

<b>STN</b>	<b>Názvy a systém označovania jadier z magneticky mäkkých feritov. Časť 3: Usmernenie na formát uvádzania údajov v katalógoch výrobcov jadier transformátorov a induktorov.</b>	<b>STN EN 60401-3</b>
		34 5886

Terms and nomenclature for cores made of magnetically soft ferrites - Part 3: Guidelines on the format of data appearing in manufacturers catalogues of transformer and inductor cores

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/16

Obsahuje: EN 60401-3:2016, IEC 60401-3:2015

Oznámením tejto normy sa od 08.01.2019 ruší  
STN EN 60401-3 (34 5886) z júla 2004

**123183**

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2016

Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

**EUROPEAN STANDARD**  
**NORME EUROPÉENNE**  
**EUROPÄISCHE NORM**

**EN 60401-3**

March 2016

ICS 29.100.10

Supersedes EN 60401-3:2003

English Version

**Terms and nomenclature for cores made of magnetically soft  
ferrites - Part 3: Guidelines on the format of data appearing in  
manufacturers catalogues of transformer and inductor cores  
(IEC 60401-3:2015)**

Termes et nomenclature pour noyaux en matériaux ferrites  
magnétiquement doux - Partie 3: Lignes directrices relatives  
aux formats des données figurant dans les catalogues des  
fabricants de noyaux pour transformateurs et inductances  
(IEC 60401-3:2015)

Begriffe und Bezeichnungssystem für Kerne aus  
weichmagnetischen Ferriten - Teil 3: Leitfaden für das  
Datenformat für Übertrager- und Spulenkerne in  
Herstellerkatalogen  
(IEC 60401-3:2015)

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**European foreword**

The text of document 51/1106/FDIS, future edition 2 of IEC 60401-3, prepared by IEC/TC 51 "Magnetic components and ferrite materials" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60401-3:2016.

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) 2016-10-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-08

This document supersedes EN 60401-3:2003.

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

IEC 60424 Series	NOTE	Harmonized as EN 60424 Series.
IEC 60424-1	NOTE	Harmonized as EN 60424-1.
IEC 60424-2	NOTE	Harmonized as EN 60424-2.
IEC 60424-3	NOTE	Harmonized as EN 60424-3.
IEC 60424-4	NOTE	Harmonized as EN 60424-4.
IEC 60424-5	NOTE	Harmonized as EN 60424-5.
IEC 61631	NOTE	Harmonized as EN 61631.
IEC 62044-1	NOTE	Harmonized as EN 62044-1.
IEC 62211	NOTE	Harmonized as EN 62211.

**Annex ZA**  
(normative)

**Normative references to international publications  
with their corresponding European publications**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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 61332	2005	Soft ferrite material classification	EN 61332	2005
IEC 62044-2	-	Cores made of soft magnetic materials - Measuring methods - Part 2: Magnetic properties at low excitation level	EN 62044-2	-
IEC 62044-3	-	Cores made of soft magnetic materials - Measuring methods - Part 3: Magnetic properties at high excitation level	EN 62044-3	-



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Terms and nomenclature for cores made of magnetically soft ferrites –  
Part 3: Guidelines on the format of data appearing in manufacturers catalogues  
of transformer and inductor cores**

**Termes et nomenclature pour noyaux en matériaux ferrites magnétiquement  
doux –**

**Partie 3: Lignes directrices relatives aux formats des données figurant dans les  
catalogues des fabricants de noyaux pour transformateurs et inductances**





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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Terms and nomenclature for cores made of magnetically soft ferrites –  
Part 3: Guidelines on the format of data appearing in manufacturers catalogues  
of transformer and inductor cores**

**Termes et nomenclature pour noyaux en matériaux ferrites magnétiquement  
doux –  
Partie 3: Lignes directrices relatives aux formats des données figurant dans les  
catalogues des fabricants de noyaux pour transformateurs et inductances**

