



SLOVENSKI STANDARD
SIST EN 60400:1992

01-december-1992

Okovi za cevne fluorescenčne sijalke in starterski okovi

Lampholders for tubular fluorescent lamps and starterholders

Lampenfassungen für röhrenförmige Leuchtstofflampen und Starterfassungen

Douilles pour lampes tubulaires à fluorescence et douilles pour starters

Ta slovenski standard je istoveten z: EN 60400:1992

[SIST EN 60400:1992](https://standards.iteh.ai/catalog/standards/sist/3461782c-06a1-4221-a96e-169a02426ba8/sist-en-60400-1992)

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ICS:

29.140.10 Grla in držala žarnic Lamp caps and holders

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en

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EUROPEAN STANDARD

EN 60400

NORME EUROPEENNE

EUROPÄISCHE NORM

January 1992

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Supersedes EN 60400:1989

Descriptors: Holder for fluorescent tubes, holder for external starting devices, requirements, testing, definitions

ENGLISH VERSION

LAMPHOLDERS FOR TUBULAR FLUORESCENT LAMPS
AND STARTERHOLDERS
(IEC 400:1991, modified)

Douilles pour lampes tubulaires
à fluorescence et douilles pour
starters

(CEI 400:1991, modifiée)

Lampenfassungen für
röhrenförmige
Leuchtstofflampen und
Starterfassungen

(IEC 400:1991, modifiziert)

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This European Standard was approved by CENELEC on 1991-12-10.

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

The International Standard IEC 400:1991, together with a CENELEC common modification, was submitted to the CENELEC members for Unique Acceptance in February 1991. It was approved by CENELEC as EN 60400 on 10 December 1991.

The following dates were fixed:

- latest date of publication of
an identical national standard (dop) 1992-12-01
- latest date of withdrawal of
conflicting national standards (dow) 1992-12-01

For products which have complied with EN 60400:1989 before 1992-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1997-12-01.

Annexes designated "normative" are part of the body of the standard. In this standard, annex ZA is normative.

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The text of the International Standard IEC 400:1991 was approved by CENELEC as a European Standard with an agreed common modification as given below.

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COMMON MODIFICATION

5. Electrical rating

Delete the note.

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
61	Series	Lamp caps and holders together with gauges for the control of interchangeability and safety	-	-
61-1	-	Part 1: Lamp caps	HD 65.1 S1	sliding latest edition
61-2	-	Part 2: Lampholders	HD 65.2 S1	sliding latest edition
61-3	-	Part 3: Gauges	HD 65.3 S1	sliding latest edition
68-2-20	1979	Environmental testing - Part 2: Tests Test T: Soldering	HD 323.2.20 S3*	1988
81	1984	Tubular fluorescent lamps for general lighting service	EN 60081*	1989
112	1979	Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	HD 214 S2	1980
155, mod	1983	Starters for tubular fluorescent lamps	EN 60155*	1989
238	1991	Edison screw lampholders	**	-
352-1	1983	Solderless connections - Part 1: Solderless wrapped connections - General requirements, test methods and practical guidance	HD 476.1 S1	1986

* HD 323.2.20 S3 includes A1:1986 + A2:1987 to IEC 68-2-20

EN 60081 includes A1:1987 + A2:1988 to IEC 81

EN 60155 includes A1:1987 to IEC 155

** EN 60238:1989 + A1:1989 is based on IEC 238:1987, mod.

IEC Publication -----	Date -----	Title -----	EN/HD -----	Date -----
399	1972	Standard sheets for barrel thread for E14 and E27 lampholders with shade holder ring	HD 222 S1	1977
529	1976	Degrees of protection provided by enclosures (IP Code)	HD 365 S1*	1978
598-1, mod	1986	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	Fire hazard testing - Part 2: Test methods - Needle-flame test	HD 444.2.2 S1	1983

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* HD 365 S1 is superseded by EN 60529:1991 which is based on IEC 529:1989

EN 60598-1 includes A1:1988 to IEC 598-1

C E N E L E C
=====
Central Secretariat

CORRIGENDUM to EN 60400:1992

English version

The following corrections apply to the text of IEC 400:1991

Subclause 1.1

Replace the last two lines of the third paragraph by:

..following subclauses of IEC 238: 8.4; 8.5; 8.6; 9.3; 10.7; 11; 12.2; 12.5;
12.6; 12.7; 13; 15.3; 15.4; 15.5 and 15.9.

Subclause 4.5**iTeh STANDARD PREVIEW****(standards.iteh.ai)**

In the first paragraph of the note, replace "clause 123" by "clause 12".

