SLOVENSKI STANDARD
SIST EN 129202:2002

01-september-2002

Blank detail specification: Wire wound inductors with ceramic or ferrite core - Assessment level P

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Vordruck für Bauartspezifikation: Drahtgewickelte Spulen mit Keramik- oder Ferritkern - Gütebestätigungsstufe P

Spécification particulière cadre: (n'existe pas en français)

Ta slovenski standard je istoveten z: **EN 129202:1994**

ICS:

31.220.99	Druge elektromehanske komponente	Other electromechanical components

SIST EN 129202:2002 **en**

EUROPEAN STANDARD

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EN 129202

July 1994

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Descriptors: Quality, electronic components, inductors

English version

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(includes amendment A1:1995)

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Drahtgewickelte Spulen mit Keramik- oder Ferritkern — Gütebestätigungsstufe P
(enthält Änderung A1:1995)

This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 1993-08-09. 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 Central 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.

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

Ref. No. EN 129202:1994 + A1:1995 E

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 the 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 acceptable in all member countries without further testing.

This specification was prepared by the German ONH under the Single Originator Procedure for approval and publication of CECC specifications (see RP 11-V).

The text of the draft based on document CECC(Secretariat)3266/01.93 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3387/07.93, it was approved by CECC as EN 129202 on 9 August 1993.

The following dates were fixed:

— latest date of announcement of the EN at national level	(doa)	1993-11-08
— latest date of publication of an identical national standard	(dop)	1994-05-08
— latest date of withdrawal of conflicting national standards	(dow)	1995-05-08

Foreword

This amendment was prepared by Working Group CLC/TC CECC/WG DE.

The text of the draft based on document CECC(Secretariat)3590 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3639, it was approved as amendment A1 to EN 129202:1994 on 1994-12-28.

The following dates were fixed:

— latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	1995-10-24
— latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	1996-10-24

Contents

Identification of the detail specification (DS) and the component

The first page of the DS should have the layout recommended on page 3. The numbers in square brackets correspond to the indications to be completed thereunder:

[1] The name of the National Standards Organization under whose authority the DS is published and, if applicable, the organization from whom the DS is available

[2] The CECC symbol and the number allotted to the DS by the CECC General Secretariat

[3] The number and year of publication of the EN generic and sectional specification as relevant; also national reference if different.

[4] If different from the CECC number, the national number of the DS, date of issue and any further information required by the national system, together with any amendment numbers

[5] A brief description of the component or range of components

[6] Information on typical construction (where applicable)

[7] An outline drawing with main dimensions which are of importance for interchangeability, and/or reference to the appropriate national or international document for outlines. Alternatively, this drawing may be given in an annex to the DS, but [7] should always contain an illustration of the general outer appearance of the component

[8] The level(s) of quality assessment covered by the DS

[9] Reference data giving information on the most important properties of the component which allow comparison between the various component types intended for the same, of for similar, applications

For [5] and [6] the text to be given in the DS should be suitable for an entry in CECC 00200 (Register of Approvals) and CECC 00301 (Register of CECC Specifications and Related Detail Specifications).

Specification available from: [1] 	CECC 29202-xxx [2]
ELECTRONIC COMPONENTS OF ASSESSED QUALITY — DETAIL SPECIFICATION IN ACCORDANCE WITH: EN 129000:1993 EN 129200:1994 [3]	[4]
Outline and dimensions: [7] (First angle projection)	DETAIL SPECIFICATION FOR WIREWOUND INDUCTORS WITH CERAMIC OR FERRITE CORE [5]
	TYPICAL CONSTRUCTION [6] (Examples): axial/radial terminations
	Assessment level P [8]
	[9]

QUICK REFERENCE DATA: Rated inductance range, inductance tolerance, rated current, climatic category, performance grade

Information about manufacturer who have components qualified to this detail specification is available in the current CECC 00200.

blank

1 General data

1.1 Recommended method of mounting

The inductors are mounted by their terminations.

See **1.3.2** of the sectional specification EN 129200:1994.

1.2 Dimensions

Table 1

Case size reference	Dimensions (in mm)							
	ϕ	L	d					

NOTE The dimensions shall be given as maximum dimensions or as nominal dimensions with a tolerance.

1.3 Ratings and characteristics

Rated inductance range		(See Table 2)
Tolerance of rated inductance		. . . . .
Q-factor	]	
D.C. resistance	]	(See Table 2)
Self-resonant frequency	]	
Rated current	]	
Climatic category		. . . . .
Rated temperature		. . . . .

