



**SLOVENSKI STANDARD**  
**SIST EN 60598-2-20:1999**

**01-julij-1999**

**Nadomešča:**  
**SIST EN 60598-2-20:1995**

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**Svetilke - 2-20. del: Posebne zahteve - Svetlobni nizi (IEC 60598-2-20:1996, spremenjen)**

Luminaires - Part 2-20: Particular requirements - Lighting chains (IEC 60598-2-20:1996, modified)

Leuchten - Teil 2-20: Besondere Anforderungen - Lichtketten

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Luminaires - Partie 2-20: Règles particulières - Guirlandes lumineuses

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**Ta slovenski standard je istoveten z: EN 60598-2-20:1997**

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**ICS:**

29.140.40

Svetila

Luminaires

**SIST EN 60598-2-20:1999**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60598-2-20**

September 1997

ICS 29.140.40

Supersedes EN 60598-2-20:1991 and its amendment

Descriptors: Illumination, construction of the electric circuit, testing, definitions, electrical safety requirements

English version

**Luminaire**  
**Part 2: Particular requirements**  
**Section 20: Lighting chains**  
(IEC 60598-2-20:1996, modified)

Luminaire  
Partie 2: Règles particulières  
Section 20: Guirlandes lumineuses  
(CEI 60598-2-20:1996, modifiée)

Leuchten  
Teil 2: Besondere Anforderungen  
Hauptabschnitt 20: Lichtketten  
(IEC 60598-2-20:1996, modifiziert)

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**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 34D/381/FDIS, future amendment to IEC 60598-2-20:1982, prepared by SC 34D, Luminaires, of IEC TC 34, Lamps and related equipment, was submitted to the IEC-CENELEC parallel. Because this amendment was to be incorporated in a new edition of the IEC standard, CENELEC approved EN 60598-2-20 on 1996-07-02 incorporating those common modifications from the previous edition of EN 60598-2-20 which were not covered by the text of 34D/328/FDIS, as well as the texts of amendments A11:1992 and prA12. The common modifications to IEC 60598-2-20:1996 were prepared by the Technical Committee CENELEC TC 34Z, Luminaires and associated equipment.

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) 1998-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-04-01

For products which have complied with EN 60598-2-20:1991 and its amendment A11:1992 before 1998-04-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2003-04-01.

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, ZA and ZB are normative and annex A is informative.

Annexes ZA, and ZB have been added by CENELEC.

**Endorsement notice**

The text of the International Standard IEC 60598-2-20:1996 was approved by CENELEC as a European Standard with agreed common modifications as given below.

**COMMON MODIFICATIONS****20.1 Scope**

20.1.1 **Replace** "IEC 238:1991" by "IEC 238:1996".

**20.5 Marking**

20.5.1 Item b), 2) **amend** to commence as follows:

2) for series-connected lamps other than those in sealed chains, replace ...

Item e), **replace** the note by:

NOTE - For the purpose of this subclause, a fused lamp is a lamp designed so as to break the circuit in the event of an overload either by means of a separate fuse incorporated within the lamp or by any other means e.g. a special filament. Such fuses or special filaments are not considered integral components [see subclause 0.5.1 of section Zero of EN 60598-1].

20.5.2 In the third paragraph, first line, between "an ordinary lighting chain" and "is delivered with" **add** "(other than Class III)"

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**20.6 Construction**

20.6.1 **Replace** the text of this subclause by:

Edison screw lampholders E14 and E27 shall meet the requirements of EN 60238:1996.

Edison screw lampholders E5 and E10 and similar small lampholders of the push-in type shall meet the appropriate requirements of EN 60238:1996 as modified by Annex ZB.

Edison screw lampholders larger than E10 with non-metallic screw threads shall meet the requirements of subclause 12.1 (Construction) of EN 60238:1996.

NOTE - E10 and smaller lampholders may have screw threads of insulating material.

