SVENSK STANDARD SS-EN 61558-2-5

Fastställd	Utgåva	Sida	Ansvarig kommitté
2010-09-27	2	1 (1+16)	SEK TK 96

Transformatorer, strömförsörjningsdon och liknande – Säkerhet – Del 2-5: Särskilda fordringar på transformatorer och strömförsörjningsdon för rakapparater

Safety of transformers, reactors, power supply units and combinations thereof – Part 2-5: Particular requirements and tests for transformer for shavers, power supply units for shavers and shaver supply units

Som svensk standard gäller europastandarden EN 61558-2-5:2010. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61558-2-5:2010.

Nationellt förord

Europastandarden EN 61558-2-5:2010

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC

– **IEC 61558-2-5, Second edition, 2010 - Safety of transformers, reactors, power supply units and combinations thereof - Part 2-5: Particular requirements and tests for transformer for shavers, power supply units for shavers and shaver supply units**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 61558-1, utgåva 2, 2006.

Tidigare fastställd svensk standard SS-EN 61558-2-5, utgåva 1, 1998 och SS-EN 61558-2-5/A11, utgåva 1, 2004, gäller ej fr o m 2013-07-01.

ICS 29.180

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61558-2-5

July 2010

ICS 29.180

Supersedes EN 61558-2-5:1998 + A11:2004

English version

Safety of transformers, reactors, power supply units and combinations thereof - Part 2-5: Particular requirements and tests for transformer for shavers, power supply units for shavers and shaver supply units

(IEC 61558-2-5:2010)

Sécurité des transformateurs, bobines d'inductance, blocs d'alimentation et des combinaisons de ces éléments - Partie 2-5: Règles particulières et essais pour les transformateurs pour rasoirs, blocs d'alimentation incorporant un transformateur pour rasoirs et blocs d'alimentation pour rasoirs
(CEI 61558-2-5:2010)

Sicherheit von Transformatoren, Drosseln, Netzgeräten und entsprechende Kombinationen - Teil 2-5: Besondere Anforderungen und Prüfungen an Transformatoren für Rasierer, Netzgeräte für Rasierer und Rasiersteckdosen-Einheiten
(IEC 61558-2-5:2010)

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 61558-2-5:2010 E

SEK Svensk Elstandard

Foreword

The text of document 96/353/FDIS, future edition 2 of IEC 61558-2-5, prepared by IEC TC 96, Transformers, reactors, power supply units and similar products for low voltage up to 1 100 V, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61558-2-5 on 2010-07-01.

This European Standard supersedes EN 61558-2-5:1998 + A1:2004.

The main changes consist of updating this part in accordance with EN 61558-1:2005 and adding power supply units to the scope.

This part has the status of a group safety publication in accordance with IEC Guide 104:1997, *The preparation of safety publications and the use of basic safety publications and group safety publications*.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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)	2011-04-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2013-07-01

This part is intended to be used in conjunction with the latest edition of EN 61558-1 and its amendments. It is based on the second edition (2005) of that standard.

This part supplements or modifies the corresponding clauses in EN 61558-1, so as to convert that publication into the EN standard: *Particular requirements and test for transformer for shavers, power supply units for shavers and shaver supply units*.

A list of all parts of the EN 61558 series, under the general title: *Safety of transformers, reactors, power supply units and combinations thereof*, can be found on the CENELEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

Where a particular subclause of Part 1 is not mentioned in this part, that subclause applies as far as is reasonable. Where this part states "addition", "modification" or "replacement", the relevant text of Part 1 is to be adopted accordingly.

In this part, the following print types are used:

– requirements proper: in roman type;

– *test specifications: in italic type*;

– explanatory matters: in smaller roman type.

In the text of this part, the words in **bold** are defined in Clause 3.

