
British Standard Specification for

Starters for fluorescent lamps

Spécification des starters pour lampes à fluorescence

Spezifikation für Starter für Leuchtstofflampen

Contents

	Page
National foreword	Inside front cover
Text of EN 60 155	1
National appendix W	Inside back cover
National appendix X	Inside back cover
Cooperating organizations	Back cover

National foreword

This British Standard has been prepared under the direction of the Electrical Illumination Standards Policy Committee LGL/- and is the English language version of EN 60 155, 'Starters for tubular fluorescent lamps'. It was derived from the third edition of IEC Publication 155 (1983) and Amendment No. 1 (1987), modified. For sake of clarity, the CENELEC common modifications have been incorporated into the appropriate places in the text of IEC 155, they are marked by a vertical line at the left hand margin. The relevant parts of the original IEC text have been quoted as 'INFORMATION' directly after the text of the common modifications.

Appendices designated normative are part of the body of the standard.

Attention is drawn to the fact that the page numbers quoted in the text of EN 60 155, in relation to figures, are the page numbers of IEC Publication 155. These page references do not therefore correspond to the EN page numbers as shown in the shoulder heading of each page.

This standard supersedes BS 3772 : 1981 which is withdrawn.

Cross-references. Details of other international publications quoted in this standard are given in annex ZA. Where there are British Standards either identical or technically equivalent to these international standards the relationship is given in national appendix X.

Additional information. In 6.10.2, paragraph 3, reference is made to figures 11(a) and 11(b), the reference should be to figures 1 and 2 of IEC Publication 695-2-1. In 6.12.1, after 'IEC Publication 81', or IEC 901' may be inserted.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Amendment No. 1
published and effective from 15 January 1994
to BS 3772 : 1990

Specification for starters and fluorescent lamps

NOTE. This amendment has been issued to implement Amendment 2, published in August 1993, to the English version of EN 60155 : 1989.

Revised text

National foreword

Delete the existing paragraph 1 and substitute the following.

'This British Standard has been prepared under the direction of the Electrical Illumination Standards Policy Committee and is the English language version of EN 60155 and its Amendments 1 and 2 published by the European Committee for Electrotechnical Standardization (CENELEC) and was derived from IEC 155 : 1983, 'Starters for tubular fluorescent lamps', and its Amendments No. 1 and No. 2, published by the International Electrotechnical Commission (IEC).'

Delete the paragraph entitled 'Additional information'.

AMD 8049/January 1994

EN amendment title page and foreword

Insert the attached EN amendment title page (foreword on reverse).

AMD 8049/January 1994

Text of EN 60155

Amend the text of European Standard EN 60155 in accordance with the details given on the attached pages.

AMD 8049/January 1994

Annex ZA

Insert the text of the attached annex ZA into the existing annex ZA.

AMD 8049/January 1994

UDC 621.3.032.434 : 621.327.543.15

Descriptors: Starter, fluorescent lamp, starting test, endurance test, de-activated lamp, type test marking

Amendment A2 to the English version of EN 60155

Starters for tubular fluorescent lamps

(IEC 155 : 1983/A2 : 1991)

Interrupteurs d'amorçage (starters) pour lampes
tubulaires à fluorescence
(CEI 155 : 1983/A2 : 1991)

Starter für röhrenförmige Leuchtstofflampen
(IEC 155 : 1983/A2 : 1991)

This amendment A2 modifies the European Standard EN 60155 : 1989. It was approved by CENELEC on 1993-07-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 Central Secretariat or to any CENELEC member.

This amendment 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

Foreword

The CENELEC questionnaire procedure, performed for finding out whether or not the amendment 2 : 1991 to the International Standard IEC : 155 1983 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as European Standard.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as amendment A2 to EN 60155 : 1989 on 6 July 1993.

The following dates were fixed:

- latest date of publication of
an identical national
standard (dop) 1994-03-01
- latest date of withdrawal of
conflicting national
standards (dow) 1994-03-01

For products which have complied with EN 60155 : 1989 before 1994-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1999-03-01.

Annexes designated 'normative' are part of the body of the standard. In this standard, annex ZA is normative.

