SVENSK STANDARD

SS-EN IEC 60598-2-20+A11, utg 6:2024

2024-10-23

REDLINE VERSION

Ljusarmatur –
Säkerhet –
Del 2-20: Särskilda fordringar på ljuskedjor

Luminaires –
Part 2-20: Particular requirements –
Lighting chains

En så kallad ”Redline version” (RLV) innehåller både standarden som fastställts som SS och en ändringsmarkerad IEC-standard. Alla tillägg och borttagningar sedan den tidigare utgåvan av IEC-standarden är markerade med färg. Med en RLV sparar du mycket tid när du ska identifiera och bedöma aktuella ändringar i standarden. SEK Svensk Elstandard kan bara ge ut RLV i de fall den finns tillgänglig från IEC.

IEC 60598-2-20

Edition 5.0 2022-01
REDLINE VERSION

INTERNATIONAL STANDARD

colour inside

Luminaires –
Part 2-20: Particular requirements – Lighting chains

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.140.40

ISBN 978-2-8322-1075-9

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LUMINAIRES –

Part 2-20: Particular requirements – Lighting chains

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60598-2-20:2014. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 60598-2-20 has been prepared by subcommittee 34D: Luminaires, of IEC technical committee 34: Lighting. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2014. This edition constitutes a technical revision.

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

a) specific provisions for temporarily installed protected lighting (TPL) chains have been added;
b) new terms and definitions have been added.

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

Draft	Report on voting
34D/1646/FDIS	34D/1651/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

This Part 2-20 is to be used in conjunction with the latest edition of IEC 60598-1 and its amendment(s). It was established on the basis of the ninth edition (2020) of that standard.

NOTE 1 When "Part 1" is mentioned in this document, it refers to IEC 60598-1.

NOTE 2 In this document, the following print types are used:

– *compliance statements: in italic type.*

A list of all the parts in the IEC 60598 series, published under the general title *Luminaires* can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This new edition includes the following technical changes:

a) Inclusion of specific provisions for temporarily installed protected lighting (TPL) chains.

This form of lighting chain was not previously addressed with specific provisions in previous editions of the standard. A temporarily installed protected lighting chain is a physical impact protected rough service lighting chain intended for temporary installation on building sites during the construction or demolition phases of a building project.

a) Addition of terms and definitions

New terms and definitions have been added to include the expanded typology for lighting chains and to include a connector with breaking capacity (CBC).

b) Inclusion of graphical depictions of lighting chains

Graphical depictions have been added to clarify and differentiate the construction and installation configurations of the various different types of lighting chains. Word descriptions alone had limitations in clearly and precisely defining the characteristics of the numerous variants in this luminaire sector.

The illustrations show the three main types of lighting chains: permanently installed lighting chains, temporarily installed lighting chains and temporarily installed protected lighting (TPL) chains, as well as further differentiating by installation and/or fixing method where applicable.

LUMINAIRES –

Part 2-20: Particular requirements – Lighting chains

20.1 Scope

This part of IEC 60598 specifies requirements for lighting chains fitted with series, parallel or a combination of series/parallel connected light sources for use either indoors or outdoors on supply voltages not exceeding 250 V.

For combinations where rope lights (also known as sealed lighting chains) are included, see IEC 60598-2-21.

Lighting chains provided with fixed or detachable attachments for example ornamental or decorative, are considered to be covered by this document.

For lighting chains fitted with lampholders of the push-in type, the appropriate requirements of this document applies.

~~NOTE 1 A Christmas tree lighting chain is an example of a lighting chain fitted with series or series/parallel connected lamps. A chain for illuminating ski-tracks or promenades is an example of a lighting chain fitted with parallel connected lamps.~~

This document covers the following lighting chains:

a) permanently installed lighting chains;

b) temporarily installed lighting chains;

c) temporarily installed protected lighting (TPL) chains.

