
Auxiliaries for lamps - Capacitors for use in tubular fluorescent and other discharge lamp circuits - General and safety requirements (IEC 61048:1991+corrigendum Jan.1992, modified)

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Descriptors: Capacitor, safety requirement, discharge lamp, tubular lamp, fluorescent lamp, termination, test, marking

ENGLISH VERSION

Capacitors for use in tubular fluorescent and
other discharge lamp circuits - General and safety
requirements
(IEC 1048:1991, modified + corrigendum 1992)

Condensateurs destinés à être
utilisés dans les circuits de
lampes tubulaires à fluorescence
et autres lampes à décharge
Prescriptions générales et de
sécurité

(CEI 1048:1991, modifiée
+ corrigendum 1992)

Kondensatoren für
Entladungslampen-, insbesondere
Leuchtstofflampen-Anlagen

Allgemeine und
Sicherheitsanforderungen
(IEC 1048:1991, modifiziert

+ Corrigendum 1992)

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This European Standard was approved by CENELEC on 1992-09-15.

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, 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

At the request of CENELEC Technical Committee TC 34Z, Luminaires and associated equipment, the International Standard IEC 1048:1991 and its corrigendum January 1992, together with some modifications prepared by CLC/TC 34Z, were submitted to the CENELEC members for formal vote in May 1992 for acceptance as a European Standard.

The text of the draft was approved by CENELEC as EN 61048 on 15 september 1992.

The following dates were fixed:

- latest date of publication of
an identical national standard (dop) 1993-09-01
- latest date of withdrawal of
conflicting national standards (dow) 1993-09-01

For products which have complied with the relevant national standard before 1993-09-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-09-01.

Annexes designated "normative" are part of the body of the standard. In this standard, annexes A, B and ZA are normative.

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ENDORSEMENT NOTICE

The text of the International Standard IEC 1048:1991 and its corrigendum January 1992 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Clause Modification

3 General requirements

Add after the second paragraph:

Capacitors shall not contain polychlorinated biphenyls (PCBs).

17 Destruction test

Replace table 2 by:

Self-healing		Non-self-healing
up to and including 250 V	over 250 V	
Clause 17.1	Clauses 17.1 and 17.2	Clause 17.3
1) For use only when the a.c. conditioning of 17.1 does not produce ten inoperative capacitors		

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
-----	----	-----	-----	----
68-2-3	1969	Environmental testing Part 2: Tests - Test Ca: Damp heat, steady state	HD 323.2.3 S2*	1987
241	1968	Fuses for domestic and similar purposes	-	-
384-14	1981	Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for radio interference suppression Selection of methods of test and general requirements	-	-
410	1973	Sampling plans and procedures for inspection by attributes	-	-
529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
598-1, mod + A1	1986 1988	Luminaires - Part 1: General requirements and tests	EN 60598-1	1989
695-2-1	1980	Fire hazard testing - Part 2: Test methods - Glow-wire test and guidance	HD 444.2.1 S1	1983
695-2-2	1980*	Part 2: Test methods Needle-flame test	HD 444.2.2 S1	1983
1049, mod.	1990	Capacitors for use in tubular fluorescent and other discharge lamp circuits - Performance requirements	EN 61049	1993

* HD 323.2.3 S2 includes A1:1984 to IEC 68-2-3
IEC 695-2-2:1980 is superseded by IEC 695-2-2:1991, harmonized
as HD 444.2.2 S2:1992

NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
1048

Première édition
First edition
1991-02

Condensateurs destinés à être utilisés dans les
circuits de lampes tubulaires à fluorescence et
autres lampes à décharge

STANDARD PREVIEW
iTeh (standards.iteh.ai)
Prescriptions générales et de sécurité

**Capacitors for use in tubular fluorescent and
other discharge lamp circuits**

<https://standards.iteh.ai/en/standards/61048-1999/84f82e16a84e/sist-en-61048-1999>

General and safety requirements

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CAPACITORS FOR USE IN TUBULAR FLUORESCENT AND
OTHER DISCHARGE LAMP CIRCUITS

General and safety requirements

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.
- 4) The IEC has not laid down any procedure concerning marking as an indication of approval and has no responsibility when an item of equipment is declared to comply with one of its recommendations.