In lighting chains fitted with parallel connected lamps, E27 and B22 lampholders with insulation piercing contacts shall meet the requirements of this section. In addition, E27 lampholders with insulation piercing contacts shall meet the requirements of subclause 12.1 (Construction) of EN 60238:1996.

**20.6.6 Replace** the text of this subclause by:

Compliance with the mechanical strength requirements of clause 4.13 of section 4 of EN 60598-1 for E14 and E27 lampholders incorporated in lighting chains shall be checked by the tests given in clause 15 of EN 60238:1996.

E5 and E10 and similar small lampholders of push-in type shall be checked by the tests given in clause 15 of EN 60238:1996 as modified by Annex ZB.

The tests are made on three samples of the lampholder without lamps inserted. After the test, the relevant compliance requirements of clause 4.13 of section 4 of EN 60598-1 shall be met.

**20.7 Creepage distances and clearances**

**Replace** the text of this subclause by:

The provisions of section 11 of EN 60598-1 apply except that:

- for Edison screw lampholders E10, E14 and E27, clause 17 of EN 60238:1996 applies;
- for Edison screw lampholders E5 and similar small lampholders of push-in type, clause 17 of EN 60238:1996, as modified by Annex ZB, applies.'

**20.10 External and internal wiring****20.10.1 Replace** the text of this subclause by:

Subclause 5.2.2 of section 5 of EN 60598-1 does not apply. Internal and external cables of lighting chains other than class III chains, sealed chains and external cables of sealed chains shall not be lighter than the following:

- |   |  |
|---|--|
| - for ordinary lighting chains using series-connected lampholders   | H03VH7-H   |
| - for Class II ordinary lighting chains using parallel-connected lampholders  | H03VV-F or<br>H03VVH2-F                          |
| - for other lighting chains using series-connected lampholders  | H03RN-F<br>(HD 22.8)                             |
| - for other lighting chains using parallel-connected lampholders  | H05RNH2-F or<br>H05RN-F<br>(HD 22.4 and HD 22.8) |
| - for other lighting chains where the length of cable between the supply plug and the nearest lampholder exceeds 3 m - that part of the cable | H07RN-F  |

The nominal cross-sectional area of the conductors for the cables listed above shall be not less than one of the following values:

- a) 0,5 mm<sup>2</sup> for lighting chains with E5 or E10 lampholders or similar small lampholders of push-in type;
- b) 0,75 mm<sup>2</sup> for lighting chains with E14, E27, B15 or B22 lampholders and fitted with series-connected lamps;
- c) 1,5 mm<sup>2</sup> for lighting chains with E14, E27, B15 or B22 lampholders and fitted with parallel connected lamps'

Internal and external cables of Class III lighting chains with a maximum rated wattage not exceeding 50 W and the internal conductors of sealed chains may have a cross-sectional area of less than 0,4 mm<sup>2</sup> provided that the current carrying capacity and mechanical properties are adequate. For sealed chains, conductors without insulation may be used provided adequate precautions have been taken to ensure maintenance of the minimum clearance distances and compliance with the requirements of subclause 5.3.1 of EN 60598-1.

NOTE: Attention is drawn to the fact that, in certain countries, national types of cable are also available. These types, not deemed suitable for harmonization have been examined by TC 20 and, where accepted as providing equivalent safety for their use, are listed in a regularly updated standing document by TC 20 entitled 'Recognized National Types'. This document is available from National Committees.

**20.15 Resistance to heat, fire and tracking**  
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Replace the text of this subclause by:

