



BSI Standards Publication

Luminaires

Part 2-20: Particular requirements — Lighting chains

National foreword

This British Standard is the UK implementation of EN IEC 60598-2-20:2024+A11:2024. It is derived from IEC 60598-2-20:2022. It supersedes BS EN 60598-2-20:2015, which will be withdrawn on 18 June 2027.

The start and finish of text introduced or altered by amendment A11 is indicated in the text by tags. Tags indicating changes to text carry the number of the CENELEC amendment. For example, text altered by CENELEC amendment A11 is indicated by A11 A11.

The UK participation in its preparation was entrusted to Technical Committee CPL/34/4, Luminaires.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2024
Published by BSI Standards Limited 2024

ISBN 978 0 539 12651 8

ICS 29.140.40

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2024.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

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.

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



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

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 (dop) 2024-12-28 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-06-28 document have to be withdrawn

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

European foreword to amendment A11

This document (EN IEC 60598-2-20:2024/A11:2024) has been prepared by CLC/TC 34 "Lighting".

The following dates are fixed:

- latest date by which this document has to be (dop) 2024-12-28
implemented at national level by publication of
an identical national standard or by
endorsement
- latest date by which the national standards (dow) 2027-06-28
conflicting with this document have to be
withdrawn

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.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	EN IEC 60238	2018
+ 1	2017		-	-
+ 2	2020		+ 2	2021
IEC 60309-1	-	Plugs, fixed or portable socket-outlets and appliance inlets for industrial purposes - Part 1: General requirements	EN IEC 60309-1	-
IEC 60320	series	Appliance couplers for household and similar general purposes	EN IEC 60320	series
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60598-1	-	Luminaires - Part 1: General requirements and tests	EN IEC 60598-1	-
IEC 60906	series	IEC system of plugs and socket-outlets for household and similar purposes	-	-
IEC 61184	2017	Bayonet lampholders	EN 61184	2017
+ 1	2019		+ 1	2022
IEC 61347-2-11	-	Lamp controlgear - Part 2-11: Particular requirements for miscellaneous electronic circuits used with luminaires	EN 61347-2-11	-
IEC 61347-2-13	-	Lamp controlgear - Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules	EN 61347-2-13	-
IEC 61984	2008	Connectors - Safety requirements and tests	EN 61984	2009
ISO 4046-4	2016	Paper, board, pulps and related terms - Vocabulary - Part 4: Paper and board grades and converted products	-	-

CONTENTS

FOREWORD	4
INTRODUCTION	6
20.1 Scope	7
20.2 Normative references	7
20.3 Terms and definitions	8
20.4 General test requirements	10
20.5 Classification of luminaires	10
20.5.1 General	10
20.5.2 Protection against electric shock	10
20.5.3 Protection against dust, solid objects and moisture	10
20.6 Marking	10
20.6.1 General	10
20.6.2 Lighting chain marking	11
20.6.3 Lighting chain and packaging marking	11
20.6.4 Packaging or instructions marking	11
20.7 Construction	12
20.7.1 General	12
20.7.2 Lampholders	12
20.7.3 Terminal blocks	12
20.7.4 Terminals and supply connections	13
20.7.5 Gaskets	13
20.7.6 Mechanical strength	13
20.7.7 Lamp bridging devices	13
20.7.8 Control units and controlgear	13
20.7.9 Lamp rotation	14
20.7.10 Lamp insertion and withdrawal force	14
20.7.11 Lamp mechanical requirements	14
20.7.12 Temporarily installed protected lighting (TPL) chains	14
20.8 Creepage distances and clearances	15
20.9 Provisions for earthing	15
20.10 Terminals	15
20.11 External and internal wiring	15
20.11.1 General	15
20.11.2 Cables for lighting chains	15
20.11.3 Cord anchorage test	16
20.11.4 Plugs and cable length	16
20.11.5 Maximum length of extendable class II lighting chains	16
20.12 Protection against electric shock	17
20.12.1 General	17
20.12.2 Divisible plug	17
20.12.3 Electrification of decorations	17
20.12.4 Contacts of push-in lampholders	18
20.12.5 Blanking plugs	18
20.13 Endurance tests and thermal tests	19
20.13.1 General	19

20.13.2	Test voltage	19
20.13.3	Lamp bridging devices	19
20.13.4	Short-circuit test of rectifier	19
20.14	Resistance to dust, solid objects and moisture	19
20.15	Insulation resistance and electric strength	20
20.16	Resistance to heat, fire and tracking	20
Annex A (normative) Requirements for interconnecting connectors for use in lighting chains		21
Bibliography		23
Figure 1 – Examples of different types of lighting chains		10
Figure 2 – Example of a connector to a divisible plug for lighting chains		17
Figure 3 – Example of test device suitable for checking security of lampholder contacts		18
Table 1 – Cable or cord types for lighting chains		15
Table 2 – Conductor size for lighting chains		16

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 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.

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.