INTERNATIONAL STANDARD

NORME INTERNATIONALE

IEC
CEI
60927

Third edition
Troisième édition
2007-06

Auxiliaries for lamps – Starting devices (other than glow starters) – Performance requirements

Appareils auxiliaires pour lampes – Dispositifs d'amorçage (autres que starters à lueur) – Exigences de performance

Reference number
Numéro de référence
IEC/CEI 60927:2007

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

- Catalogue of IEC publications: www.iec.ch/searchpub
The IEC on-line Catalogue enables you to search by a variety of criteria (reference number, text, technical committee,…). It also gives information on projects, withdrawn and replaced publications.
- IEC Just Published: www.iec.ch/online_news/justpub
Stay up to date on all new IEC publications. Just Published details twice a month all new publications released. Available on-line and also by email.
- Customer Service Centre: www.iec.ch/webstore/custserv
If you wish to give us your feedback on this publication or need further assistance, please visit the Customer Service Centre FAQ or contact us:

Email: csc@iec.ch
Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00

A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

- Catalogue des publications de la CEI: www.iec.ch/searchpub/cur_fut-f.htm
Le Catalogue en-ligne de la CEI vous permet d'effectuer des recherches en utilisant différents critères (numéro de référence, texte, comité d'études,…). Il donne aussi des informations sur les projets et les publications retirées ou remplacées.
- Just Published CEI: www.iec.ch/online_news/justpub
Restez informé sur les nouvelles publications de la CEI. Just Published détaille deux fois par mois les nouvelles publications parues. Disponible en-ligne et aussi par email.
- Service Clients: www.iec.ch/webstore/custserv/custserv_entry-f.htm
Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions, visitez le FAQ du Service clients ou contactez-nous:

Email: csc@iec.ch
Tél.: +41 22 919 02 11
Fax: +41 22 919 03 00

INTERNATIONAL STANDARD

NORME INTERNATIONALE

IEC
CEI
60927

Third edition
Troisième édition
2007-06

Auxiliaries for lamps – Starting devices (other than glow starters) – Performance requirements

Appareils auxiliaires pour lampes – Dispositifs d'amorçage (autres que starters à lueur) – Exigences de performance

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE
CODE PRIX V

For price, see current catalogue
Pour prix, voir catalogue en vigueur

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUXILIARIES FOR LAMPS – STARTING DEVICES (OTHER THAN GLOW STARTERS) – PERFORMANCE 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.
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 provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
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.

International standard IEC 60927 has been prepared by subcommittee 34C: Auxiliaries for lamps, of IEC technical committee 34: Lamps and related equipment.

This third edition of IEC 60927 replaces the second edition (1996) and its Amendments 1 (1999) and 2 (2004). Subclause 4.5 has been inserted in order to install an obligatory link to the relevant lamp standard.

This standard is to be used in conjunction with IEC 61347-1 and IEC 61347-2-1. It was established on the basis of the second (2007) edition of IEC 61347-1 and on the basis of the first (2000) edition and Amendment 1 (2005) of IEC 61347-2-1.

The text of this standard is based on the following documents:

FDIS	Report on voting
34C/783/FDIS	34C/797/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

AUXILIARIES FOR LAMPS – STARTING DEVICES (OTHER THAN GLOW STARTERS) – PERFORMANCE REQUIREMENTS

1 Scope

This International Standard specifies performance requirements for starting devices (starters and ignitors) for tubular fluorescent and other discharge lamps for use on a.c. supplies up to 1 000 V at 50 Hz or 60 Hz, which produce starting pulses not greater than 5 kV.

This standard is used in conjunction with IEC 61347-1 and IEC 61347-2-1.

NOTE 1 All glow starters for fluorescent and other discharge lamps including thermal relay/cut-outs will be included in IEC 60155.

NOTE 2 There are regional standards regarding the regulation of EMC requirements for end-products like luminaires and independent control gear. In a luminaire, the control gear is dominant in this respect. Control gear, together with other components, should comply with these standards.

2 Normative references

The following referenced documents are indispensable for the application 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 60081, *Double-capped fluorescent lamps – Performance specifications*

IEC 60192, *Low-pressure sodium vapour lamps – Performance specifications*

IEC 60598-1:2003, *Luminaires – Part 1: General requirements and tests*[1)]
Amendment 1 (2006)

IEC 60662, *High-pressure sodium vapour lamps*

IEC 60901, *Single-capped fluorescent lamps – Performance specifications*

IEC 60921, *Ballasts for tubular fluorescent lamps – Performance requirements*

IEC 60923, *Auxiliaries for lamps – Ballasts for discharge lamps (excluding tubular fluorescent lamps) – Performance requirements*

IEC 61167, *Metal halide lamps*

IEC 61347-1, *Lamp controlgear - General and safety requirements*

IEC 61347-2-1, *Lamp controlgear – Particular requirements for starting devices (other than glow starters)*

---

1) A consolidated edition 6.1 exists, including IEC 60598-1 (2003) and its Amendment 1 (2006).

IEC 61347-2-9, *Lamp controlgear – Particular requirements for ballasts for discharge lamps (excluding fluorescent lamps)*

IEC 61547, *Equipment for general lighting purposes – EMC immunity requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 61347-2-1 together with the following apply.

3.1
starter with mechanical switching element
starter which provides cathode pre-heating current and lamp-starting pulse(s) by mechanical means (e.g. thermal or magnetic)

3.2
starter with electronic switching element
starter which provides cathode pre-heating current and lamp-starting voltage(s) or pulse(s) by electronic means and contains no moving parts

3.3
deactivated lamp
lamp in which one or both cathodes are deprived of emitting material but neither of which is broken

3.4
non-re-operating level
reduced level of voltage and/or current at which a starting device must not re-operate after the completion of the starting cycle, and the lamp is operating normally

3.5
maximum abnormal current
value of continuous r.m.s. current through the ballast which shall not be exceeded at the end of the starting cycle when the circuit is in an abnormal condition (e.g. deactivated lamp, or lamp that has been removed)

3.6
starting aid
means to facilitate the starting of a lamp, which can be either a conductive strip affixed to the outer surface of a lamp or a conductive plate which is placed within an appropriate distance from a lamp

NOTE A starting aid can only be effective when it has an adequate potential difference from one end of the lamp.

3.7
maximum case temperature (t_c + *X*) under abnormal conditions
maximum allowable case temperature of the ignitor under abnormal conditions with metal halide lamps

The value of (t_c + *X*) is declared by the manufacturer