

SLOVENSKI STANDARD
SIST EN 132400:2002/A4:2002
01-september-2002

Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (Assessment level D) - Amendment A4

Sectional Specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (Assessment level D)

Rahmenspezifikation: Festkondensatoren zur Unterdrückung elektromagnetischer Störungen, geeignet für Netzbetrieb (Gütebestätigungsstufe D)

Spécification intermédiaire: Condensateurs fixes d'antiparasitage et raccordement à l'alimentation (Niveau d'assurance D)

Ta slovenski standard je istoveten z: EN 132400:1994/A4:2001

ICS:

31.060.10	Fiksni kondenzatorji	Fixed capacitors
33.100.20	Imunost	Immunity

SIST EN 132400:2002/A4:2002 en

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EUROPEAN STANDARD

EN 132400/A4

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2001

ICS 31.060.10; 33.100

English version

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Fixed capacitors for electromagnetic interference suppression and
connection to the supply mains
(Assessment level D)**

Spécification intermédiaire:
Condensateurs fixes d'antiparasitage
et raccordement à l'alimentation
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Rahmenspezifikation:
Festkondensatoren zur Unterdrückung
elektromagnetischer Störungen,
geeignet für Netzbetrieb
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This amendment A4 modifies the European Standard EN 132400:1994; it was approved by CENELEC on 2000-08-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, Czech Republic, 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

Foreword

This amendment was prepared by the Technical Committee CENELEC TC 40XA, Capacitors.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A4 to EN 132400:1994 on 2000-08-01.

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) 2002-02-01
- latest date by which the national standards conflicting
with the amendment have to be withdrawn (dow) 2003-08-01

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3.5 Quality conformance inspection

Replace the existing text by:

Before submission to the quality conformance inspection, an appropriate 100% voltage proof test between terminations according to Table 8 shall be made. The details of this test shall be the prerogative of the manufacturer. If the test is performed in a time period between 1 s and 2 s the voltage of Table 8 shall be increased by 20%. If a d.c. test voltage is used instead of a.c. for Y-capacitors, it shall not be less than 1,5 times the a.c. test voltage in Table 8 and further increased by 20% if the testing time is between 1 s and 2 s.

4.2.1.3 Applied voltage

Replace the first paragraph by:

The voltages of Table 8 shall be applied between the respective measuring points shown in Table 3 of EN 130000 for a period of 1 min for qualification approval and periodic testing and for a period of not less than 1 s for lot-by-lot quality conformance testing with the following details:

Add:

- d) The testing may also be carried out for a period of less than 2 s, but not less than 1 s, with the voltages shown in table 8 increased by 20%.

4.2.5 Insulation resistance

[SIST EN 132400:2002/A4:2002](https://standards.iteh.ai/catalog/standards/sist/e1182dc6-f348-4629-a0aa-1875a9c701e8/sist-en-132400-2002-a4-2002)

Replace the existing text by: [ai/catalog/standards/sist/e1182dc6-f348-4629-a0aa-1875a9c701e8/sist-en-132400-2002-a4-2002](https://standards.iteh.ai/catalog/standards/sist/e1182dc6-f348-4629-a0aa-1875a9c701e8/sist-en-132400-2002-a4-2002)

See 4.5 of EN 130000 with the following details:

In lot-by-lot quality conformance testing the measuring may be interrupted at the time that the value of the insulation resistance exceeds the limits of Table 9 or Table 10, which time can be shorter than 60 s.

4.18 Active flammability

Replace the second sentence of the third paragraph by:

The cheesecloth shall be untreated pure cotton cloth with a mass of 20 g/m² to 60 g/m² and having a count of between 22 x 27 and 45 x 34 which has been pre-conditioned under standard atmospheric conditions for testing (see 4.2.1 of EN 130000) for 24 h.

Add a new Annex G:

Annex G (normative)

Particular requirements for safety test of surface mounting capacitors

Surface mounting capacitors shall in general comply with all safety requirements of EN 132400. Design, material and mounting technology make it necessary to introduce new tests and adjust some existing methods and requirements.

General

The following paragraphs replace corresponding paragraphs in EN 132400.

1.4.2 Mounting

According to 4.33 of EN 130000. For safety testing according to Table 17, enclosure 1, the manufacturer shall supply the test house with components unmounted or mounted on individual substrates as indicated in Table 17.

1.5.21 Surface mounting capacitor

A capacitor whose small dimensions and nature of shape of terminations make it suitable for surface mounting in hybrid circuits and on printed board.

1.6.1 Marking

The capacitors shall be clearly marked with a) and b) in 1.6. The capacitors may also be marked with as many of the remaining items as possible taking account of the relative importance of each item. The marking shall be sufficient to enable a clear identification to be made.

4 Test and measurement procedures

The capacitor shall be tested in accordance with Table 17 with the following deviations.

For a capacitor, where the capacitive element is not protected, test C in 4.2.1 voltage proof and 4.2.5 insulation resistance shall be omitted.

4.3 Robustness of terminations

This subclause is substituted by 4.34 and 4.35 of EN 130000 and performed before the tests in group 2 and 3. Measurement of capacitance during bending test may be omitted.

4.4 Resistance to soldering heat

If applicable, this test is performed as a separate test according to 4.14.2 of EN 130000.

4.4.2 Final inspection, measurements and requirements

The capacitors shall be visually examined and measured and shall meet the requirements of Table 14.

Table 17 - Test schedule and sampling plan for safety tests

Group	Clause number and test referred to Section 4	Number of specimens tested per rated voltage and sub-class	Permitted number of non-conforming items per rated voltage and sub-class	
			Per group	Total
0	4.1 Visual examination 4.2.2 Capacitance 4.2.4 Resistance ³⁾ 4.2.1 Voltage proof 4.2.5 Insulation resistance Spares	$28+12^{4)} + 6^{5)} + (6-18)^{6)}$ $14+6^{5)}$	1 ²⁾	XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX
1A	4.1.1 Creepage distances and clearances 4.4 Resistance to soldering heat ³⁾ 4.20 Solvent resistance of the marking	6	0 ¹⁾²⁾	1
2	4.34 Shear test 4.35 Substrate bending test 4.12 Damp heat, steady state	10	0 ¹⁾²⁾	
3	4.34 Shear Test 4.35 Substrate bending test 4.13 Impulse voltage 4.14 Endurance 4.14.3 Class X and Rc-units 4.14.4 Class Y and Rc-units 4.14.5 Lead-through	$12^{4)}$ $12^{4)}$ $6^{5)}$	0 ¹⁾²⁾	
6	4.17 Passive flammability	$6-18^{6)}$	0	
7	4.18 Active flammability	$24^{8)}$	0	

For information about the notes see Table 3.

Samples for 4.1, 4.1.1, 4.4, 4.17 and 4.20 shall not be mounted on substrate during test.