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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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- withdrawn,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: