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Överspänningsskydd för lågspänning – Del 311: Specifikationer för gasurladdningsrör (GDT)

*Components for low-voltage surge protective devices –
Part 311: Specifications for gas discharge tubes (GDT)*

Som svensk standard gäller europastandarden EN 61643-311:2001. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61643-311:2001.

Nationellt förord

Europastandarden EN 61643-311:2001

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- **IEC 61643-311, First edition, 2001 - Components for low-voltage surge protective devices - Part 311: Specifications for gas discharge tubes (GDT)**

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EUROPEAN STANDARD

EN 61643-311

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English version

Components for low-voltage surge protective devices
Part 311: Specification for gas discharge tubes (GDT)
(IEC 61643-311:2001)

Composants pour parafoudres basse
tension
Partie 311: Spécifications pour les tubes
à décharge dans un gaz (TDG)
(CEI 61643-311:2001)

Bauelemente für
Überspannungsschutzgeräte für
Niederspannung
Teil 311: Festlegungen
für Gasentladungsableiter (ÜsAg)
(IEC 61643-311:2001)

This European Standard was approved by CENELEC on 2001-12-01. 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 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, 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 text of document 37B/57/FDIS, future edition 1 of IEC 61643-311, prepared by SC 37B, Specific components for surge arresters and surge protective devices, of IEC TC 37, Surge arresters, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61643-311 on 2001-12-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-09-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2004-12-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61643-311:2001 was approved by CENELEC as a European Standard with the following editorial modifications:

Throughout the document, **replace** "a.c." by "AC" and **replace** "d.c." by "DC".

Delete "µs" in all x/y indications of waveforms:

- 6.1.6 : Table 4 headings (four times) and note ^{b)};
 - 7.7 : third paragraph (twice) and from "surge generator" in Figures 8 and 9;
 - 7.9 : subclause title, in the first paragraph and in the key to Figures 12 and 13;
 - 7.10 : subclause title, in the third paragraph and in the key to Figures 14 and 15.
-

Annex ZA (normative)

Normative references to international publications with their corresponding 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 (including amendments).

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-1	1990	Environmental testing Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
IEC 60068-2-20	1979	Part 2: Tests - Test T: Soldering	HD 323.2.20 S3 ¹⁾	1988
IEC 60068-2-21	1999	Part 2-21: Tests - Test U: Robustness of terminations and integral mounting devices	EN 60068-2-21	1999
IEC 61000-4-5	1995	Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	1995
IEC 61180-1	1992	High-voltage test techniques for low-voltage equipment Part 1: Definitions, test and procedure requirements	EN 61180-1	1994
ITU-T Recommendation K.20	2000	Resistibility of telecommunication equipment installed in a telecommunications centre to overvoltages and overcurrents	-	-

¹⁾ HD 323.2.20 S3 includes A2:1987 to IEC 60068-2-20.

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COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTIVE DEVICES –

Part 311: Specification for gas discharge tubes (GDT)

1 Scope

Gas discharge tubes (GDTs) are used for applications up to 1 000 V a.c. or 1 500 V d.c. in communication or signalling circuits. They are defined as a gap, or series of gaps, in an enclosed discharge medium other than air. They are designed to protect apparatus or personnel, or both, from high transient voltages. This standard does not specify requirements applicable to complete surge protective devices, nor does it specify total requirements for GDTs employed within electronic devices, where precise coordination between GDT performance and surge protective device withstand capability is highly critical.

This part of IEC 61643

- deals with GDTs having two or three electrodes;
- does not deal with mountings and their effect on GDT characteristics. Characteristics given apply solely to GDTs mounted in the ways described for the tests;
- does not deal with mechanical dimensions;
- does not deal with quality assurance requirements;
- may not be sufficient for GDTs used on high-frequency or multi-channel systems;
- does not deal with electrostatic voltages;
- does not deal with GDTs connected in series with voltage-dependent resistors in order to limit follow-on currents in electrical power systems;
- does not deal with hybrid or composite GDT devices.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61643. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61643 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60068-2-1:1990, *Environmental testing – Part 2: Tests. Tests A: Cold*

IEC 60068-2-20:1979, *Environmental testing – Part 2: Tests. Test T: Soldering*

IEC 60068-2-21:1999, *Environmental testing – Part 2-21: Tests – Test U: Robustness of terminations and integral mounting devices*

IEC 61000-4-5:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 5: Surge immunity test*