SVENSK STANDARD

SS-EN IEC 61547, utg 3:2023

2023-11-15

REDLINE VERSION

Belysningsmateriel för allmän användning – Elektromagnetisk kompatibilitet (EMC) – Immunitet

Equipment for general lighting purposes – EMC immunity requirements

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 61547

Edition 3.0 2020-03

REDLINE VERSION

colour inside

Equipment for general lighting purposes – EMC immunity requirements

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.020; 29.140.01; 33.100.10

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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EQUIPMENT FOR GENERAL LIGHTING PURPOSES – EMC IMMUNITY REQUIREMENTS

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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This Redline version provides you with a quick and easy way to compare all the changes between this standard and its previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International Standard IEC 61547 has been prepared by IEC technical committee 34: Lamps and related equipment.

This third edition cancels and replaces the second edition, published in 2009. This edition constitutes a technical revision

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

a) extension of scope with end-user replaceable modules and the combination of end-user replaceable module and independent auxiliary;
b) clarification of module testing in a host system;
c) increased ESD and surge test levels for road and street lighting equipment;
d) the introduction of ESD testing under normal operation and handling conditions;
e) removal of line to ground surge test for self-ballasted lamps ≤ 25 W.

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

FDIS	Report on voting
34/676/FDIS	34/689/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.

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EQUIPMENT FOR GENERAL LIGHTING PURPOSES – EMC IMMUNITY REQUIREMENTS

1 Scope

This part of IEC 61547 which deals with electromagnetic immunity requirements, applies to lighting equipment which is within the scope of IEC technical committee 34, including apparatus such as lamps, ~~auxiliaries and luminaires, intended either for connecting to a low voltage electricity supply or for battery operation~~ luminaires and modules.

~~Excluded from the scope of this standard is equipment for which the immunity requirements are formulated in other IEC or CISPR standards such as:~~

~~– lighting equipment for use in transport vehicles;~~

~~– entertainment lighting control equipment for professional purposes;~~

~~– lighting devices built into other equipment such as:~~

- ~~scale illumination or indicators;~~
- ~~photocopiers;~~
- ~~slide and overhead projectors;~~
- ~~multimedia equipment.~~

Excluded from the scope of this document are:

– components or modules intended to be built into lighting equipment and which are not end-user replaceable;

– equipment for which the electromagnetic compatibility requirements in the radio-frequency range are explicitly formulated in other product immunity standards, even if they incorporate a built-in lighting function.

NOTE Examples of exclusions are:

– equipment with built-in lighting devices for display back lighting, scale illumination and signaling;

– SSL-displays;

– range hoods, refrigerators, freezers;

– photocopiers, projectors;

– electronic switches for fixed installations;

– lighting equipment for road vehicles (within the scope of CISPR 12);

– lighting equipment for aircraft and airfield facilities.

However, in multi-function equipment where the lighting ~~part~~ function operates independently from other ~~parts~~ functions, the electromagnetic immunity requirements of this document apply to the lighting ~~part~~ function only.

Lighting equipment with a wireless control function are also within the scope of this document. However, the test is limited to the control of the lighting function only. Radio properties like frequency stability or spurious emissions are not assessed.

EXAMPLE Colour/light level control via a wireless interface are meant to stay intact after an immunity test.

Also included in the scope of this document is lighting equipment that interfaces with systems or installations other than common power supply networks.

The requirements of this document are based on the requirements for domestic, commercial and light-industrial environments as given in IEC 61000-6-1:2016, but modified to lighting engineering practice.

It can be expected that lighting equipment complying with the requirements of this document will operate satisfactorily in other environments. In some special cases, measures ~~have to~~ can be taken to provide higher immunity. In this document it is impracticable to deal with all these possibilities. Such requirements ~~may~~ can be established by contractual agreement between supplier and purchaser.

