

Nadomešča:
SIST EN 60938-2:2002
SIST EN 60938-2:2002/A1:2007

Fiksne dušilke za dušenje elektromagnetnega motenja - 2. del: Področna specifikacija za električne dušilke (IEC 60938-2:2021)

Fixed inductors for electromagnetic interference suppression - Part 2: Sectional specification on power line chokes (IEC 60938-2:2021)

Drosseln zur Unterdrückung elektromagnetischer Störungen – Teil 2: Rahmenspezifikation zu Netzdrosseln (IEC 60938-2:2021)

Inductances fixes d'antiparasitage - Partie 2: Spécification intermédiaire sur les bobines d'arrêt pour ligne électrique (IEC 60938-2:2021)

Ta slovenski standard je istoveten z: **EN IEC 60938-2:2021**

ICS:

29.180	Transformatorji. Dušilke	Transformers. Reactors

SIST EN IEC 60938-2:2021 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60938-2

August 2021

ICS 29.100.10; 31.020

Supersedes EN 60938-2:1999 and all of its amendments and corrigenda (if any)

English Version

Fixed inductors for electromagnetic interference suppression - Part 2: Sectional specification on power line chokes (IEC 60938-2:2021)

Inductances fixes d'antiparasitage - Partie 2: Spécification intermédiaire sur les bobines d'arrêt pour ligne électrique (IEC 60938-2:2021)

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This European Standard was approved by CENELEC on 2021-08-24. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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 60938-2:2021 E

European foreword

The text of document 40/2846/FDIS, future edition 3 of IEC 60938-2, prepared by IEC/TC 40 “Capacitors and resistors for electronic equipment” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60938-2:2021.

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) 2022–05–24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024–08–24

This document supersedes EN 60938-2:1999 and all of its amendments and corrigenda (if any).

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.

Any feedback and questions on this document should be directed to the users’ national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60938-2:2021 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60063	NOTE Harmonized as EN 60063
IEC 60068-2-1	NOTE Harmonized as EN 60068-2-1
IEC 60068-2-2	NOTE Harmonized as EN 60068-2-2
IEC 60068-2-6	NOTE Harmonized as EN 60068-2-6
IEC 60068-2-20	NOTE Harmonized as EN IEC 60068-2-20
IEC 60068-2-27	NOTE Harmonized as EN 60068-2-27
IEC 60068-2-30	NOTE Harmonized as EN 60068-2-30
IEC 60068-2-58	NOTE Harmonized as EN 60068-2-58
IEC 60068-2-78	NOTE Harmonized as EN 60068-2-78
IEC 60938-2-1	NOTE Harmonized as EN 60938-2-1

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 60027	series	Letters symbols to be used in electrical technology	-	-
IEC 60050	series	International Electrotechnical Vocabulary (IEV)	-	-
IEC 60060-1	-	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	-
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-13	-	Environmental testing - Part 2–13: Tests - Test M: Low air pressure	EN IEC 60068-2-13	-
IEC 60068-2-14	-	Environmental testing - Part 2–14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60068-2-17	-	Basic environmental testing procedures - Part 2–17: Tests - Test Q: Sealing	EN 60068-2-17	-
IEC 60068-2-21	-	Environmental testing - Part 2–21: Tests - Test U: Robustness of terminations and integral mounting devices	-	-
IEC 60068-2-45	-	Basic environmental testing procedures - Part 2–45: Tests - Test XA and guidance: Immersion in cleaning solvents	EN 60068-2-45	-
IEC 60317-0-7	-	Specifications for particular types of winding wires - Part 0–7: General requirements - Fully insulated (FIW) zero-defect enamelled round copper wire	EN 60317-0-7	-
IEC 60317-56	-	Specifications for particular types of winding wires – Part 56: Solderable fully insulated (FIW) zero-defect polyurethane enamelled round copper wire, class 180	EN 60317-56	-
IEC 60335-1	-	Household and similar electrical appliances - Safety - Part 1: General requirements	-	-
IEC 60617	-	Graphical symbols for diagrams	-	-

