

**SLOVENSKI STANDARD**  
**SIST EN 132400:2002/A3:2002**  
**01-september-2002**

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

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)

<https://standards.iteh.ai/catalog/standards/sist/096fbace-08b2-4b9-9119-1e26fd7bceca/sist-en-132400-2002-a3-2002>

**Ta slovenski standard je istoveten z: EN 132400:1994/A3:1998**

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**ICS:**

|           |                      |                  |
|-----------|----------------------|------------------|
| 31.060.10 | Fiksni kondenzatorji | Fixed capacitors |
| 33.100.20 | Imunost              | Immunity         |

**SIST EN 132400:2002/A3:2002**                      **en**

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EUROPEAN STANDARD

EN 132400/A3

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 1998

ICS 31.060.10; 33.100

Descriptors: Fixed capacitors, electromagnetic interference suppression, connection to the supply mains, sectional specification, assessment level D

English version

**Sectional Specification:**  
**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  
(Niveau d'assurance D)

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

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This amendment A3 modifies the European Standard EN 132400:1994; it was approved by CENELEC on 1998-10-01. 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 A3 to EN 132400:1994 on 1998-10-01.

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) 1999-10-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 1999-10-01

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**1 General****1.1 Replace the existing scope as follows:**

This specification applies to capacitors which will be connected to an a.c. mains or other supply with a nominal voltage not exceeding 1000 V a.c. (r.m.s.) or 1000 V d.c. and with a nominal frequency not exceeding 100 Hz.

**Table 2 Replace the existing table by the following:**

Table 2

| Sub-class | Type of insulation bridged                   | Range of rated voltages      | Peak impulse voltage before endurance test |
|-----------|--|------------------------------|--|
| Y1        | Double insulation or reinforced insulation   | $\leq 500$ V                 | 8,0 kV                                     |
| Y2        | Basic insulation or supplementary insulation | $\geq 150$ V<br>$\leq 300$ V | 5,0 kV                                     |
| Y3        |  | $\geq 150$ V<br>$\leq 250$ V | none                                       |
| Y4        |  | $< 150$ V                    | 2,5 kV                                     |

Note - For definitions of basic, supplementary, double and reinforced insulation see IEC 60536, sub-clauses 2.1, 2.2, 2.3 and 2.4.

**2 Preferred ratings and characteristics****2.2.3 Replace the existing text by the following:**

The preferred values or rated voltages are:

115 V, 250 V, 400 V, 500 V and 760 V.

NOTE - A star connect can be used for X-capacitors in cases where line to line nominal voltages exceed 500 V d.c. or a.c. (r.m.s.).

### 3 Quality assessment procedures

#### 3.4.3.1 Replace the 2nd paragraph by the following:

The sample shall contain equal numbers of specimens of the highest and lowest capacitance values in the range to be qualified, except for the passive flammability test of 4.17 and the active flammability test of 4.18. For the passive flammability test the rules of sampling in 4.17, Note 6 to Table 3 and Note 9 to Table 4 shall be followed. For the active flammability test the rules of sampling in 4.18 shall be followed. For RC units, the sample of highest capacitance values and the sample of the lowest capacitance values shall contain each, as near as possible, equal numbers of resistors of the highest and lowest resistance values in the range to be qualified. Where only one capacitance value is involved, the total number of capacitors as stated in Tables 3 and 4 shall be tested. Spare specimens are permitted as follows:

### 4 Test and measurement procedures

Add after the 1st sentence:

A.C. tests performed at 50 Hz can be considered valid up to 100 Hz.

#### Table 7 Replace the existing table by the following:

Table 7  
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| Points of measurement  | Rated voltage (r.m.s.)   |                 |                                |                 |                                |                 |                                |                 |
|--|--------------------------|-----------------|--------------------------------|-----------------|--------------------------------|-----------------|--------------------------------|-----------------|
|  | $U_R \geq 130 \text{ V}$ |                 | $130 < U_R \leq 250 \text{ V}$ |                 | $250 < U_R \leq 500 \text{ V}$ |                 | $500 < U_R \leq 760 \text{ V}$ |                 |
|  | Creepage distance<br>mm  | Clearance<br>mm | Creepage distance<br>mm        | Clearance<br>mm | Creepage distance<br>mm        | Clearance<br>mm | Creepage distance<br>mm        | Clearance<br>mm |
| Between live parts of different polarity 1)                            | 2,0                      | 1,5             | 3,0                            | 2,5             | 4,0                            | 3,0             | 6,3                            | 5,5             |
| Between live parts and other metal parts over basic insulation 2)      | 2,0                      | 1,5             | 4,0                            | 3,0             | 6,3                            | 5,5             | 6,3                            | 5,5             |
| Between live parts and other metal parts over reinforced insulation 3) | 8,0                      | 8,0             | 8,0                            | 8,0             | 8,0                            | 8,0             | -                              | -               |

1) These limits shall be used for measurements between terminals of an X-capacitor.

2) These limits shall be used for measurements between either terminal and the metal case of an X-capacitor and for measurements between terminals or between either terminal and the metal case of a Y2-, Y3- or Y4-capacitor.

3) These limits shall be used for measurements between the terminals of a Y1-capacitor

**Table 8** Replace the existing table by the following:

Table 8

| Class | Rated Voltage                | Test A                    | Test B or C   |
|-------|------------------------------|---------------------------|---|
| X1    | $\leq 760$ V                 | 4,3U <sub>R</sub> ( d.c.) | 2 U <sub>R</sub> + 1500 V (a.c.)<br>with a minimum of<br>2000 V (a.c.) 1) |
| X2    |                              |                           |   |
| X3    |                              |                           |   |
| Y1    | $\leq 500$ V                 | 4000 V (a.c.)             | 4000 V (a.c.)   |
| Y2    | $\geq 150$ V<br>$\leq 300$ V | 1500 V (a.c.)             | 2 U <sub>R</sub> + 1500 V (a.c.)<br>with a minimum of<br>2000 V (a.c.) 2) |
| Y3    | $\leq 250$ V                 | 1500 V (a.c.)             |   |
| Y4    | $< 150$ V                    | 900 V (a.c.)              | 900 V (a.c.) 2)   |

1) For delta and T-connected capacitor units according to figures 5b and 5c the test voltage for terminals-to-case shall be the appropriate test voltage for the Y-capacitors.

2) For lot-by-lot tests of class Y2-, Y3- and Y4-capacitors the a.c. test voltage may be replaced by a d.c. voltage of 1.5 times the prescribed a.c. voltage

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