NOTE 1 Festoon lighting chain – a lighting chain that is supported by the supply cable or fixed at the lampholder and is permanently connected to the fixed wiring. Festoon lighting chains are primarily suitable for permanent indoor or outdoor lighting applications.

NOTE 2 Decorative lighting chain – a lighting chain that is supported by the supply cable and is temporarily connected to the fixed wiring. Decorative lighting chains are primarily suitable for domestic, indoor or indoor/outdoor temporary lighting applications, see Figure 1 for examples.

NOTE 3 Temporarily installed protected lighting (TPL) chain – a lighting chain where each lampholder is fixed to the building or structure and the light source is enclosed by a protective enclosure and is temporarily connected to the fixed wiring. Temporarily installed protected lighting chains are primarily suitable for use in rough service lighting applications.

For lighting chains with non-standardized 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.

NOTE 4 For products where the lighting chain is permanently fixed to a frame or pre-lit Christmas tree the relevant clauses of IEC 60598-2~~-4 and/or IEC 60598-2-7~~ can also apply.

NOTE 5 In some countries the term "strings" is used instead of "chains".

NOTE 6 Candlestick luminaries are tested according to IEC 60598-2-4.

20.2 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 60227-5:2011, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V – Part 5: Flexible cables (cords)*

IEC 60238:2016, *Edison screw lampholders*
IEC 60238:2016/AMD1:2017
IEC 60238:2016/AMD2/2020

~~IEC 60245-4:2011, *Rubber insulated cables – Rated voltages up to and including 450/750 V – Part 4: Cords and flexible cables*~~

IEC 60309-1, *Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements*

IEC 60320 (all parts), *Appliance couplers for household and similar general purposes*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-1, *Luminaires – Part 1: General requirements and tests*

IEC 60906 (all parts), *IEC system of plugs and socket-outlets for household and similar purposes*

IEC 61184:2017, *Bayonet lampholders*
IEC 61184:2017/AMD1:2019

IEC 61347-2-11, *Lamp controlgear – Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires*

IEC 61347-2-13, *Lamp controlgear – Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules*

IEC 61984:2008, *Connectors – Safety requirements and tests*

ISO 4046-4:~~2002~~2016, *Paper, board, pulps and related terms – Vocabulary – Part 4: Paper and board grades and converted products*

SVENSK STANDARD

SS-EN IEC 60598-2-20+A11, utg 6:2024

Fastställd	Sida	Ansvarig kommitté
2024-10-23	1 (29)	SEK TK 34

Ljusarmatur –
Säkerhet –
Del 2-20: Särskilda fordringar på ljuskedjor

Luminaires –
Part 2-20: Particular requirements –
Lighting chains

Som svensk standard gäller europastandarden EN IEC 60598-2-20:2024. Den svenska standarden innehåller de officiella engelska språkversionerna av EN IEC 60598-2-20:2024 och EN IEC 60598-2-20:2024/A11:2024.

Nationellt förord

Europastandarden EN IEC 60598-2-20:2024

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60598-2-20, Fifth edition, 2022 - Luminaires – Part 2-20: Particular requirements – Lighting chains**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN IEC 60598-1, utg 9:2021.

Tidigare fastställd svensk standard SS-EN 60598-2-20, utg 5:2015 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2027-06-28.

ICS 29.140.40

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: elstandard.se

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SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

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Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

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SEK Svensk Elstandard

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60598-2-20

June 2024

ICS 29.140.40

Supersedes EN 60598-2-20:2015; EN 60598-2-20:2015/AC:2017-01

English Version

Luminaires - Part 2-20: Particular requirements - Lighting chains (IEC 60598-2-20:2022)

Luminaires - Partie 2-20: Exigences particulières - Guirlandes lumineuses (IEC 60598-2-20:2022)

Leuchten - Teil 2-20: Besondere Anforderungen - Lichterketten (IEC 60598-2-20:2022)

This European Standard was approved by CENELEC on 2022-03-07. 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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 60598-2-20:2024 E

European foreword

The text of document 34D/1646/FDIS, future edition 5 of IEC 60598-2-20, prepared by SC 34D "Luminaires" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60598-2-20:2024.