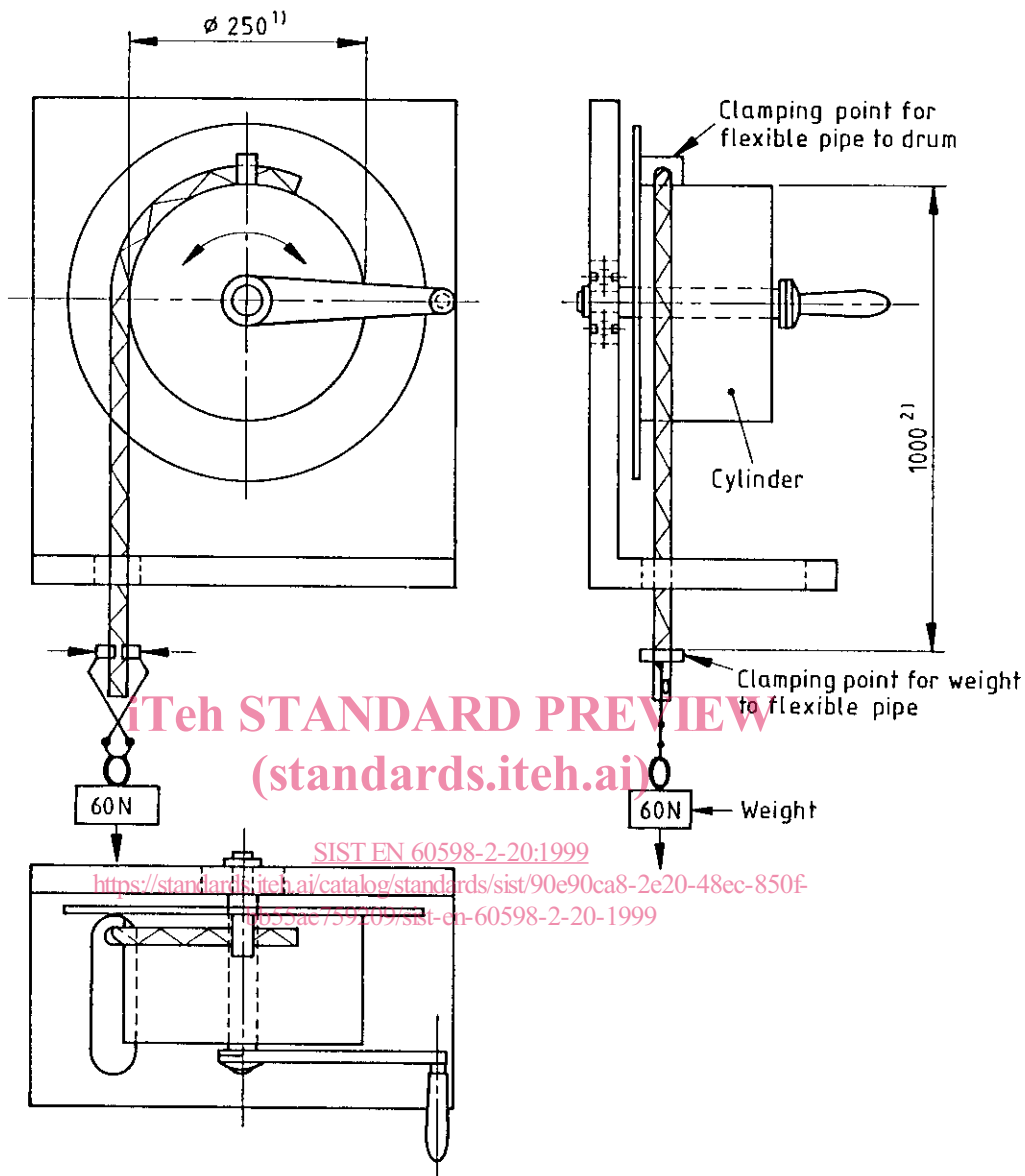
The provisions of section 13 of EN 60598-1 apply except that:

- for flexible pipes of sealed chains, the test of subclause 13.2.1 is replaced by the test of clause 8 of EN 60811-3-1.
- for lampholders, the tests of clause 13 are replaced by the tests of:
  - for E14 and E27 lampholders ..... clause 20 of EN 60238
  - for E5 and E10 and similar ..... clause 20 of EN 60238  
lampholders of the push-in type modified by Annex ZB

Figure 1 **Delete** and substitute "Not used".

Figure 3 **Replace** by:

*Dimensions in millimetres*



Dimensions in millimetres

1) Diameter of wooden cylinder.