IEC 60664-1	-	Insulation coordination for equipment within low-voltage supply systems - Part 1: Principles, requirements and tests	EN IEC 60664-1	-
IEC 60695-2-11	-	Fire hazard testing - Part 2–11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end products (GWEPT)	EN 60695-2-11	-
IEC 60695-2-12	-	Fire hazard testing - Part 2–12: Glowing/hot-wire based test methods - Glow-wire flammability index (GWFI) test method for materials	EN 60695-2-12	-
IEC 60695-2-13	-	Fire hazard testing - Part 2–13: Glowing/hot-wire based test methods - Glow-wire ignition temperature (GWIT) test method for materials	EN 60695-2-13	-
IEC 60695-10-2	-	Fire hazard testing - Part 10–2: Abnormal heat - Ball pressure test method	EN 60695-10-2	-
IEC 60695-11-10	-	Fire hazard testing - Part 11–10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	-
IEC 60695-11-20	-	Fire hazard testing - Part 11–20: Test flames - 500 W flame test method	EN 60695-11-20	-
IEC 60851-5	-	Winding wires - Test methods - Part 5: Electrical properties	EN 60851-5	-
IEC 60938-1	2021	Fixed inductors for electromagnetic interference suppression - Part 1: Generic specification	EN IEC 60938-1	2021
IEC 60938-2-2	-	Fixed inductors for electromagnetic interference suppression - Part 2–2: Blank detail specification - Inductors for which safety tests are required (only)	EN 60938-2-2	-
CISPR 17	-	Methods of measurement of the suppression characteristics of passive EMC filtering devices	EN 55017	-
ISO 80000-6	-	Quantities and units - Part 6: Electromagnetism		

IEC 60938-2

Edition 3.0 2021-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fixed inductors for electromagnetic interference suppression –
Part 2: Sectional specification on power line chokes

Inductances fixes d'antiparasitage –
Partie 2: Spécification intermédiaire sur les bobines d'arrêt pour ligne électrique

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIXED INDUCTORS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION –

Part 2: Sectional specification on power line chokes

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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IEC 60938-2 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment. It is an International Standard.

This third edition cancels and replaces the second edition published in 1999 and its Amendment 1:2006. This edition constitutes a technical revision.

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

a) the test plan for performance testing has been removed; mandatory safety tests and optional performance tests are listed in one test plan in Annex B;
b) requirements for Thyristor-Chokes have been withdrawn;
c) material requirements are harmonized with IEC 60939-3 and UL 60939-3;
d) AC chokes up to 1 000 V and DC chokes up to 1 500 V are now in the Scope.

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

FDIS	Report on voting
40/2846/FDIS	40/2862/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.

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 detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 60938 series, published under the general title *Fixed inductors for electromagnetic interference suppression*, 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.

FIXED INDUCTORS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION –

Part 2: Sectional specification on power line chokes

1 Scope

This part of IEC 60938 applies to fixed inductors designed for electromagnetic interference suppression, which will be connected to an AC mains or other supply with a nominal voltage not exceeding 1 000 V AC RMS or 1 500 V DC with a nominal frequency not exceeding 400 Hz.

This sectional specification is restricted to fixed inductors for which safety tests are appropriate. This implies that inductors specified according to this specification will either be connected to mains supplies, when compliance with the mandatory tests of Annex A is necessary, or used in other circuit positions where the equipment specification prescribes that some or all of these safety tests are required.

The object of this document is to prescribe standard requirements for safety tests, preferred ratings and characteristics, to select from IEC 60938-1 the appropriate methods of test and to give general performance requirements for suppression inductors.

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 applies, including any amendments.

IEC 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV)*

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

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-13, *Environmental testing – Part 2-13: Tests – Test M: Low air pressure*

IEC 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-17, *Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing*

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

IEC 60068-2-45, *Basic environmental testing procedures – Part 2-45: Tests – Test XA and guidance: Immersion in cleaning solvents*

IEC 60317-0-7, *Specifications for particular types of winding wires – Part 0-7: General requirements – Fully insulated (FIW) zero-defect enamelled round copper wire*