



**SLOVENSKI STANDARD**  
**SIST EN IEC 63093-1:2020**

**01-oktober-2020**

**Nadomešča:**

**SIST EN 60424-1:2016**

**SIST EN 62317-1:2007**

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**Feritna jedra - Smernice o merah in mejnih vrednostih površinskih nepravilnosti -  
1. del: Splošna specifikacija**

Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 1:  
General specification

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**Ta slovenski standard je istoveten z: EN IEC 63093-1:2020**

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**ICS:**

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EUROPEAN STANDARD

**EN IEC 63093-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2020

ICS 29.100.10

Supersedes EN 60424-1:2016, EN 62317-1:2007 and all  
of its amendments and corrigenda (if any)

English Version

**Ferrite cores - Guidelines on dimensions and the limits of  
surface irregularities - Part 1: General specification  
(IEC 63093-1:2020)**

Noyaux ferrites - Lignes directrices relatives aux  
dimensions et aux limites des irrégularités de surface -  
Partie 1: Spécification générale  
(IEC 63093-1:2020)

Ferritkerne - Richtlinien zu Maßen und Grenzen von  
Oberflächenbeschädigungen - Teil 1: Allgemeine  
Festlegungen  
(IEC 63093-1:2020)

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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**

**EN IEC 63093-1:2020 (E)****European foreword**

The text of document 51/1309/CDV, future edition 1 of IEC 63093-1, 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 63093-1:2020.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-21

This document supersedes EN 62317-1:2007 and EN 60424-1:2016 and all of its amendments and corrigenda (if any).

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The text of the International Standard IEC 63093-1:2020 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 60401-3      NOTE      Harmonized as EN 60401-3

## 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60401-1	-	Terms and nomenclature for cores made of magnetically soft ferrites - Part 1: Terms used for physical irregularities and reference of dimensions	-	-
IEC 60401-2	-	Terms and nomenclature for cores made of magnetically soft ferrites - Part 2: Reference of dimensions	EN 60401-2	-

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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Ferrite cores – Guidelines on dimensions and the limits of surface irregularities – Part 1: General specification**

**Noyaux ferrites – Lignes directrices relatives aux dimensions et aux limites des irrégularités de surface – Partie 1: Spécification générale**

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ELECTROTECHNICAL  
COMMISSION

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## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Dimension descriptions.....	7
5 Location and functions of core parts and surfaces .....	7
5.1 General.....	7
5.2 Mating surfaces .....	8
5.3 Centre post.....	8
5.4 Outer legs .....	8
5.5 Back, bottom surface and back surfaces .....	8
5.6 Wire-slot area .....	8
5.7 Wire-way area.....	9
5.8 Clamping recess area .....	9
6 Area and length reference for visual inspection .....	9
7 Examples of surface irregularities.....	11
8 Limits of surface irregularities.....	11
8.1 General.....	11
8.2 Chips and ragged edges .....	11
8.3 Cracks .....	11
8.4 Flash .....	11
8.5 Pull-outs .....	12
8.6 Pores.....	12
8.7 Crystallites.....	12
Annex A (informative) IEC 63093 series.....	13
Bibliography.....	14
Figure 1 – Location of main core parts and surfaces – Example of RM-core type .....	8
Figure 2 – Examples of surface irregularities .....	11
Table 1 – Area and length reference for visual inspection .....	10
Table A.1 – IEC 63093 series .....	13



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FERRITE CORES –  
GUIDELINES ON DIMENSIONS AND  
THE LIMITS OF SURFACE IRREGULARITIES –****Part 1: General specification****FOREWORD**

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International Standard IEC 63093-1 has been prepared by IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials.

This first edition cancels and replaces the second edition of IEC 60424-1 published in 2015 and the first edition of IEC 62317-1 published in 2007. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous editions of IEC 60424-1 and IEC 62317-1:

- a) this document integrates IEC 60424-1 and IEC 62317-1.

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

CDV	Report on voting
51/1309/CDV	51/1327/RVC

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 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the publication will be

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

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## INTRODUCTION

Due to the method of manufacture and the physical nature of the products, ferrite cores can be expected to exhibit some degree of physical irregularities such as chips, ragged edges, cracks, flashing, and pull-outs.

The permissible extent of these surface irregularities will depend on the type, position and size of the defect and on the function of the core. Thus, in order to establish limits of surface irregularities for a given series of ferrite cores, for example RM-cores, pot-cores, E-cores, U-cores and ring-cores, a particular specification should be prepared for each, setting out in detail the permissible extent of the various types of irregularities.

All surfaces of the core should be clean and free from loose ferrite particles or any other foreign matter. This is more critical for mating surfaces that should make good contact with one another. Stains, discolorations, surface crazing or crystallization are acceptable if they do not affect the normal performance of the core. The irregularities described below are considered as being detectable without the use of any magnifying equipment.

The limits of surface irregularities are set for control of the cosmetic appearance, and not for control of the magnetic performance. Surface irregularities do not substantially affect core magnetic function, nor do they affect reliability. Reliability should be assessed for wound magnetics, rather than for cores alone. See IEC 60401-3 for more details concerning the reliability of ferrite cores and devices built with them.

A list of the IEC 63093 series is shown in Annex A.

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