2) Distance between the fixing point of the flexible pipe and the weight prior to commencement of the test.

**Figure 3 - Example of test device suitable for winding a flexible pipe**



Annexes **Add** the following new annexes ZA and ZB:

### Annex ZA (normative)

#### Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60083	1975	Plugs and socket-outlets for domestic and similar general use - Standards	-	-
IEC 60227 (mod)	series	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V	HD 21	series
IEC 60238	1996	Edison screw lampholders	EN 60238 + corr. July	1996 1996
IEC 60245 (mod)	series	Rubber insulated cables of rated voltages up to and including 450/750 V	HD 22	series
IEC 60320	1981	Appliance couplers for household and similar general purposes	EN 60320-1 <sup>1)</sup> + corr. November + A11	1987 1993 1994
IEC 60598-1 (mod)	sliding, latest edition	Luminaires Part 1: General requirements and tests	EN 60598-1	sliding, latest edition
IEC 60811-3-1	1985	Insulating and sheathing materials of electric cables - Common test methods Part 3: Methods specific to PVC compounds Section 1: Pressure test at high temperature - Tests for resistance to cracking	EN 60811-3-1 <sup>2)</sup>	1995
CISPR 14	1993	Limits and methods of measurement of radio disturbance characteristics of electrical motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus	EN 55014	1993

1) EN 60320-1 is superseded by EN 60320-1:1996, which is based on IEC 60320-1:1994, mod.

2) EN 60811-3-1 includes the corrigendum May 1986 to IEC 60811-3-1.

## Annex ZB (normative)

### Requirements for edison screw lampholders E5 and E10 and similar small lampholders of the push-in type

This annex consists of modifications to EN 60238:1996 to cover Edison screw lampholders E5 and E10 and similar small lampholders of push-in type.

Subclause 1.1 - **Add** at the end of the third paragraph:

It also applies to push-in lampholders, where applicable.

Subclause 9.1 - In line 1 of the test specification **add** "E5 and" before "E10".

Subclause 15.9 - **Replace** the second paragraph of the test by:

*The backplate of lampholders shall be fixed by means of screws to a rigid flat steel sheet as follows:*

- 3 mm screws for lampholders E10;
- 4 mm screws for lampholders other than E10.

*This sheet shall have two drilled and tapped holes at a distance equal to the distance between the axes of the fixing holes of the backplate. The screws shall be gradually tightened, the maximum torque applied being:*

- 0,5 Nm for 3 mm screws, and
- 1,2 Nm for 4 mm screws.

*These requirements do not apply to lampholders E5.*

NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC  
598-2-20

Deuxième édition  
Second edition  
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Luminaire –

Partie 2:

Règles particulières –

Section 20: Guirlandes lumineuses

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Particular requirements –

Section 20: Lighting chains

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**IS 01 Interpretation of subclauses 20.1, 20.5 and 20.6  
IEC 60598-2-20: 1996 Second edition  
Luminaires - Part 2: Particular requirements  
Section 20 - Lighting chains**

**INTERPRETATION SHEET**

The following interpretation was agreed at the Budapest meeting of IEC/SC 34D WG LUMEX held in April 1997.

**20.1 Scope**

*Introduce the following new note:*

- 4) For lighting chains with non-standardised lamps (e.g. lamps of the push-in type) the lamps are regarded as a part of the lighting chain and consequently included in the testing (and thereby in the certificate, if any).

**20.5 Marking**

*Add the following requirement in subclause 20.5.1:*

- f) Lighting chains with non-standardised lamps shall be accompanied by information indicating that replacement lamps must be of the same type as delivered or of a type specified by the manufacturer (see 20.5.2).

*Add the following new paragraph at the end of subclause 20.5.2:*

The information required under item f) of subclause 20.5.1 shall be on the packing.

**20.6 Construction**

*Add the following sentence at the end of the second paragraph of subclause 20.6.1:*

In lighting chains where non-standardised lamps (e.g. lamps of the push-in type) are used, the lamps are regarded as parts of the lighting chain and tested accordingly.