



**SLOVENSKI STANDARD**  
**SIST EN 125100:2002**

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**Sectional specification: Magnetic oxide cores for inductor applications**

Sectional Specification: Magnetic oxide cores for inductor applications

Rahmenspezifikation: Kerne aus magnetischen Oxiden in Spulenanwendungen

Spécification intermédiaire: Noyaux en oxyde magnétique destinés aux bobines d'inductance

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**Ta slovenski standard je istoveten z: EN 125100:1991**

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**ICS:**

29.100.10      Magnetne komponente      Magnetic components

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EUROPEAN STANDARD  
 NORME EUROPÉENNE  
 EUROPÄISCHE NORM

EN 125100

December 1991

Descriptors: Quality, electronic components, cores

English version

## Sectional Specification: Magnetic oxide cores for inductor applications

Spécification Intermédiaire:  
 Noyaux en oxyde magnétique destinés aux  
 bobines d'inductance

Rahmenspezifikation:  
 Kerne aus magnetischen Oxiden  
 in Spulenanwendungen

### iTeh STANDARD PREVIEW

This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 20 November 1991. The text of this standard consists of the text of CECC 25100 Issue 1 1976 of the corresponding CECC Specification. CENELEC members are bound to comply with 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 General Secretariat of the CECC or to any CENELEC member.

This European Standard exists in three official versions (English, French, 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 CECC General Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom. The membership of the CECC is identical, with the exception of the national electrotechnical committees of Greece, Iceland and Luxembourg.

## CECC

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 CENELEC Electronic Components Committee (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

The object of the system is to facilitate international trade by the harmonization of specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate, of Conformity. The components produced under the System are thereby accepted by all member countries without further testing.

This document has been formally approved by the CECC, and has been prepared for those member countries taking part in the System who wish to issue national harmonized specifications for MAGNETIC OXIDE CORES FOR INDUCTOR APPLICATIONS. It should be read in conjunction with document CECC 00100: Basic Rules (1974).

At the date of printing of this document, the member countries of the CECC are Belgium, Denmark, Germany, France, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and copies of it can be obtained from the National Committees of the CENELEC in these countries.

## Preface

This sectional specification was prepared by CECC Working Group 12: "Magnetic components".

In accordance with the requirements of document CECC 00100, it is based, wherever possible, on the Recommendations of the International Electrotechnical Commission and in particular on IEC Publication 367: Cores for inductors and transformers for telecommunications.

The text of this sectional specification was circulated to the CECC in document CECC(Secretariat) 372 in June 1975 and was formally approved by the CECC for printing as a CECC Specification.

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European Committee for Electrotechnical Standardization (CENELEC)  
Cenelec Electronic Components Committee

**CECC**

English version



Harmonized System of Quality Assessment for  
Electronic Components

**SECTIONAL SPECIFICATION:  
MAGNETIC OXIDE  
CORES FOR INDUCTOR  
APPLICATIONS**

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Système Harmonisé d'Assurance de la Qualité  
des Composants Electroniques

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**SPECIFICATION INTERMEDIAIRE:**

**NOYAUX EN OXYDE  
MAGNETIQUE DESTINES  
AUX BOBINES  
D'INDUCTANCE**

Harmonisiertes Gütebestätigungssystem für  
Bauelemente der Elektronik

**RAHMENSPEZIFIKATION:  
KERNE AUS  
MAGNETISCHEN OXIDEN  
IN SPULENANWENDUNGEN**

**CECC 25100**

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## Section 1. Scope

This sectional specification prescribes the characteristics, ratings and inspection requirements for magnetic cores of assessed quality. Such cores, intended for inductors and transformers in tuned circuits for professional and industrial applications, consist of at least two parts forming a substantially closed magnetic circuit.

It selects from the generic specification CECC 25000, the appropriate methods of test to be used in detail specifications derived from this specification, and contains the test schedules to be used in the preparation of such specifications. Each test schedule, referenced by a CECC number, when taken with the appropriate information in Section 5 of this specification, forms a blank detail specification.

The cores covered by this specification may be used with an adjuster which provides for change of inductance for tuning.

## Section 2. General

### 2.1 Related documents

Document CECC 25000 and any other reference documents, as appropriate.

### 2.2 Classification

A core is classified by:

- shape: e.g. pot core, X core, RM core . . .
- size: e.g. 18 × 11, X 22, RM 6 . . .
- class (combined electromagnetic properties, e.g. temperature coefficient and losses at given frequencies). Since no systematic classification of the electromagnetic properties is available in the CECC, each detail specification shall clearly define the class to which it applies. It may also state the appropriate class designation.

Normally, a detail specification will cover cores of one shape, size and class.

## Section 3. Quality assessment procedures

The tests given in the following table shall be included in each detail specification for magnetic oxide inductor and tuned transformer cores.

These tests shall be carried out in accordance with measuring methods presented in Sections 2 and 4 of CECC 25000.

