

## **Ferrite cores - Dimensions Part 4: RM-cores and associated parts**

Ferrite cores - Dimensions Part 4: RM-cores and associated parts

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 62317-4:2006 sisaldab Euroopa standardi EN 62317-4:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.01.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 62317-4:2006 consists of the English text of the European standard EN 62317-4:2005.</p> <p>This document is endorsed on 27.01.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> Specifies the dimensions that are of importance for mechanical interchangeability for a preferred range of RM-cores and low-profile RM-cores made of ferrite, and the locations of their terminal pins on a 2,54 mm printed wiring grid in relation to the base outlines of the cores. Also specifies the test conditions and clamping forces to be used for inductance measurement.</p>	<p><b>Scope:</b> Specifies the dimensions that are of importance for mechanical interchangeability for a preferred range of RM-cores and low-profile RM-cores made of ferrite, and the locations of their terminal pins on a 2,54 mm printed wiring grid in relation to the base outlines of the cores. Also specifies the test conditions and clamping forces to be used for inductance measurement.</p>
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**ICS** 29.030, 29.100.10

**Võtmesõnad:** clamping forces, dimensions, magnetic oxides, measuring coils, rm-cores, square cores

English version

**Ferrite cores -  
Dimensions  
Part 4: RM-cores and associated parts  
(IEC 62317-4:2005)**

Noyaux ferrites -  
Dimensions  
Partie 4: Noyaux RM et parties associées  
(CEI 62317-4:2005)

Ferritkerne -  
Maße  
Teil 4: RM-Ferritkerne und deren  
Zubehörteile  
(IEC 62317-4:2005)

This European Standard was approved by CENELEC on 2005-10-01. 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 Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English, 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 Central Secretariat has the same status as the official versions.

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**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 51/833/FDIS, edition 1 of IEC 62317-4, prepared by IEC TC 51, Magnetic components and ferrite materials, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62317-4 on 2005-10-01.

This European Standard supersedes EN 60431:1997 + A2:1998.

The main changes with respect to EN 60431 are listed below:

- low-profile RM-cores at present defined in EN 61860 are added to this standard.

EN 61860 will eventually be replaced by EN 62317-9 which is under consideration. EN 62317-9 will not include the low-profile RM-cores.

The following dates were fixed:

- |  |       |            |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2006-07-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2008-10-01 |

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 62317-4:2005 was approved by CENELEC as a European Standard without any modification.

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**Annex ZA**  
(normative)

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

The following referenced documents are indispensable for the application 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 Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60097	1991	Grid systems for printed circuits	EN 60097	1993
IEC 60205	2001	Calculation of the effective parameters of magnetic piece parts	EN 60205	2001

# INTERNATIONAL STANDARD

**IEC**  
**62317-4**

First edition  
2005-09

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**Ferrite cores – Dimensions –**

**Part 4:  
RM-cores and associated parts**



Reference number  
IEC 62317-4:2005(E)

## Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

## Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

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# INTERNATIONAL STANDARD

**IEC**  
**62317-4**

First edition  
2005-09

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## **Ferrite cores – Dimensions –**

### **Part 4: RM-cores and associated parts**

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland  
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: [inmail@iec.ch](mailto:inmail@iec.ch) Web: [www.iec.ch](http://www.iec.ch)



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FERRITE CORES – DIMENSIONS –****Part 4: RM-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 the 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.
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International Standard IEC 62317-4 has been prepared IEC technical committee 51: Magnetic components and ferrite materials.

This international standard cancels and replaces the second edition of IEC 60431 published in 1983, its amendment 1 (1995), and its amendment 2 (1996). This international standard constitutes a technical revision of IEC 60431.

The main changes with respect to the previous edition of IEC 60431 are listed below:

- low-profile RM-cores at present defined in IEC 61860 are added to this standard.

IEC 61860 will eventually be replaced by IEC 62317-9 which is under consideration. IEC 62317-9 will not include the low-profile RM-cores.

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

FDIS	Report on voting
51/833/FDIS	51/839/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.

IEC 62317 consists of the following parts, under the general title *Ferrite cores – Dimensions*:

- Part 1: General (under consideration)
- Part 2: Pot cores (under consideration, currently available as IEC 60133)
- Part 3: Half pot cores (under consideration, currently available as IEC 62323)
- Part 4: RM-cores and associated parts
- Part 5: EP-cores (under consideration, currently available as IEC 61596)
- Part 6: ETD-cores (under consideration, currently available as IEC 61185)
- Part 7: EER-cores
- Part 8: E-cores
- Part 9: Planar cores
- Part 10: PM-cores (under consideration, currently available as IEC 61247)
- Part 11: EC-cores (under consideration, currently available as IEC 60647)
- Part 12: Uncoated ring cores (under consideration, currently available as IEC 61604)

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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.

A bilingual version of this publication may be issued at a later date.

## FERRITE CORES – DIMENSIONS –

### Part 4: RM-cores and associated parts

#### 1 Scope

This part of IEC 62317 specifies the dimensions that are of importance for mechanical interchangeability for a preferred range of RM-cores and low-profile RM-cores made of ferrite, and the locations of their terminal pins on a 2,54 mm printed wiring grid in relation to the base outlines of the cores. It also specifies the test conditions and clamping forces to be used for inductance measurement.

The general considerations that the design of this range of cores is based upon are given in Annex A.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 60097:1991, *Grid system for printed circuits*

IEC 60205:2001, *Calculation of the effective parameters of magnetic piece parts*

#### 3 Primary standards

Compliance with the following requirements ensures mechanical interchangeability of complete assemblies and wound coil formers.

##### 3.1 Pin locations and base outlines

These shall be as shown in Figure 6 and Figure 8 (for power applications), in which the base is viewed from the pin side, i.e. from the underside of the printed wiring boards.

The pins shall fit into holes according to IEC 60097, the nominal hole diameter being:

- 1 mm when the shortest distance between pins is 2,54 mm;
- 1,3 mm when the shortest distance between pins is  $2,54\sqrt{2}$  mm or more.

##### 3.2 Dimensions of RM-cores

The dimensions of RM-cores shall be as given in Table 1 and the low-profile RM-cores shall be as given in Table 2.