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This International Standard has been prepared by Sub-Committee 34C: Auxiliaries for discharge lamps, of IEC Technical Committee No. 34: Lamps and related equipment.

It constitutes the first edition of IEC 1048.

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

Six Months' Rule	Report on Voting
34C(C0)175	34C(C0)183

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

In this standard, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Annexes A and B form an integral part of IEC 1048.

INTRODUCTION

This International Standard covers general and safety requirements for certain capacitors for use in tubular fluorescent and other discharge lamp circuits.

Performance requirements for these capacitors are the subject of a new publication, IEC 1049.

NOTE - Safety requirements ensure that electrical equipment constructed in accordance with these requirements, does not endanger the safety of persons, domestic animals or property when properly installed and maintained and used in applications for which it was intended.

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CAPACITORS FOR USE IN TUBULAR FLUORESCENT AND OTHER DISCHARGE LAMP CIRCUITS

General and safety requirements

SECTION 1 - GENERAL

1 General

1.1 Scope

This International Standard states the requirements for both self-healing and non-self-healing continuously rated a.c. capacitors of up to and including 2,5 kvar, and not less than 0,1 μ F, having a rated voltage not exceeding 1 000 V, which are intended for use in discharge lamp circuits* operating at 50 Hz or 60 Hz and at altitudes up to 3 000 m.

It covers capacitors intended for connection in shunt or in series with the lamp circuit or an effective combination of these.

It covers only impregnated or unimpregnated capacitors, having a dielectric of paper, plastic film or a combination of both, either metallized or with metal foil electrodes. (standards.iteh.ai)

This standard does not cover radio-interference suppressor capacitors the requirements for which are found in IEC 384-14.

Tests given in this standard are type tests. Requirements for testing individual capacitors during production are not included.

* These lamps and associated ballasts are covered in the specifications of the following IEC standards:

81: 1984, *Tubular fluorescent lamps for general lighting service. Amendments Nos. 1 (1987) and 2 (1988).*

188: 1974, *High-pressure mercury vapour lamps. Amendments Nos. 1 (1976), 2 (1979), 3 (1984) and 4 (1988).*

192: 1973, *Low pressure sodium vapour lamps. Amendment No. 2 (1988).*

920: 1990, *Ballasts for tubular fluorescent lamps. General and safety requirements.*

922: 1989, *Ballasts for discharge lamps (excluding tubular fluorescent lamps). General and safety requirements.*

1.2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

1.2.1 IEC Standards

IEC 68-2-3: 1969, *Environmental testing - Part 2: Tests, Test Ca: Damp heat, steady state*.

IEC 241: 1968, *Fuses for domestic and similar purposes*.

IEC 384-14: 1981, *Fixed capacitors for use in electronic equipment - Part 14: Sectional specification: Fixed capacitors for radio interference suppression. Selection of methods of test and general requirements*.

IEC 410: 1973, *Sampling plans and procedures for inspection by attributes*.

IEC 529: 1989, *Degrees of protection provided by enclosures (IP Code)*.

IEC 598-1: 1986, *Luminaires - Part 1: General requirements and tests. Amendment No. 1 (1988)*.

IEC 695-2-1: 1980, *Fire hazard testing - Part 2: Test methods - Glow-wire test and guidance*.

IEC 695-2-2: 1980, *Fire hazard testing - Part 2: Test methods - Needle-flame test*.

IEC 1049: 1990, *Capacitors for use in tubular fluorescent and other discharge lamp circuits - Performance requirements*.

1.2.2 ISO Standard

ISO 4046: 1978, *Paper, board, pulp and related terms - Vocabulary*.

2 Definitions

For the purpose of this International Standard, the following definitions apply.

2.1 **rated voltage (U_n)**: R.M.S. value of the sinusoidal voltage, marked on the capacitor.

2.2 **rated maximum temperature (t_c)**: Temperature, in degrees Celsius, which shall not be exceeded by the hottest part of the capacitor surface during operation.