Visual examination and measurement of dimensions may be carried out on half cores prior to pairing or on a set, all other tests of Groups A and C being carried out on a set, where a “set” is defined as a pair of cores. Temperature coefficient shall be measured on gapped sets. Temperature factor may be determined on either ungapped or on gapped sets.

Disaccommodation factor, or disaccommodation, may be measured on toroidally wound half cores either on ungapped or gapped sets.

The method to be used for all Group B tests shall be defined in the detail specification.

The load tests for the adjuster mechanism are only applicable if the cores are supplied with the fixed part of the adjuster attached; the torque test is only applicable if the adjusters are supplied with these cores.

Table for quality conformance inspection

Group	Test	Inspection level	AQL %
A Lot by lot	Visual examination Marking	I	1,5
	Dimensions	Primary	1
		Secondary	S3
	Inductance factor	I	1
B Lot by lot	Loss factor <u>or</u> quality factor	S3	4
	Hysteresis constant <u>or</u> $\tan \delta_h$	S3	4
	Temperature coefficient <u>or</u> Temperature factor	S3	4
	Disaccommodation factor <u>or</u> Disaccommodation	S2	4
	Load test on fixed part of adjuster	for inclusion later	
	Adjuster torque test	for inclusion later	
C Periodic on one delivery batch	Range of inductance adjustment	for inclusion later	
	Contribution of the adjusting device to the core instability	for inclusion later	
	Compression load test <a href="https://standards.iteh.ai/catalog/standards/sist/a815bb82-90f4d1c-bcb4-3492b69f901b/sist-en-125100-2002">https://standards.iteh.ai/catalog/standards/sist/a815bb82-90f4d1c-bcb4-3492b69f901b/sist-en-125100-2002</a>	15 sets 1 defective allowable Every 6 months	

#### Section 4. Additional information

Additional information in the form of curves and graphs may be given by the manufacturers. This should not be used for inspection purposes.

#### Section 5. Blank detail specification

The following information should be included in each detail specification together with the required values.

The general data necessary to identify the harmonized detail specification and the component shall preferably be presented as shown in 5.9.

Numbers between square brackets on page 6 correspond to indications given in 5.1 and 5.2.

##### 5.1 Identification of the harmonized detail specification

The name of the National Standards Organization under whose authority the detail specification is drafted [1]

The CECC number of the relevant blank detail specification allotted by the CECC General Secretariat [2]

The number and issue number of the national generic specification [3]

The national number of the detail specification, date of issue and any further information required by the national system [4]



## 5.2 Identification of the core

Magnetic core for inductor applications class:	[5]
Typical construction (core shape and size)	[6]
Outline drawing and dimensions (cf. 5.5.2)	[7]
Application or group of applications covered by the detail specification	[8]

## 5.3 Limiting conditions (not for inspection purposes)

- Operating conditions: Any mechanical or environmental conditions which shall not be exceeded, shall be stated as absolute values, e.g. temperature range for temperature coefficient or temperature factor being + 5 °C to 55 °C (IEC 68), climatic category rating (IEC 68-1). Any known interdependence of these conditions shall also be stated.
- Storage conditions:
  - 1) for ferrite core only: e.g. – 55 °C to + 100 °C
  - 2) for ferrite core with auxiliary devices: e.g. – 10 °C to 55 °C, but a combination of high humidity and high temperature should be avoided.

## 5.4 Marking of components and package

### 5.4.1 Component (minimum information)<sup>1)</sup>

- Class or grade of material (may be in coded form)
- $A_L$  value (where space permits) (may be numerical value only, e.g. 100)
- Manufacturer's trade-mark and date of manufacture (where space permits)

### 5.4.2 Package (minimum information in the following sequence)

- Detail specification reference
- Manufacturer's component designation reference and name of manufacturer or trade-mark
- Manufacturer batch identification code
- Quantity
- $A_L$  value

## 5.5 Characteristics

### 5.5.1 Visual examination

The conditions, workmanship and finish shall be satisfactory as determined by visual examination. The permissibility of any physical imperfections shall be judged on the basis of IEC 424. The permissible percentage of chipping shall be stated in the detail specification.

The marking shall be distinctly legible as determined by visual examination.

If an adhesive is used to bond the fixed part of the adjuster to the ferrite, it should not interfere with the proper functioning of the adjuster.

### 5.5.2 Dimensions

Primary dimensions are the dimensions controlled by the gauge(s) defined in the appropriate IEC Publication, e.g. for pot cores: IEC 133.

Secondary dimensions are all those dimensions shown in the appropriate IEC Publication but not controlled by the gauge(s).

### 5.5.3 Effective parameters

At least two of the effective parameters calculated according to IEC 205: e.g.  $A_e$ ,  $l_e$ ,  $V_e$ ,  $C_1$ .

<sup>1)</sup> Sets may be marked only on one half core.