SLOVENSKI STANDARD
SIST EN 60400:2018

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Nadomešča:
SIST EN 60400:2008
SIST EN 60400:2008/A1:2011
SIST EN 60400:2008/A2:2015

Okovi za cevaste fluorescenčne sijalke in starterski okovi (IEC 60400:2017)

Lampholders for tubular fluorescent lamps and starterholders (IEC 60400:2017)

Lampenfassungen für röhrenförmige Leuchtstofflampen und Starterfassungen (IEC 60400:2017)

Douilles pour lampes tubulaires à fluorescence et douilles pour starters (IEC 60400:2017)

Ta slovenski standard je istoveten z: **EN 60400:2017**

ICS:

29.140.10 Grla in držala žarnic Lamp caps and holders

SIST EN 60400:2018 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 60400

September 2017

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Supersedes EN 60400:2008

English Version

Lampholders for tubular fluorescent lamps and starterholders (IEC 60400:2017)

Douilles pour lampes tubulaires à fluorescence et douilles pour starters
(IEC 60400:2017)

Lampenfassungen für röhrenförmige Leuchtstofflampen und Starterfassungen
(IEC 60400:2017)

This European Standard was approved by CENELEC on 2017-07-20. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 34B/1900/FDIS, future edition 8 of IEC 60400, prepared by SC 34B “Lamp caps and holders” of IEC/TC 34 “Lamps and related equipment” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60400:2017.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2018-04-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-07-20

This document supersedes EN 60400:2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60400:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60061-1	NOTE	Harmonized as EN 60061-1.
IEC 60061-4	NOTE	Harmonized as EN 60061-4.
IEC 60068-2-20:2008	NOTE	Harmonized as EN 60068-2-20:2008.
IEC 60238	NOTE	Harmonized as EN 60238.
IEC 60664-1:2007	NOTE	Harmonized as EN 60664-1:2007.
IEC 60664-4:2005	NOTE	Harmonized as EN 60664-4:2005.
IEC 61199	NOTE	Harmonized as EN 61199.
IEC 60838-1:2016	NOTE	Harmonized as EN 60838-1:2017.
IEC 60838-1:2016/AMD1:2017	NOTE	Harmonized as EN 60838-1:2017/A1:2017.

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60061-2	-	Lamp caps and holders together with gauges for the control of interchangeability and safety -- Part 2: Lampholders	-	-
IEC 60061-3	-	Lamp caps and holders together with gauges for the control of interchangeability and safety -- Part 3: Gauges	EN 60061-3	-
IEC 60068-2-75	2014	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	2014
IEC 60081	-	Double-capped fluorescent lamps - Performance specifications	EN 60081	-
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
+ A1	2009		+ A1	2009
IEC 60155	-	Glow-starters for fluorescent lamps	EN 60155	-
IEC 60352-1	1997	Solderless connections -- Part 1: Wrapped connections - General requirements, test methods and practical guidance	EN 60352-1	1997
IEC 60399	-	Barrel thread for lampholders with shade holder ring	EN 60399	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
-	-		+ corrigendum May	1993
+ A1	1999		+ A1	2000
+ A2	2013		+ A2	2013
IEC 60598-1	-	Luminaires -- Part 1: General requirements and tests	EN 60598-1	-
IEC 60695-2-11	2000	Fire hazard testing -- Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products	-	-
IEC 60695-11-5	2016	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	2017
ISO 4046-4	2016	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-

Annex ZZ
(informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardisation request relating to harmonised standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 – Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
1. General conditions		
a) the essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment, or, if this is not possible, on an accompanying document;	Clause 8	
b) the electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected;	All clauses	
c) the electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is assured, providing that the equipment is used in applications for which it was made and is adequately maintained.	See item 2 and 3 of this table	
2. Protection against hazards arising from the electrical		

equipment Measures of a technical nature shall be laid down in accordance with point 1, in order to ensure that:		
a) persons and domestic animals are adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact;	Clauses 4, 9, 10, 11, 12 and 16	
b) temperatures, arcs or radiation which would cause a danger, are not produced;	Clauses 11, 12, 14, 17 and 18	
c) persons, domestic animals and property are adequately protected against non-electrical dangers caused by the electrical equipment which are revealed by experience;	Clauses 4, 11, 14, 15 and 19	
d) the insulation is suitable for foreseeable conditions.	Clauses 9, 11, 15, 17 and 18	
3. Protection against hazards which may be caused by external influences on the electrical equipment Technical measures shall be laid down in accordance with point 1, in order to ensure that the electrical equipment:		
a) meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered;	Clauses 8, 11, 15 and 19	
b) is resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered;	Clauses 11, 13, 17 and 18	
c) does not endanger persons, domestic animals and property in foreseeable conditions of overload.	Clauses 11, 13 and 18	

WARNING 1: Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2: Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

IEC 60400

Edition 8.0 2017-06

INTERNATIONAL STANDARD

Lampholders for tubular fluorescent lamps and starterholders

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.140.10

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LAMPHOLDERS FOR TUBULAR FLUORESCENT LAMPS AND STARTERHOLDERS

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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9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60400 has been prepared by subcommittee 34B: Lamp caps and holders, of IEC technical committee 34: Lamps and related equipment.

This eighth edition cancels and replaces the seventh edition published in 2008, Amendment 1:2011 and Amendment 2:2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) alignment with ISO/IEC drafting rules;

b) renumbering of clauses, tables and figures.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
34B/1900/FDIS	34B/1911/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this standard, the following print types are used:

– requirements proper: in roman type;

– *test specifications: in italic type;*

– notes: in smaller roman type.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

LAMPHOLDERS FOR TUBULAR FLUORESCENT LAMPS AND STARTERHOLDERS

1 Scope

This document 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 document 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 60155, intended for use in AC circuits where the working voltage does not exceed 1 000 V r.m.s.

This document 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 are tested in accordance with the following clauses and subclauses of IEC 60238: 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.

This document also covers lampholders which are integral with a luminaire or intended to be built into appliances. It covers the requirements for the lampholder only. For all other requirements, such as protection against electric shock in the area of the terminals, the requirements of the relevant appliance standard are applicable and tested after building into the appropriate equipment, when that equipment is tested according to its own standard. Lampholders for use by luminaire manufacturers only are not for retail sale.

This document 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 "holder" is used in this document, both lampholders and starterholders are intended.

Where the term “bi-pin lampholder” is used, lampholders for wedged caps are also intended.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60061-2, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 2: Lampholders*

IEC 60061-3, *Lamp caps and holders together with gauges for the control of interchangeability and safety – Part 3: Gauges*

IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60081, *Double-capped fluorescent lamps – Performance specifications*