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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60155**

January 1995

ICS 29.140.30

Supersedes EN 60155:1989 and its amendment

Descriptors: Starter, fluorescent lamp, starting test, endurance test, deactivated lamp, type test, marking

English version

**Glow-starters for fluorescent lamps**  
(IEC 155:1993)

Interrupteurs d'amorçage à leur pour  
lampes à fluorescence (starters)  
(CEI 155:1993)

Glimmstarter für Leuchtstofflampen  
(IEC 155:1993)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels



## ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD  
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
81	1984	Tubular fluorescent lamps for general lighting service	EN 60081*	1989
400 (mod)	1991	Lampholders for tubular fluorescent lamps and starterholders (corrigendum June 1992)	EN 60400 + corr. March	1992 1992
598	series	Luminaires	EN 60598	series
695-2-1	1991	Fire hazard testing - Part 2: Test methods - Section 1: Glow-wire test and guidance	-	-
901	1987	Single-capped fluorescent lamps - Safety and performance requirements (corrigendum June 1992)	EN 60901	1990
921 (mod)	1988	Ballasts for tubular fluorescent lamps Performance requirements	EN 60921	1991

\* EN 60081 includes A1:1987 + A2:1988 to IEC 81

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# INTERNATIONAL STANDARD

# IEC 60155

Fourth edition  
1993-11

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## Glow-starters for fluorescent lamps

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## GLOW-STARTERS FOR FLUORESCENT LAMPS

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The 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 the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

International Standard IEC 155 has been prepared by sub-committee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

This fourth edition cancels and replaces the third edition published in 1983 and amendments 1 and 2, and constitutes a technical revision.

The test of this standard is based on the third edition, on the amendments 1 and 2 and on the following documents:

DIS	Report on voting
34A(CO)635	34A(CO)686

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 standard should be used in conjunction with IEC 81, IEC 901 and IEC 921.

Annexes A and B form an integral part of this standard.

## INTRODUCTION

This standard for interchangeable glow-starters for fluorescent lamps comprises two sections: Section 1 describes the general requirements with which glow-starters shall comply in order to ensure safety, and Section 2 covers the requirements for performance.

The additional requirements with which glow-starters for use in class II luminaires shall comply are specified in annex B.

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## GLOW-STARTERS FOR FLUORESCENT LAMPS

### Section 1 – General and safety requirements

#### 1 Scope

This standard specifies interchangeable glow-starters used with pre-heat type fluorescent lamps, hereafter called "starters".

Section 1 specifies the general and safety requirements with which starters shall comply.

Section 2 specifies the performance.

NOTE – Starters are generally designed to operate with a range of lamps, depending on supply voltage, single lamp or series pair operation, maximum lamp voltage and lamp starting requirements.

#### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 81: 1984, *Tubular fluorescent lamps for general lighting service*

IEC 400: 1991, *Lampholders for tubular fluorescent lamps and starterholders*

IEC 598: *Luminaires*

IEC 695-2-1: 1991, *Fire hazard testing. Part 2: Test methods – Section 1: Glow-wire test and guidance*

IEC 901: 1987, *Single-capped fluorescent lamps – Safety and performance requirements*

IEC 921: 1988, *Ballasts for tubular fluorescent lamps. Performance requirements*

#### 3 Definitions

3.1 **starter:** A device, other than a main switch, which closes or opens the pre-heating circuit of a fluorescent lamp for the purpose of starting the lamp.

3.2 **glow-starter:** A starter which depends for its operation on a glow discharge in a gaseous atmosphere.

3.3 **non-reclosure voltage:** A reduced voltage at which the starter contacts must not reclose after operation at the test voltage specified for testing the speed of operation.

3.4 **deactivated lamp:** A lamp in which one or both filaments are deprived of emitting material, but neither of which is broken.

3.5 **glow-starters with operating time limitation:** A glow-starter which prevents prolonged attempts to start lamps which refuse to start, e.g. lamps with deactivated electrodes.

The following types can be distinguished:

- a) starters which are non-resettable (one shot);
- b) starters with a manual reset;
- c) starters with an automatic reset, by actuating the main switch or other intended actions.

#### 4 General requirements

Starters shall be so designed and constructed that in normal use their operation is without danger to the user or surroundings. In general, compliance is checked by carrying out all the tests specified.

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#### 5 General requirements for tests

5.1 Requirements for type tests only are included.

5.2 Unless otherwise specified, the tests shall be made at an ambient temperature of  $25\text{ °C} \pm 5\text{ °C}$ .

5.3 The tests shall be carried out in the order of the clauses.

#### 6 Marking

6.1 Starters shall be provided with durable and legible marking as follows:

- a) manufacturer's or responsible vendor's name, or trade mark;
- b) type or catalogue reference;
- c) lamp(s) for which the starter is intended.