Table 2

L_R nH	f_L MHz	$Q_{min.}$	f_Q MHz	$R_{max.}$ Ω	f_{res} min. MHz	I_R mA	I_{CR} mA	Type of Core-material

I_{CR} : incremental current
I_R : rated current
L_R : rated inductance
Q : quality factor
R : D.C. resistance

f_L : measuring frequency for inductance
f_Q : measuring frequency for Q
f_{res} : resonant frequency

1.4 Related documents

Generic specification : EN 129000:1993
Sectional specification : EN 129200:1994

1.5 Marking

The marking of the inductor and of the packing shall be in accordance with the requirements of **1.5** of the sectional specification EN 129200:1994.

NOTE The details of the marking of the component and of packing shall be given in full in the detail specification.

1.6 Ordering information

Orders for inductors covered by this specification shall contain, in clear or in coded form, the following minimum information:

1) Rated inductance
2) Tolerance on rated inductance
3) Number of detail specification and case size reference
4) Packaging (bulk or taped; if taped, according to IEC 286-1 or IEC 286-2)

1.7 Certified test records

Required/not required

1.8 Additional information (not for inspection purpose)

1.9 Additional or increased severities or requirements to those specified in the generic and/or sectional specification

NOTE Additions or increased requirements should be specified only when essential.

Table 3 — Other characteristics

This table is to be used for defining characteristics which are additional to or tighter than those given in the sectional specification.

2 Qualification approval and Inspection requirements

2.1 Procedures

2.1.1 For Qualification Approval the procedures shall be in accordance with **3.4** of the sectional specification EN 129200:1994.

2.1.2 For Quality Conformance Inspection the test schedule (Table 4A and Table 4B) includes sampling, periodicity, severities and requirements. The formation of inspection lots is covered by **3.5.1** of the sectional specification EN 129200:1994.

Notes to Table 4A and Table 4B

(1) Clause numbers of tests and performance requirements refer to the sectional specification EN 129200:1994.

(2) D = destructive
ND = non destructive
P = periodicity (in months)
n = number of specimens (sample size)
c = number of permissible defectives (acceptance criterion)
IL = inspection level (selected from IEC 410)
AQL = acceptable quality level (selected from IEC 410)

Table 4A — Lot-by-lot inspection (Group A and B)

Sub-clause number and test (1)	D or ND (2)	Conditions of test (1)	IL (2)	AQL (2)	Performance requirements (1)
Group A1	ND		S4	1,0	
4.1 Visual examination					No visible damage Marking legible, see **1.5**
4.1 Dimensions (Detail)					See Table 1 of this specification
Group A2	ND		II	0,25	
4.2.1 Inductance					Within specified tolerance
4.2.2 Q-factor					See Table 2 of this specification
Group A3	ND		S3	1,0	]
4.2.3 Self-resonant-frequency					]
4.2.4 D.C. resistance					] See Table 2 of this specification
					]
					]
Notes see page 6					

Table 4A — Lot-by-lot inspection (Group A and B)

Sub-clause number and test (1)	D or ND (2)	Conditions of test (1)	IL (2)	AQL (2)	Performance requirements (1)
Group B1	D		S3	1,0	
4.5 Solderability		Ageing (if required Duration: 4 h Temperature: 155 °C) Method: . . .			Good tinning as evidenced by free flowing of the solder with wetting of the terminations or solder shall flow within . . . s, as applicable
4.14.2 Solvent resistance of marking (if required)		Solvent temperature: (23 ± 5) °C Method 1 Rubbing material: cotton wool			Legible marking
4.4.3 Final measurement		Visual examination			As in **4.5.3**
Notes see page 6					

Table 4B — Periodic tests (Group C)

Sub-clause number and test (1)	D or ND (2)	Conditions of test (1)	P	n (2)	c		Performance requirements (1)
Group C1A	D		12	9	1		
4.3.1 Initial measurements		Inductance Q-factor D.C. resistance					
4.3 Robustness of terminations		Visual examination					No visible damage
4.4 Resistance to soldering heat		Method:					
4.13.1 Component solvent resistance (if required)		Solvent: . . . Solvent temperature: . . . Method 2 Recovery: . . .					No visible damage
4.4.2 Final measurements		Visual examination					No visible damage
		Inductance					$\lvert\Delta L/L\rvert \leq 3\ \%$ of value measured in **4.3.1**
		Q-factor					$\lvert\Delta Q/Q\rvert \leq 20\ \%$ compared to values measured in **4.3.1**
		D.C. resistance					$\lvert\Delta R/R\rvert \leq 3\ \%$ of value measured in **4.3.1**
Notes see page 6							