2 Normative references

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IEC 60050-161, *International Electrotechnical Vocabulary – Part 161: Electromagnetic Compatibility* (available at http://www.electropedia.org)

IEC 60050-845, *International Electrotechnical Vocabulary – Part 845: Lighting* (available at http://www.electropedia.org)

IEC 60598-1:~~2008~~2014, *Luminaires – Part 1: General requirements and tests*

~~IEC 60598-2-22, *Luminaires – Part 2-22: Particular requirements – Luminaires for emergency lighting*~~

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio frequency, electromagnetic field immunity test*~~[1]~~
IEC 61000-4-3:2006/AMD1:2007
IEC 61000-4-3:2006/AMD2:2010

IEC 61000-4-4:~~2004~~2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5:~~2005~~2014, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*
IEC 61000-4-5:2014/AMD1:2017

IEC 61000-4-6:~~2008~~2013, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8:~~1993~~2009, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*~~[2]~~
~~Amendment 1 (2000)~~

IEC 61000-4-11:2004, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity*

~~[1] There exists a consolidated edition 3.1 (2008) that comprises IEC 61000-4-3 and its Amendment 1.~~

~~[2] There exists a consolidated edition 1.1 (2001) that comprises IEC 61000-4-8 and its Amendment 1.~~

tests
IEC 61000-4-11:2004/AMD1:2017

~~IEC 61000-6-1:2005, *Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments*~~

IEC CISPR 15:2018, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*

SVENSK STANDARD

SS-EN IEC 61547, utg 3:2023

Fastställd	Sida	Ansvarig kommitté
2023-11-15	1 (24)	SEK TK 34

Belysningsmateriel för allmän användning – Elektromagnetisk kompatibilitet (EMC) – Immunitet

Equipment for general lighting purposes – EMC immunity requirements

Som svensk standard gäller europastandarden EN IEC 61547:2023. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61547:2023.

Nationellt förord

Europastandarden EN IEC 61547:2023

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61547, Third edition, 2020 - Equipment for general lighting purposes – EMC immunity requirements**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61547, utg 2:2009 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2026-03-08.

ICS 33.100.10; 29.040.01; 29.020.00

Denna standard är fastställd av SEK Svensk Elstandard,
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61547

April 2023

ICS 29.020; 33.100.10; 29.140.01

Supersedes EN 61547:2009

English Version

Equipment for general lighting purposes - EMC immunity requirements (IEC 61547:2020)

Equipements pour l'éclairage à usage général - Exigences concernant l'immunité CEM (IEC 61547:2020)

Einrichtungen für allgemeine Beleuchtungszwecke - EMV-Störfestigkeitsanforderungen (IEC 61547:2020)

This European Standard was approved by CENELEC on 2023-03-08. 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 61547:2023 E

SEK Svensk Elstandard

SS-EN IEC 61547, utg 3:2023

European foreword

The text of document 34/676/FDIS, future edition 3 of IEC 61547, prepared by IEC/TC 34 "Lighting" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61547:2023.

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) 2023-12-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-03-08

This document supersedes EN 61547:2009 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 given to CENELEC by the European Commission and the European Free Trade Association.

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 61547:2020 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 60598-2-22	NOTE	Approved as EN IEC 60598-2-22
IEC 61000-6-1	NOTE	Approved as EN IEC 61000-6-1
CISPR 12	NOTE	Approved as EN 55012

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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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 60050-161	-	International Electrotechnical Vocabulary. Chapter 161: Electromagnetic compatibility	-	-
IEC 60050-845	-	International Electrotechnical Vocabulary. Lighting	-	-
IEC 60598-1 (mod)	2014	Luminaires - Part 1: General requirements and tests	EN 60598-1	2015
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+ A1	2007		+ A1	2008
+ A2	2010		+ A2	2010
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
+ A1	2017		+ A1	2017
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-8	2009	Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test	EN 61000-4-8	2010

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IEC 61000-4-11	2004	Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	2004
+ A1	2017		+ A1	2017
IEC CISPR 15	2018	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	EN IEC 55015	2019
-	-		+ A11	2020

IEC 61547

Edition 3.0 2020-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Equipment for general lighting purposes – EMC immunity requirements

Équipements pour l'éclairage à usage général – Exigences concernant l'immunité CEM

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
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