Subclauses, notes, figures and tables additional to those in Part 1 are numbered starting from 101; supplementary annexes are entitled AA, BB, etc.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 2006/95/EC.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61558-2-5:2010 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61558-2-16:2009	NOTE Harmonized as EN 61558-2-16:2009 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

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

Annex ZA of Part 1 is applicable except as follows:

Addition:

Publication	Year	Title	EN/HD	Year
IEC 60068-2-62	1991	Environmental testing - Part 2: Test methods - Test Ef: Impact, pendulum hammer	EN 60068-2-62[1) 2)]	1995
IEC 60670	Series	Boxes and enclosures for electrical accessories for household and similar fixed electrical installations	EN 60670	Series
IEC 61558-1	2005	Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests	EN 61558-1 + corr. August	2005 2006

[1)] EN 60068-2-62 includes A1 to IEC 60068-2-62.

[2)] EN 60068-2-62 is superseded by EN 60068-2-75:1997, which is based on IEC 60068-2-75:1997.

CONTENTS

SAFETY OF TRANSFORMERS, REACTORS, POWER SUPPLY UNITS AND COMBINATIONS THEREOF –

Part 2-5: Particular requirements and test for transformer for shavers, power supply units for shavers and shaver supply units

1 Scope

Replacement:

This part of IEC 61558 deals with the safety of **shaver transformers**, **power supply units** incorporating a **shaver transformer**, and **shaver supply units. Shaver transformers** incorporating **electronic circuits** are also covered by this standard.

NOTE 1 Safety includes electrical, thermal, mechanical and chemical aspects.

Unless otherwise specified, from here onward, the term **transformer** covers **shaver transformers** and **power supply units** incorporating **shaver transformers** and **shaver supply units**.

This part is applicable to **stationary,** single phase air-cooled (natural or forced), **independent** or **associated dry- type transformers.** The windings may be encapsulated or non-encapsulated.

This standard is applicable to **transformers** and **power supply** (linear) with **internal operational frequencies** not exceeding 500 Hz.

This standard used in combination with Part 2-16 for **switch mode power supply units** (**SMPS**) is also applicable to power supplies with **internal operational frequencies** higher than 500 Hz. Where the two requirements are in conflict the most severe take precedence.

The **rated supply voltage** does not exceed 250 V a.c., and the **rated supply frequency** does not exceed 500 Hz.

The **rated output** is not less than 20 VA and does not exceed 50 VA .

The **no-load output voltage** does not exceed 275 V a.c and the **rated output voltage** does not exceed 250 V a.c.

This part is not applicable to external circuits and their components intended to be connected to the input and output terminals or socket-outlets of the **transformers.**

Transformers covered by this part are used in applications where **double** or **reinforced insulation** between circuits is required by the installation rules for bathrooms and similar locations, or by the appliance specifications.

NOTE 2 **Transformers** covered by this part may be flush or surface mounted or incorporated in luminaires, mirrors, and other equipment containing one or more socket-outlet(s).

NOTE 3 Attention is drawn to the following:

- for **transformers** intended to be used in vehicles, on board ships, and aircraft, additional requirements (from other applicable standards, national rules, etc.) may be necessary;

- measures to protect the **enclosure** and the components inside the **enclosure** against external influences such as fungus, vermin, termites, solar-radiation, and icing should also be considered;

- the different conditions for transportation, storage, and operation of the **transformers** should also be considered;

- additional requirements in accordance with other appropriate standards and national rules may be applicable to **transformers** intended for use in special environments.

NOTE 4 Future technological development of **transformers** may necessitate a need to increase the upper limit of the frequencies, until then this part may be used as a guidance document.

2 Normative references

This clause of Part 1 is applicable except as follows:

Addition:

IEC 60068-2-62:1:1991, *Environmental testing – Part 2: Test methods – Test Ef: Impact, pendulum hammer*[1]

IEC 60670 (all parts), *Boxes and enclosures for electrical accessories for household and similar fixed electrical installations*

IEC 61558-1 :2005, *Safety of power transformers, power supplies, reactors and similar products – Part 1: General requirements and tests*

[redacted]

1 This publication was withdrawn and replaced by IEC 60068-2-75 (1997), but for the purposes of this standard, the IEC 60068-2-62 is cited.