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Subclause 7.1 d)<https://standards.iteh.ai/catalog/standards/sist/3461782c-06a1-4221-a96e-169a02426ba8/sist-en-60400-1992>

Delete the reference to the note.

Subclause 7.4

In the last indent, align the square symbol with the number.

Figures 14 to 20, figure 23, figures 25 to 29

For reference E, replace tolerance "± 0,05" by "± 0,02".

March 1992

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
400

Quatrième édition
Fourth edition
1991-01

Douilles pour lampes tubulaires à fluorescence
et douilles pour starters

iTeh STANDARD PREVIEW
Lampholders for tubular fluorescent lamps
and starterholders
(standards.iteh.ai)

SIST EN 60400:1992

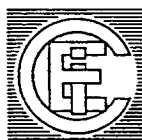
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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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Pour prix, voir catalogue en vigueur
For price, see current catalogue

Publication 400 de la CEI
(Quatrième édition - 1991)

Douilles pour lampes tubulaires
à fluorescence et douilles pour starters

IEC Publication 400
(Fourth edition - 1991)

Lampholders for tubular fluorescent
lamps and starterholders

C O R R I G E N D U M

Page 6

Paragraphe 1.1, troisième alinéa

Au lieu de: ... d'après les articles et paragraphes suivants de la CEI 238: 9.4; 9.5; 9.6; 10.3; 11.7; 12; 13.2; 13.5; 13.6; 13.7; 14; 16.3; 16.4; 16.5 et 16.9.

Lire: ... d'après les articles et paragraphes suivants de la CEI 238: 8.4; 8.5; 8.6; 9.3; 10.7; 11; 12.2; 12.5; 12.6; 12.7; 13; 15.3; 15.4; 15.5 et 15.9.

Page 14

Correction du texte anglais seulement.

Page 7

Subclause 1.1, third paragraph

Instead of: ... in accordance with the following subclauses of IEC 238: 9.4; 9.5; 9.6; 10.3; 11.7; 12; 13.2; 13.5; 13.6; 13.7; 14; 16.3; 16.4; 16.5 and 16.9.

Read: ... in accordance with the following subclauses of IEC 238: 8.4; 8.5; 8.6; 9.3; 10.7; 11; 12.2; 12.5; 12.6; 12.7; 13; 15.3; 15.4; 15.5 and 15.9.

Page 15

Subclause 4.5, note, first paragraph

Instead of: ... clause 123 onwards.

Read: ... clause 12 onwards.

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Page 16

Paragraphe 7.1, lettre d)

Au lieu de: (voir note à l'article 6);

Lire: (voir note à l'article 5);

Page 20

Paragraphe 7.4, avant-dernière ligne:

Au lieu de: (par exemple 0,5□).

Lire: (par exemple 0,5□).

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Figures 14 à 20 puis 23 et 25 à 29

Sous Tolérance, Référence E, changer:

± 0,05 pour ± 0,02 mm.

Page 17

Subclause 7.1, lettre d)

Instead of: (see note to clause 6);

Read: (see note to clause 5);

Page 21

Subclause 7.4, last indent:

Instead of: (for example 0,5□).

Read: (for example 0,5□).

Page 81

Figures 14 to 20, and 23, and 25 to 29

Change the tolerance for reference E from:

± 0,05 to ± 0,02 mm.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LAMP HOLDERS FOR TUBULAR FLUORESCENT LAMPS
AND STARTER HOLDERS**

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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SIST EN 60400:1992

This standard has been prepared by Sub-Committee 34B: Lamp caps and holders, of IEC Technical Committee No. 34: Lamps and related equipment.

This fourth edition of IEC 400 supersedes the third edition of 1987.

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

Six Months' Rule	Report on Voting
34B(CO)575	34B(CO)618

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

Annexes A and B form an integral part of this standard.

In this standard, the following print types are used:

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

LAMPHOLDERS FOR TUBULAR FLUORESCENT LAMPS AND STARTERHOLDERS

1 General

1.1 Scope

This International Standard states the technical and dimensional requirements for lampholders for tubular fluorescent lamps and for starterholders, and the methods of test to be used in determining the safety and the fit of the lamps in the lampholders and the starters in the starterholders.

This standard covers independent lampholders and lampholders for building-in, used with tubular fluorescent lamps provided with caps as listed in annex A, and independent starterholders and starterholders for building-in, used with starters in accordance with IEC 155, intended for use in a.c. circuits where the working voltage does not exceed 1 000 V r.m.s.

This standard also covers lampholders for single capped tubular fluorescent lamps integrated in an outer shell and dome similar to Edison screw lampholders (e.g. for G23 and G24 capped lamps). Such lampholders shall further be tested in accordance with the following subclauses of IEC 238: 9.4; 9.5; 9.6; 10.3; 11.7; 12; 13.2; 13.5; 13.6; 13.7; 14; 16.3; 16.4; 16.5 and 16.9.

