Fixed electric double-layer capacitors for use in electronic equipment Part 2-1: Blank detail specification - Electric-double layer capacitors for power application - Assessment level EZ

Fixed electric double-layer capacitors for use in electronic equipment Part 2-1: Blank detail specification - Electric-double layer capacitors for power application - Assessment level EZ

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 62391-2-1:2006 sisaldab Euroopa standardi EN 62391-2-1:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 22.09.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 62391-2-1:2006 consists of the English text of the European standard EN 62391-2-1:2006. This document is endorsed on 22.09.2006 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala:	**Scope:**

ICS 31.060.10

Võtmesõnad:

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62391-2-1

June 2006

ICS 31.060.10

English version

Fixed electric double-layer capacitors for use in electronic equipment Part 2-1: Blank detail specification - Electric-double layer capacitors for power application - Assessment level EZ

(IEC 62391-2-1:2006)

Condensateurs électriques fixes à double couche utilisés dans les équipements électroniques
Partie 2-1: Spécification particulière cadre - Condensateurs électriques fixes à double couche pour application de puissance - Niveau d'assurance de la qualité EZ
(CEI 62391-2-1:2006)

Elektrische Doppelschichtfestkondensatoren zur Verwendung in Geräten der Elektronik
Teil 2-1: Vordruck für Bauartspezifikation: Elektrische Doppelschichtfestkondensatoren für Leistungsanwendungen - Bewertungsstufe EZ
(IEC 62391-2-1:2006)

This European Standard was approved by CENELEC on 2006-05-01. 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 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, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

The text of document 40/1642/FDIS, future edition 1 of IEC 62391-2-1, prepared by IEC TC 40, Capacitors and resistors for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62391-2-1 on 2006-05-01.

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)	2007-02-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-05-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 62391-2-1:2006 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60410	-[1)]	Sampling plans and procedures for inspection by attributes	-	-
IEC 62391-1	-[1)]	Fixed electric double-layer capacitors for use in electronic equipment - Part 1: Generic specification	EN 62391-1	2006[2)]
IEC 62391-2	-[1)]	Fixed electric double-layer capacitors for use in electronic equipment - Part 2: Sectional specification - Electric double-layer capacitors for power application	EN 62391-2	2006[2)]
IEC QC 001005	-[1)]	IEC Quality assessment system for electronic components (IECQ) - Register of films, products and services approved under the IECQ system, including ISO 9000	-	-

[1)] Undated reference.

[2)] Valid edition at date of issue.

INTERNATIONAL STANDARD

IEC 62391-2-1

First edition
2006-04

Fixed electric double-layer capacitors for use in electronic equipment –

Part 2-1:
Blank detail specification –
Electric double-layer capacitors for power application –
Assessment level EZ

Reference number
IEC 62391-2-1:2006(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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- **IEC Web Site (www.iec.ch)**

- **Catalogue of IEC publications**

  The on-line catalogue on the IEC web site (www.iec.ch/searchpub) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.

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INTERNATIONAL STANDARD

IEC 62391-2-1

First edition
2006-04

Fixed electric double-layer capacitors for use in electronic equipment –

Part 2-1: Blank detail specification – Electric double-layer capacitors for power application – Assessment level EZ

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIXED ELECTRIC DOUBLE-LAYER CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 2-1: Blank detail specification – Electric double-layer capacitors for power application – Assessment level EZ

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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 62391-2-1 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

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

FDIS	Report on voting
40/1642/FDIS	40/1714/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 62391 consists of the following parts, under the general title *Fixed electric double-layer capacitors for use in electronic equipment:*

Part 1: Generic specification

Part 2: Sectional specification – Electric double-layer capacitors for power application

The sectional specification mentioned above does have a blank detail specification being a supplementary document, containing requirements for style, layout and minimum content of detail specifications.

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.

