

SLOVENSKI STANDARD SIST EN IEC 63093-10:2023

01-maj-2023

Nadomešča:

SIST EN 61247:2002

Feritna jedra - Smernice o merah in mejnih vrednostih površinskih nepravilnosti - 10. del: PM-jedra in pripadajoči deli

Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 10: PM-cores and associated parts

Ferritkerne – Richtlinien zu Maßen und Grenzen von Oberfächenbeschädigungen – Teil 10: PM-Kerne und zugehörige Teile

Noyaux ferrites - Lignes directrices relatives aux dimensions et aux limites des irrégularités de surface - Partie 10: Noyaux PM et parties associées

Ta slovenski standard je istoveten z: EN IEC 63093-10:2022

ICS:

29.100.10 Magnetine komponente Magnetic components

SIST EN IEC 63093-10:2023 en

SIST EN IEC 63093-10:2023

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 63093-10:2023

https://standards.iteh.ai/catalog/standards/sist/f21c502b-3574-4ad7-bed1-10c11dc000ad/sist-en-iec-63093-10-2023

EUROPEAN STANDARD

EN IEC 63093-10

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2022

ICS 29.100.10

Supersedes EN 61247:1997

English Version

Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 10: PM-cores and associated parts (IEC 63093-10:2022)

Noyaux ferrites - Lignes directrices relatives aux dimensions et aux limites des irrégularités de surface - Partie 10: Noyaux PM et parties associées (IEC 63093-10:2022)

Ferritkerne - Richtlinien zu Maßen und Grenzen von Oberfächenbeschädigungen - Teil 10: PM-Kerne und zugehörige Teile (IEC 63093-10:2022)

This European Standard was approved by CENELEC on 2022-05-26. 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

EN IEC 63093-10:2022 (E)

European foreword

The text of document 51/1388/CDV, future edition 1 of IEC 63093-10, prepared by IEC/TC 51 "Magnetic components, ferrite and magnetic powder materials" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63093-10:2022.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2023-02-26
 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2025-05-26 document have to be withdrawn

This document supersedes EN 61247:1997 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.

iTeh STANDARD PREVIEW
Endorsement notice

The text of the International Standard IEC 63093-10:2022 was approved by CENELEC as a European Standard without any modification.

10c11dc000ad/sist-en-jec-63093-10-202

EN IEC 63093-10:2022 (E)

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60205	-	Calculation of the effective parameters of magnetic piece parts	EN 60205	-
IEC 60401-1	Teh	Terms and nomenclature for cores made of magnetically soft ferrites - Part 1: Terms used for physical irregularities and reference of dimensions	ofEN IEC 60401-1	-
IEC 63093-1	2020	Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Par 1: General specification		2020

https://standards.iteh.ai/catalog/standards/sist/f21c502b-3574-4ad7-bed1 10c11dc000ad/sist-en-iec-63093-10-2023 SIST EN IEC 63093-10:2023

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 63093-10:2023

https://standards.iteh.ai/catalog/standards/sist/f21c502b-3574-4ad7-bed1-10c11dc000ad/sist-en-iec-63093-10-2023



IEC 63093-10

Edition 1.0 2022-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Ferrite cores – Guidelines on dimensions and the limits of surface irregularities –

Part 10: PM-cores and associated parts

Noyaux ferrites – Lignes directrices relatives aux dimensions et aux limites des irrégularités de surface – al/catalog/standards/sist/f21c502b-3574-4ad7-bed1-Partie 10: Noyaux PM et parties associées -63093-10-2023

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 29.100.10 ISBN 978-2-8322-5523-0

Warning! Make sure that you obtained this publication from an authorized distributor.

Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

CONTENTS

FC	REWO	RD	4
1	Scop	e	6
2	Norm	ative references	6
3	Term	s and definitions	6
4	Prima	ary dimensions	6
	4.1	General	6
	4.2	Dimensions of PM-cores	7
	4.2.1	Principal dimensions	7
	4.2.2	Effective parameter and A_{min} values	8
	4.3	Main dimensions of coil formers	8
	4.4	Pin locations and base outlines	9
	4.5	Pin diameter	9
5	Mour	ting hardware	9
6	Limit	s of surface irregularities	
	6.1	General	
	6.2	Examples of surface irregularities	
	6.3	Chips and ragged edges	11
	6.3.1	General	
	6.3.2	- 1 33 3	
	6.3.3 6.4	Cracks	
	6.5		
	6.6	Pull-out SIST EN TEC 03093-10:2023 Crystallites SIST EN TEC 03093-10:2023	1 <i>3</i>
	6.7	Flash	14
	6.8	Pores	
Ar	inex A (normative) Derived standards	
	,	normative) Example of a gauge to check the coil former space dimensions of	
		meeting the IEC primary standard	17
Ar	inex C (informative) Recommended main dimensions for mounting hardware	18
Ar	nex D (informative) Limits of allowable chipping areas	20
Fig	gure 1 -	Main dimensions of PM-cores	7
Fig	gure 2 –	Main dimensions of coil formers	8
	_	Pin locations and base outlines viewed from the underside of the board	
	-	Examples of surface irregularities	
•	•	· Chips on mating surfaces	
	-	· Locations of cracks	
	_	· Location of pull-out	
•		Location of a crystallite	
		·	
•	•	Location of a flash	
	-	- Location of pore	
	-	– Example of a gauge	
Εİ	gure C.	l – Main dimensions of mounting hardware	18

– 3 –

IFC.	63003	-10.2022	@ IEC	2022

Table 1 – Main dimensions of PM-cores	7
Table 2 – Effective parameter and A_{min} values	
Table 3 – Main dimensions of coil formers	9
Table 4 – Limits for cracks	13
Table B.1 – Example of a gauge	17
Table C.1 – Main dimensions of U-bolt	18
Table C.2 – Main dimensions of base plate	19
Table D.1 – Limits of allowable chipping areas	20

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 63093-10:2023
https://standards.iteh.ai/catalog/standards/sist/f21c502b-3574-4ad7-bed1-10c11dc000ad/sist-en-iec-63093-10-2023

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FERRITE CORES – GUIDELINES ON DIMENSIONS AND THE LIMITS OF SURFACE IRREGULARITIES –

Part 10: PM-cores and associated parts

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 63093-10 has been prepared by IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials. It is an International Standard.

This first edition cancels and replaces the first edition IEC 61247 published in 1995. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the first edition of IEC 61247:

- a) the calculations of the effective parameter values have been updated according to IEC 60205;
- b) added the limits of surface irregularities.

IEC 63093-10:2022 © IEC 2022

- 5 -

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

Draft	Report on voting
51/1388/CDV	51/1408/RVC

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 63093 series, published under the general title *Ferrite cores – Guidelines on dimensions and the limits of surface irregularities*, 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,
- · replaced by a revised edition, or
- amended.

SIST EN IEC 63093-10:2023

ards.iteh.ai/catalog/standards/sist/f21c502b-357/4-4ad7-bed1 10c11dc000ad/sist-en-iec-63093-10-2023