Lampholders designed with a barrel thread for shade holder rings shall comply with the current edition of IEC 399.

As far as it applies, this standard also covers combinations of lampholders and starterholders as well as lampholders or combinations which are wholly or partly integral with the luminaire. It also applies, as far as is reasonable, to lampholders and starterholders other than the types explicitly mentioned above and to lamp connectors.

Where the term "holders" is used in the standard, both lampholders and starterholders are intended.

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 of this standard, 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.

IEC publications quoted:

61: *Lamp caps and holders together with gauges for the control of interchangeability and safety.*

- 61-1: *Lamp caps and holders together with gauges for the control of interchangeability and safety, Part 1: Lamp caps.*
- 61-2: *Lamp caps and holders together with gauges for the control of interchangeability and safety, Part 2: Lampholders.*
- 61-3: *Lamp caps and holders together with gauges for the control of interchangeability and safety, Part 3: Gauges.*
- 68-2-20: (1979), *Environmental testing, Part 2: Tests - Test T: Soldering.*
- 81: (1984), *Tubular fluorescent lamps for general lighting service.*
- 112: (1979), *Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions.*
- 155: (1983), *Starters for tubular fluorescent lamps.*
- 238: (1991), *Edison screw lampholders.*
- 352-1: (1983), *Solderless connections, Part 1: Solderless wrapped connections - General requirements, test methods and practical guidance.*
- 399: (1972), *Standard sheets for barrel thread for E14 and E27 lampholders with shade holder ring.*
- 529: (1976), *Degrees of protection provided by enclosures (IP Code).*
- 598-1: (1986), *Luminaires, Part 1: General requirements and tests.*
- 695-2-1: (1980), *Fire hazard testing, Part 2: Test methods; Glow-wire test and guidance.*
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- 695-2-2: (1980), *Fire hazard testing, Part 2: Test methods; Needle-flame test.*

Other publication quoted:

ASTM D 785-65: 1981.

2 Definitions

For the purposes of this International Standard the following definitions apply.

- 2.1 **rated voltage:** A voltage declared by the manufacturer to indicate the highest working voltage for which the holder is intended.
- 2.2 **working voltage:** The highest r.m.s. voltage which may occur across any insulation, transients being disregarded, both when the lamp or starter is operating under normal conditions and when the lamp or starter is removed.

2.3 flexible lampholders for linear double-capped fluorescent lamps: A pair of lampholders in which the base of each holder is rigidly mounted in the luminaire but which has one or both of the lampholders so designed as to allow axial movement of the contacts to provide compensation for variations in lamp lengths and, where necessary, to permit insertion and removal of the lamp.

NOTE - In case of doubt whether a lampholder G5 or G13 provides the required axial movement of the contact a test with the device shown in figure 3 may be carried out.

2.4 Inflexible lampholders for linear double-capped fluorescent lamps: A pair of lampholders intended for rigid mounting and in which no axial movement of the contacts is provided or is needed, either for the insertion and removal of the lamp or as compensation for variation in lamp lengths.

2.5 flexibly mounted lampholders for linear double-capped fluorescent lamps: A pair of lampholders which do not in themselves provide for any axial movement of the contact system but which are intended to be mounted in a luminaire in a specified manner so that the combination provides the necessary axial movement of the contact system.

NOTE - Lampholders of this type may or may not be suitable for rigid mounting also.

2.6 lamp connectors: A set of contacts mounted on flexible conductors which provide for electrical contact but do not support the lamp.

2.7 holder for building-in: A holder designed to be built into a luminaire, an additional enclosure or the like.

2.7.1 unenclosed holder: A holder for building-in so designed that it requires additional means, for example an enclosure, to meet the requirements of this standard with regard to protection against electric shock.

2.7.2 enclosed holder: A holder for building-in so designed that on its own it fulfills the requirements of this standard with regard to protection against electric shock and IP classification, if appropriate.

2.8 Independent holder: A holder so designed that it can be mounted separately from a luminaire and at the same time providing all the necessary protection according to its classification and marking.

2.9 rated operating temperature: The highest temperature for which the holder is designed.

2.10 rated lampholder rearside temperature: The rearside temperature for lampholders G13 with T-marking ascertained by test b) of 17.1.

2.11 type test: A test or series of tests made on a type test sample, for the purpose of checking compliance of the design of a given product with the requirements of the relevant standard.

2.12 type test sample: A sample consisting of one or more similar specimens submitted by the manufacturer or responsible vendor for the purpose of a type test.

2.13 live part: A conductive part which may cause an electric shock.