FIXED ELECTRIC DOUBLE-LAYER CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 2-1: Blank detail specification – Electric double-layer capacitors for power application – Assessment level EZ

INTRODUCTION

Blank detail specification

A blank detail specification is a supplementary document to the sectional specification and contains requirements for style, layout and minimum content of detail specifications. Detail specifications not complying with these requirements may not be considered as being in accordance with IEC specifications nor shall they so be described.

In the preparation of detail specifications, the content of 1.4 of the sectional specification shall be taken into account.

The numbers between square brackets on the first page of the detail specification correspond to the following information, which shall be inserted in the position indicated.

Identification of the detail specification

[1] The “International Electrotechnical Commission” or the National Standards Organization under whose authority the detail specification is drafted.

[2] The IEC or National Standards number of the detail specification, date of issue and any further information required by the national system.

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

[4] The IEC number of the blank detail specification.

Identification of the capacitor

[5] A short description of the type of capacitor.

[6] Information on typical construction (when applicable).

NOTE When the capacitor is not designed for use in printed circuit-board applications, this is clearly stated in the detail specification in this position.

[7] Outline drawing with main dimensions which are of importance for interchangeability and/or reference to the national or international documents for outlines. Alternatively, this drawing may be given in an annex to the detail specification.

[8] Application or group of applications covered and/or assessment level.

[9] Reference data on the most important properties, to allow comparison between the various capacitor types.

[1]	IEC 62391-2-1-XXX [2] QC XXXXXXXXXXX
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH: [3]	IEC 62391-2-1 [4] QC XXXXXX
	ELECTRIC DOUBLE-LAYER CAPACITORS FOR POWER APPLICATION [5]
Outline drawing: (see Table 1) (…angle projection) [7]	[6]
	Assessment level(s): EZ [8]
NOTE For [1] to [9]: see previous page.	

Information on the availability of components qualified to this detail specification is given in IEC QC 001005. [9]

1 General data

1.1 Recommended method(s) of mounting (to be inserted)

See 1.4.2 of IEC 62391-2.

1.2 Dimensions

Dimensions are given in Table 1.

Table 1 – Case size reference and dimensions

Case size reference	Dimensions mm						
	Ø	*W*	*H*	*d*	.....		

NOTE 1 When there is no case size reference, Table 1 may be omitted and the dimensions should be given in Table 2a, which then becomes Table 1.

NOTE 2 The dimensions should be given as maximum dimensions or as nominal dimensions with a tolerance.

1.3 Ratings and characteristics

Rated capacitance range (see Table 2a).

Tolerance on rated capacitance.

Rated voltage (see Table 2a).

Climatic category.

Rated temperature.

Internal resistance (see Table 2b).

Leakage current (if applicable).

Table 2a – Values of capacitance and of voltage related to case sizes

Rated voltage				
Rated capacitance F	Case sizes	Case sizes	Case sizes	Case sizes

Table 2b – Values of internal resistance and leakage current

U_R V	C_R F	**Internal resistance at … °C**	**Leakage current** µA (if applicable)		

1.4 Normative references

IEC 60410, *Sampling plans and procedures for inspection by attributes*

IEC 62391-1, *Fixed electric double-layer capacitors for use in electronic equipment – Part 1: Generic specification*

IEC 62391-2, *Fixed electric double-layer capacitors for use in electronic equipment – Part 2: Sectional specification – Electric double-layer capacitors for power application*

IEC QC 001005, *Rules of procedure – Part 5: Hazardous substances process management requirements*

1.5 Marking

The marking of the capacitor and the package shall be in accordance with the requirements of 1.6 of IEC 62391-2.

NOTE The details of the marking of the component and package should be given in full in the detail specification.

1.6 Ordering information

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

a) Rated capacitance.
b) Tolerance on rated capacitance.
c) Rated d.c. voltage.
d) Number and issue reference of the detail specification and style reference.
e) Packaging instructions.

1.7 Certified records of released lots

Required/not required.

1.8 **Additional information** (not for inspection purposes)

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 more severe than those given in the sectional specification.

2 Inspection requirements

2.1 Procedures

2.1.1 For qualification approval, the procedures shall be in accordance with 3.4 of IEC 62391-2.