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) 2024-12-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-06-28

This document supersedes EN 60598-2-20:2015 and all of its amendments and corrigenda (if any).

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 standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60598-2-20:2022 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 standard indicated:

IEC 60598-2-4 NOTE Approved as EN 60598-2-4

IEC 60598-2-21 NOTE Approved as EN 60598-2-21

IEC 60598-2-20

Edition 5.0 2022-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Luminaires –
Part 2-20: Particular requirements – Lighting chains

Luminaires –
Partie 2-20: Exigences particulières – Guirlandes lumineuses

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INTERNATIONALE

ICS 29.140.40

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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NOTE 1 When "Part 1" is mentioned in this document, it refers to IEC 60598-1.

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- amended.

INTRODUCTION

This new edition includes the following technical changes:

a) Inclusion of specific provisions for temporarily installed protected lighting (TPL) chains.

This form of lighting chain was not previously addressed with specific provisions in previous editions of the standard. A temporarily installed protected lighting chain is a physical impact protected rough service lighting chain intended for temporary installation on building sites during the construction or demolition phases of a building project.

b) Addition of terms and definitions

New terms and definitions have been added to include the expanded typology for lighting chains and to include a connector with breaking capacity (CBC).

c) Inclusion of graphical depictions of lighting chains

Graphical depictions have been added to clarify and differentiate the construction and installation configurations of the various different types of lighting chains. Word descriptions alone had limitations in clearly and precisely defining the characteristics of the numerous variants in this luminaire sector.

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LUMINAIRES –

Part 2-20: Particular requirements – Lighting chains

20.1 Scope

This part of IEC 60598 specifies requirements for lighting chains fitted with series, parallel or a combination of series/parallel connected light sources for use either indoors or outdoors on supply voltages not exceeding 250 V.

For combinations where rope lights (also known as sealed lighting chains) are included, see IEC 60598-2-21.

Lighting chains provided with fixed or detachable attachments for example ornamental or decorative, are considered to be covered by this document.

For lighting chains fitted with lampholders of the push-in type, the appropriate requirements of this document applies.

This document covers the following lighting chains:

a) permanently installed lighting chains;

b) temporarily installed lighting chains;

c) temporarily installed protected lighting (TPL) chains.

NOTE 1 Festoon lighting chain – a lighting chain that is supported by the supply cable or fixed at the lampholder and is permanently connected to the fixed wiring. Festoon lighting chains are primarily suitable for permanent indoor or outdoor lighting applications.

NOTE 2 Decorative lighting chain – a lighting chain that is supported by the supply cable and is temporarily connected to the fixed wiring. Decorative lighting chains are primarily suitable for domestic, indoor or indoor/outdoor temporary lighting applications, see Figure 1 for examples.

NOTE 3 Temporarily installed protected lighting (TPL) chain – a lighting chain where each lampholder is fixed to the building or structure and the light source is enclosed by a protective enclosure and is temporarily connected to the fixed wiring. Temporarily installed protected lighting chains are primarily suitable for use in rough service lighting applications.

For lighting chains with non-standardized 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.

NOTE 4 For products where the lighting chain is permanently fixed to a frame or pre-lit Christmas tree the relevant clauses of IEC 60598-2-4 can also apply.

NOTE 5 In some countries the term "strings" is used instead of "chains".

NOTE 6 Candlestick luminaries are tested according to IEC 60598-2-4.

20.2 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.

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IEC 60238:2016/AMD2/2020

IEC 60309-1, *Plugs, socket-outlets and couplers for industrial purposes – Part 1: General requirements*

IEC 60320 (all parts), *Appliance couplers for household and similar general purposes*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-1, *Luminaires – Part 1: General requirements and tests*

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