Annex ZA (normative)

Other international publications quoted in this standard with the references of the relevant European publications

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
695-2-1	1980	<i>Fire hazard testing</i>	HD 444.2.1 S1	1983
		<i>Part 2: Test methods</i>		
		<i>Glow-wire test and guidance</i>		

6.10 Resistance to heat

Replace the title by the following:

Resistance to heat and fire

Transfer the text under this sub-clause to a new sub-clause numbered 6.10.2.

Introduce a new Sub-clause 6.10.1 as follows:

6.10.1 Enclosures and other external parts of insulating material shall be sufficiently resistant to heat.

Compliance is checked by the following tests:

Five samples are tested in a heating cabinet at a temperature of 125 °C during 168 h.

During the test, the samples shall not undergo any change impairing their safety, especially in the following respects:

- reduction of the protection against electric shock;
- loosening of electrical contacts;
- cracks, swelling or shrinking.

At the end of the test, the dimensions shall comply with the requirements of Sub-clause 6.6.1.

Introduce a new Sub-clause 6.10.3 as follows:

6.10.3 Enclosures and other external parts of insulating material shall be resistant to abnormal heat and fire.

Compliance is checked by the following test:

Parts are subjected to a test using a nickel-chromium glow-wire heated to 650 °C. The test apparatus shall be that described in Publication 695-2-1.

The sample to be tested is mounted vertically on the carriage and pressed against the glow-wire tip with a force of 1 N, preferably 15 mm, or more, from the upper edge of the sample. The penetration of the glow-wire into the sample is mechanically limited to 7 mm. After 30 s, the sample is withdrawn from contact with the glow-wire tip.

Any flame or glowing of the sample shall extinguish within 30 s of withdrawing the glow-wire and any burning or molten drop shall not ignite a piece of tissue paper, consisting of five layers, spread out horizontally 200 ± 5 mm below the sample.

The glow-wire temperature and heating current shall be constant for 1 min prior to commencing the test. Care shall be taken to ensure that heat radiation does not influence the sample during this period. The glow-wire tip temperature is measured by means of a sheathed fine-wire thermocouple constructed and calibrated as described in Publication 695-2-1.

Precautions shall be taken to safeguard the health of personnel conducting tests against:

- risks of explosion or fire;
- inhalation of smoke and/or toxic products;
- toxic residues.

6.12 *Radio interference suppression capacitors*

Sub-clause 6.12

In Sub-clause 6.12.2, replace the last paragraph by the following:

The test voltage shall be applied across the terminations of the capacitor and initially shall not be more than half the prescribed voltage. It shall then be raised gradually to the specified full value.

8.2 *Conditions of acceptance*

Replace the second paragraph as follows:

If more than one failure occurs in the first sample, the starters are deemed not to satisfy the requirements of this clause.

9.1 *Test quantity*

Replace the existing text by the following:

The test quantity shall consist of five starters which have passed the starting tests but which have not been subjected to any additional tests.

9.2 *Conditions of acceptance*

Replace the second paragraph by the following:

In the event of one starter failing to comply, another five starters shall be tested, all of which shall comply. If more than one failure occurs the starters are deemed not to satisfy the requirements of this clause.

10.1 *Test quantity*

Replace the existing text by the following:

The test quantity shall consist of five starters which have passed the starting tests but which have not been subjected to any additional tests.

10.2 *Conditions of acceptance*

Replace the second paragraph by the following:

In the event of one starter failing to comply, another five starters shall be tested, all of which shall comply. If more than one failure occurs the starters are deemed not to satisfy the requirements of this clause.

UDC 621.3.032.434 : 621.327.543.15

Key words: Starter; fluorescent lamp; starting test; endurance test; de-activated lamp; type test marking

English version

Starters for tubular fluorescent lamps

(IEC 155 (1983) 3rd edition + Amendment No. 1 (1987), modified)

Interrupteurs d'amorçage (starters) pour lampes
tubulaires à fluorescence (CEI 155 (1983) ed 3 +
Amdt 1 (1987), modifiée)

Starter für röhrenförmige Leuchtstofflampen
(IEC 155 (1983) Ausg. 3 + Änderung 1 (1987),
modifiziert)

This European Standard was ratified by CENELEC on 15 June 1987 and the Amendment 1 on 6 December 1988.

CENELEC members are bound to comply with the requirements of the 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 CENELEC Central Secretariat or to any CENELEC member.

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