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ICS 29.100.10

ISBN 978-2-8322-3029-9

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## CONTENTS

FOREWORD .....	3
INTRODUCTION .....	5
1    Scope .....	6
2    Normative references .....	6
3    Measuring methods .....	6
4    Table of material properties and measuring conditions .....	6
5    Integrity of value .....	7
6    Reliability .....	9
Annex A (informative) Breakdown voltage test for insulated ring cores – Measurement techniques .....	11
A.1    Method A .....	11
A.2    Method B .....	11
A.2.1    General .....	11
A.2.2    Method B 1 .....	11
A.2.3    Method B 2 .....	12
A.2.4    Method B 3 .....	12
A.3    Notes on voltage breakdown testing .....	13
Bibliography .....	14
Figure A.1 – Method A: measurement principle .....	11
Figure A.2 – Method B 1: Measurement principle .....	12
Figure A.3 – Method B 2: Measurement principle .....	12
Figure A.4 – Method B 3: Measurement principle .....	13
Table 1 – Rules for property values given in Table 2 .....	7
Table 2 – Property values and measuring conditions (1 of 2) .....	8

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**TERMS AND NOMENCLATURE FOR CORES MADE  
OF MAGNETICALLY SOFT FERRITES –****Part 3: Guidelines on the format of data appearing in manufacturers  
catalogues of transformer and inductor cores****FOREWORD**

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International Standard IEC 60401-3 has been prepared IEC technical committee 51: Magnetic components and ferrite materials.

This second edition cancels and replaces the first edition published in 2003. This edition constitutes a technical revision.

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

- a) addition of reliability in Clause 6.

The text of this standard is based on the following documents:

FDIS	Report on voting
51/1106/FDIS	51/1121/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60401 series, published under the general title *Terms and nomenclature for cores made of magnetically soft ferrites*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

## INTRODUCTION

For various reasons, a manufacturer may wish to publish in its catalogue typical data for material parameters as measured on test pieces. It is the object of this part of IEC 60401 to promote the comparability of such information in the area of soft ferrite materials.

Except for several specific property limits that should be given separately for each particular core, the properties described in this standard are material characteristics, intended to facilitate meaningful evaluation of ferrite materials. It should be recognized, however, that there is no direct relation between material characteristics as measured on test pieces and the corresponding parameters measured on other cores, made of the same material, because of differences in geometry and variation in production processes. Also, the extrapolation of material characteristics to other flux densities and other frequencies will not permit valid comparison of cores of different materials under these new conditions of operation.

It is therefore emphasized that it is impossible to design and specify a core on the basis of material properties published by a manufacturer in its catalogue, without due contact with that manufacturer. Also, the publication of material characteristics should not be considered as a guarantee for core properties; for this purpose, only the specification of that core should be used.

It is strongly recommended that, together with the material characteristics, manufacturers publish a note covering the two statements above on the limitations of this kind of information.

This standard further addresses the comparability of various grades of ferrite from different manufacturers by defining the baseline reliability and temperature performance that is inherent for all MnZn ferrite materials, and the limitations that exist when specifying related performance characteristics in ferrite cores.

## TERMS AND NOMENCLATURE FOR CORES MADE OF MAGNETICALLY SOFT FERRITES –

### Part 3: Guidelines on the format of data appearing in manufacturers catalogues of transformer and inductor cores

#### 1 Scope

This part of IEC 60401 gives guidelines for a uniform method of presentation for the properties of magnetically soft ferrite materials and measuring conditions under which they should be determined. It is intended for use in manufacturers' catalogues of transformer and inductor cores, in order to aid the comparability of such data. Additional guidance is given for users and manufacturers concerning testing and specification of reliability for ferrite cores and for devices using ferrite cores.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61332:2005, *Soft ferrite material classification*

IEC 62044-2, *Cores made of soft magnetic materials – Measuring methods – Part 2: Magnetic properties at low excitation level*

IEC 62044-3, *Cores made of soft magnetic materials – Measuring methods – Part 3: Magnetic properties at high excitation level*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN