BS EN IEC 60938-2-1:2024

BSI Standards Publication

Fixed inductors for electromagnetic interference suppression

Part 2-1: Blank detail specification — Inductors for which safety tests are required

bsi.

National foreword

This British Standard is the UK implementation of EN IEC 60938-2-1:2024. It is identical to IEC 60938-2-1:2023. It supersedes BS EN 60938-2-1:2000, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee W/-, Consumer Products and Services Sector Policy and Strategy Committee.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Date	Text affected

EUROPEAN STANDARD

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EN IEC 60938-2-1

January 2024

ICS 29.100.10; 31.020

Supersedes EN 60938-2-1:1999

English Version

Fixed inductors for electromagnetic interference suppression - Part 2-1: Blank detail specification - Inductors for which safety tests are required (IEC 60938-2-1:2023)

Inductances fixes d'antiparasitage - Partie 2-1: Spécification particulière-cadre - Inductances exigeant des essais de sécurité
(IEC 60938-2-1:2023)

Ortsfeste Induktivitäten zur elektromagnetischen Störunterdrückung - Teil 2-1: Blank-Detailspezifikation - Induktivitäten, für die Sicherheitsprüfungen erforderlich sind - Bewertungsstufe D
(IEC 60938-2-1:2023)

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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

European foreword

The text of document 40/3084/FDIS, future edition 2 of IEC 60938-2-1, 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 60938-2-1:2024.

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)	2024-10-10
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2027-01-10

This document supersedes EN 60938-2-1:1999 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.

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Endorsement notice

The text of the International Standard IEC 60938-2-1:2023 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 standard indicated:

IEC 60938-2-2:1999 NOTE Approved as EN 60938-2-2:1999 (not modified)

IEC 61193-2 NOTE Approved as EN 61193-2

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60938-2	2021	Fixed inductors for electromagnetic interference suppression - Part 2: Sectional specification on power line chokes	EN IEC 60938-2	2021

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIXED INDUCTORS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION –

Part 2-1: Blank detail specification – Inductors for which safety tests are required

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 60938-2-1 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment. It is an International Standard.

This second edition cancels and replaces the first edition published in 1999. This edition constitutes a technical revision.

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

a) it combines IEC 60938-2-1:1999 and IEC 60938-2-2:1999 into one Blank detail specification (BDS);
b) test schedule for quality conformance inspection is moved to an informative annex (Annex B).

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

Draft	Report on voting
40/3084/FDIS	40/3103/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 greater 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

Blank detail specification

A blank detail specification is a supplementary document to the sectional specification and contains requirements for style, layout and minimum content of detail specifications. Detail specifications not complying with these requirements shall not be considered as being in accordance with IEC specifications nor shall they so be described.

In the preparation of detail specifications, the content of 4.3 of the sectional specification shall be taken into account.

The numbers between square brackets on the first page of the detail specification correspond to the following information which shall be inserted in the position indicated.

Identification of the detail specification

[1] The "International Electrotechnical Commission" or the National Standards Organization under whose authority the detail specification is drafted.

[2] The IEC or National Standards number of the detail specification, date of issue and any further information required by the national system.

[3] The number and issue number of the IEC or national generic specification.

[4] The IEC number of the blank detail specification.

Identification of the inductor

[5] A short description of the type of inductor.

[6] Information on typical construction (when applicable).

[7] Outline drawing with main dimensions which are of importance for interchangeability and/or reference to the national or international documents for outlines. Alternatively, this drawing may be given in an annex to the detail specification.

[8] Application or group of applications covered and/or assessment level.

[9] Reference data on the most important properties, to allow comparison between the various inductor types.

<table>
<tr><td>[1]</td><td>IEC 60938-2-1XX [2]
QC XXXXXXXXXXXX</td></tr>
<tr><td rowspan="2">ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH:

[3]</td><td>IEC 60938-2-1 [4]
QC XXXXXX</td></tr>
<tr><td rowspan="3">FIXED INDUCTORS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION FOR WHICH SAFETY TESTS ARE REQUIRED [5]</td></tr>
<tr><td rowspan="2">Outline drawing: (see Table 1)
(... angle projection)

[7]
(Other shapes are permitted within the dimensions given)</td></tr>
<tr><td>[6]</td></tr>
<tr><td></td><td>[8]</td></tr>
<tr><td colspan="2">NOTES [1] to [9] see page 4.</td></tr>
</table>

[9]

Information on the availability of components qualified to this detail specification is given in the Register of Approvals.

FIXED INDUCTORS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION –

Part 2-1: Blank detail specification – Inductors for which safety tests are required

1 Scope

This part of IEC 60938-2 is applicable to the drafting of detail specifications for fixed inductors for which safety tests are required for use in electronic equipment.

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 60938-2:2021, *Fixed inductors for electromagnetic interference suppression – Part 2: Sectional specification on power line chokes*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

4 General information

4.1 Methods of mounting

The recommended method of mounting for normal use shall be specified. It is mandatory to use this method for the application of shock and vibration tests.

The method of mounting shall be given in the detail specification. This method shall be used for the application of shock and vibration tests.

If the design of the inductor requires special mounting fixtures in its use, the detail specification shall describe the mounting fixtures and they shall be used in the application of shock and vibration tests. The specified heat sink shall be used in the application of the endurance test.