BS EN IEC 61347-2-1:2024

BSI Standards Publication

Controlgear for electric light sources — Safety

Part 2-1: Particular requirements — Starting devices (other than glow starters)

Documents
Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024

National foreword

This British Standard is the UK implementation of EN IEC 61347-2-1:2024. It is identical to IEC 61347-2-1:2024. It supersedes BS EN 61347-2-1:2001+A2:2014, which will be withdrawn on 18 June 2027.

The UK participation in its preparation was entrusted to Technical Committee CPL/34/3, Auxiliaries for lamps.

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 04059 3

ICS 29.140.99

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

Documents
Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61347-2-1

June 2024

ICS 29.140.99

Supersedes EN 61347-2-1:2001;
EN 61347-2-1:2001/corrigendum Jul. 2003;
EN 61347-2-1:2001/A1:2006;
EN 61347-2-1:2001/A1:2006/corrigendum Nov. 2006;
EN 61347-2-1:2001/corrigendum Dec. 2010;
EN 61347-2-1:2001/A2:2014

English Version

Controlgear for electric light sources - Safety - Part 2-1: Particular requirements - Starting devices (other than glow starters) (IEC 61347-2-1:2024)

Appareillages de commande pour les sources de lumière électriques - Sécurité - Partie 2-1: Exigences particulières - Dispositifs d'amorçage (autres que starters à lueur) (IEC 61347-2-1:2024)

Betriebsgeräte für elektrische Lichtquellen - Sicherheit - Teil 2-1: Besondere Anforderungen - Startgeräte (andere als Glimmstarter) (IEC 61347-2-1:2024)

This European Standard was approved by CENELEC on 2024-06-18. 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

© 2024 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

Ref. No. EN IEC 61347-2-1:2024 E

AVA Documents Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024

European foreword

The text of document 34C/1582/CDV, future edition 2 of IEC 61347-2-1, prepared by SC 34C "Auxiliaries for lamps" of IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61347-2-1:2024.

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) 2025-03-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-06-18

This document supersedes EN 61347-2-1:2001 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 is read in conjunction with EN 61347-1:2015 and EN 61347-1:2015/A1:2021.

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 61347-2-1:2024 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 60188	NOTE	Approved as EN 60188
IEC 60192	NOTE	Approved as EN 60192
IEC 60662	NOTE	Approved as EN 60662
IEC 60927	NOTE	Approved as EN 60927
IEC 61167	NOTE	Approved as EN 61167
IEC 61195	NOTE	Approved as EN 61195
IEC 61199	NOTE	Approved as EN 61199
IEC 61347-2-1:2000	NOTE	Approved as EN 61347-2-1:2001 (not modified)
IEC 61347-2-1:2000/A1:2005	NOTE	Approved as EN 61347-2-1:2001/A1:2006 (not modified)
IEC 61347-2-1:2000/A2:2013	NOTE	Approved as EN 61347-2-1:2001/A2:2014 (not modified)
IEC 61347-2-8	NOTE	Approved as EN 61347-2-8
IEC 61347-2-9	NOTE	Approved as EN 61347-2-9

Documents
Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60052	2002	Voltage measurement by means of standard air gaps	EN 60052	2002
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 60155	1993	Glow-starters for fluorescent lamps	EN 60155	1995
+ A1	1995		+ A1	1995
+ A2	2006		+ A2	2007
IEC 60255-8[1]	1990	Electrical relays -- Part 8: Thermal electrical relays	EN 60255-8[1]	1998
IEC 60598	series	Luminaires	EN IEC 60598	series
IEC 60598-1	2020	Luminaires - Part 1: General requirements and tests	EN IEC 60598-1	2021
IEC 60901	-	Single-capped fluorescent lamps - Performance specifications	EN 60901	-
IEC 61347-1	2015	Lamp controlgear - Part 1: General and safety requirements	EN 61347-1	2015
+ A1	2017		+ A1	2021
ISO 3864	series	Graphical symbols - Safety colours and safety signs	-	series

[1] Withdrawn.

