



NSAI
Standards

Irish Standard
I.S. EN IEC 63093-3:2020

Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 3: Half pot-cores made of ferrite for inductive proximity switches

I.S. EN IEC 63093-3:2020

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National Foreword

I.S. EN IEC 63093-3:2020 is the adopted Irish version of the European Document EN IEC 63093-3:2020, Ferrite cores - Guidelines on dimensions and the limits of surface irregularities - Part 3: Half pot-cores made of ferrite for inductive proximity switches

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EUROPEAN STANDARD

EN IEC 63093-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2020

ICS 29.100.10

Supersedes EN 62323:2005 and all of its amendments
and corrigenda (if any)

English Version

**Ferrite cores - Guidelines on dimensions and the limits of
surface irregularities - Part 3: Half pot-cores made of ferrite for
inductive proximity switches
(IEC 63093-3:2020)**

Noyaux ferrites - Lignes directrices relatives aux
dimensions et limites des irrégularités de surface - Partie 3:
Demi-circuits magnétiques en pots en ferrite pour des
commutateurs inductifs de proximité
(IEC 63093-3:2020)

Ferritkerne - Richtlinien zu Maßen und Grenzen von
Oberflächenschädigungen - Teil 3: Ferritschalenkernhälften
für induktive Näherungsschalter
(IEC 63093-3:2020)

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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 63093-3:2020 (E)**European foreword**

The text of document 51/1300/CDV, future edition 1 of IEC 63093-3, 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 63093-3:2020.

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) 2021-02-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-01

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

IEC 61332	NOTE	Harmonized as EN 61332
IEC 62044-1	NOTE	Harmonized as EN 62044-1
IEC 62044-2	NOTE	Harmonized as EN 62044-2
IEC 62044-3	NOTE	Harmonized as EN 62044-3
IEC 62317-1	NOTE	Harmonized as EN 62317-1
IEC 62317-2	NOTE	Harmonized as EN 62317-2

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

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NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

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<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 60424-1	2015	Ferrite cores - Guidelines on the limits of surface irregularities - Part 1: General specification	EN 60424-1	2016

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IEC 63093-3

Edition 1.0 2020-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Ferrite cores – Guidelines on dimensions and the limits of surface
irregularities –
Part 3: Half pot-cores made of ferrite for inductive proximity switches**

**Noyaux ferrites – Lignes directrices relatives aux dimensions et limites
des irrégularités de surface –
Partie 3: Demi-circuits magnétiques en pots en ferrite pour des commutateurs
inductifs de proximité**



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IEC 63093-3

Edition 1.0 2020-03

INTERNATIONAL STANDARD

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**Ferrite cores – Guidelines on dimensions and the limits of surface irregularities –
Part 3: Half pot-cores made of ferrite for inductive proximity switches**

**Noyaux ferrites – Lignes directrices relatives aux dimensions et limites des irrégularités de surface –
Partie 3: Demi-circuits magnétiques en pots en ferrite pour des commutateurs inductifs de proximité**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 3: Half pot-cores made of ferrite for inductive proximity switches

FOREWORD

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International Standard IEC 63093-3 has been prepared by IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials.

This first edition cancels and replaces the first edition of IEC 62323, published in 2005. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition of IEC 62323:

- a) addition of the limits surface irregularities.

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

CDV	Report on voting
51/1300/CDV	51/1323/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 of 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 document will be

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

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

Part 3: Half pot-cores made of ferrite for inductive proximity switches

1 Scope

This part of IEC 63093-3 specifies the dimensions that are of importance for mechanical interchangeability for a preferred range of half pot-cores made of ferrite, intended to be used in inductive proximity switches. Half pot-cores for inductive proximity switches are also called PS-cores.

The selection of core sizes and shapes for this document is based on the philosophy of including those sizes and shapes which are industrial standards, either by inclusion in a national standard, or by broad-based use in industry.

This part of IEC 63093 can also be considered as a sectional specification useful in the negotiations between ferrite core manufacturers and customers about surface irregularities. It provides guidelines on the allowable limits of surface irregularities applicable to PS-cores in accordance with the relevant generic specification.

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 60401-1, *Terms and nomenclature for cores made of magnetically soft ferrites – Part 1: Terms used for physical irregularities*

IEC 60424-1:2015, *Ferrite cores – Guidelines on the limits of surface irregularities – Part 1: General specification*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60401-1 and IEC 60424-1 apply.

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

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

4 Primary dimensions

4.1 General

PS-cores are primarily suited for use in inductive proximity switches. The design of PS-cores is guided by the following considerations:

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