Documents
Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024

CONTENTS

FOREWORD 4
INTRODUCTION 6
1 Scope 7
2 Normative references 7
3 Terms and definitions 8
4 General requirements 9
5 General notes on tests 9
6 Classification 9
7 Marking 10
7.1 Marking and information 10
7.1.1 Mandatory marking 10
7.1.2 Information to be provided 10
7.2 Durability and legibility 10
8 Terminals 10
9 Earthing 10
10 Protection against accidental contact with live parts 10
11 Moisture resistance and insulation 11
12 Electric strength 11
13 Thermal endurance test for windings of ballasts 11
14 Fault conditions 11
15 Pulse voltage of ignitors 12
16 Heating of built-in and independent starting devices 14
16.1 General 14
16.2 Normal operation 14
16.2.1 General 14
16.2.2 Normal operation of built-in starting devices 14
16.2.3 Normal operation of independent starting devices 15
16.3 Abnormal operation 15
16.3.1 Abnormal operation of built-in ignitors 15
16.3.2 Abnormal operation of built-in starters 16
16.3.3 Abnormal operation of independent starting devices 16
17 Mechanical strength 17
18 Construction 18
19 Creepage distances and clearances 18
20 Screws, current-carrying parts and connections 18
21 Resistance to heat, fire and tracking 19
22 Resistance to corrosion 19
23 Applicable annexes of IEC 61347-1 19
Annex A (normative) Mechanical strength testing 20
A.1 Replaceable starting devices and accessible components over 100 g 20
A.2 Replaceable starting devices and accessible components up to 100 g 20
Annex B (informative) Precautions to be observed when measuring with sphere-gaps 22
B.1 General 22
B.2 Sphere-gap 22

AVA Documents
Document Sharing Hub

B.3 Breakdown gap distance 22
B.4 Duty cycle of the ignitor 22
B.5 End of test 22
Annex C (informative) Schedule of more onerous requirements 23
Bibliography 24

Figure 1 – Starting voltage measurement for ignitors 13
Figure A.1 – Tumbling barrel 21

Documents
Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONTROLGEAR FOR ELECTRIC LIGHT SOURCES – SAFETY –

Part 2-1: Particular requirements – Starting devices (other than glow starters)

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) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 61347-2-1 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lighting. It is an International Standard.

This second edition cancels and replaces the first edition published in 2000, Amendment 1:2005 and Amendment 2:2013. This edition constitutes a technical revision.

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

a) update of normative references, introducing dated references where appropriate;
b) clarification of sample item numbers;
c) alignment of clause numbers with those of IEC 61347-1;
d) renumbering of Clause 15 and Clause 16.

Documents
Document Sharing Hub

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

Draft	Report on voting
34C/1582/CDV	34C/1590/RVC

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/publications.

This document is intended to be used in conjunction with IEC 61347-1:2015 and IEC 61347-1:2015/AMD1:2017. Where the requirements of any of the clauses of IEC 61347-1:2015 and IEC 61347-1:2015/AMD1:2017 are referred to in this document by the phrase "IEC 61347-1:2015, Clause n and IEC 61347-1:2015/AMD1:2017, Clause n apply", this phrase is interpreted as meaning that all the requirements of the clause in question of IEC 61347-1:2015 and IEC 61347-1:2015/AMD1:2017 apply, except any which are clearly inapplicable to the specific type of controlgear covered by this document.

NOTE In this document, the following print type is used:

– *compliance statements: in italic type*.

A list of all parts in the IEC 61347 series, published under the general title *Controlgear for electric light sources – Safety,* can be found on the IEC website.

Future documents in this series will carry the new general title as cited above. Titles of existing documents in this series will be updated at the time of the next edition.

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, or
- revised.

Documents
Document Sharing Hub

Full document details: BS EN IEC 61347-2-1:2024