

**SLOVENSKI  
STANDARD**

**SIST EN 61558-2-19:2002**

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Safety of power transformers, power supply units and similar devices - Part 2-19:  
Particular requirements for perturbation attenuation transformers

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EUROPEAN STANDARD

**EN 61558-2-19**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2001

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English version

**Safety of power transformers, power supply units and similar devices**  
**Part 2-19: Particular requirements**  
**for perturbation attenuation transformers**  
(IEC 61558-2-19:2000)

Sécurité des transformateurs, blocs  
d'alimentation et dispositifs analogues  
Partie 2-19: Règles particulières  
pour les transformateurs d'atténuation  
de perturbations  
(CEI 61558-2-19:2000)

Sicherheit von Transformatoren,  
Netzgeräten und dergleichen  
Teil 2-19: Besondere Anforderungen  
an Störminderungs-Transformatoren  
(IEC 61558-2-19:2000)

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This European Standard was approved by CENELEC on 2001-01-01. 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, 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 96/147/FDIS, future edition 1 of IEC 61558-2-19, prepared by IEC TC 96, Small power transformers, reactors and power supply units: Safety requirements, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61558-2-19 on 2001-01-01.

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) 2001-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-01-01

This part 2-19 is to be used in conjunction with EN 61558-1:1997.

This part 2-19 supplements or modifies the corresponding clauses of EN 61558-1. When a particular subclause of part 1 is not mentioned in this part 2-19, that subclause applies as far as is reasonable. Where this part 2-19 states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

The words in **bold** in the text of the standard are defined in clause 3.

Subclauses, tables or figures which are additional to those in part 1 are numbered starting from 101.

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## Endorsement notice

The text of the International Standard IEC 61558-2-19:2000 was approved by CENELEC as a European Standard without any modification.

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**Sécurité des transformateurs, blocs d'alimentation  
et dispositifs analogues –**

**Partie 2-19:  
Règles particulières pour les transformateurs  
d'atténuation de perturbations**

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**Safety of power transformers, power supply units  
and similar devices –**

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**Part 2-19:  
Particular requirements for perturbation  
attenuation transformers**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY OF POWER TRANSFORMERS, POWER SUPPLY UNITS  
AND SIMILAR DEVICES –**

**Part 2-19: Particular requirements  
for perturbation attenuation transformers**

## 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 co-operation 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 express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, 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.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61558-2-19 has been prepared by IEC technical committee 96: Small power transformers, reactors and power supply units: safety requirements.

It has the status of a group safety publication in accordance with IEC Guide 104: The preparation of safety publications and the use of basic safety publications and group safety publications (1997).

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

FDIS	Report on voting
96/147/FDIS	96/152/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 3.

This part 2-19 is intended to be used in conjunction with IEC 61558-1. It was established on the basis of the first edition (1997) of that standard.

This part 2-19 supplements or modifies the corresponding clauses in IEC 61558-1, so as to convert that publication into the IEC standard: *Particular requirements for perturbation attenuation transformers*.

When a particular subclause of part 1 is not mentioned in this part 2-19, that subclause applies as far as is reasonable. Where this standard states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

In this standard, the following print types are used.

- requirements proper: in roman type;
- *test specifications: in italic type;*
- explanatory matter: in smaller roman type.

In the text of the standard the words in **bold** are defined in clause 3.

Subclauses or figures which are additional to those in part 1 are numbered starting from 101; supplementary annexes are entitled AA, BB, etc.

The committee has decided that the contents of this publication will remain unchanged until 2004-12. At this date, the publication will be

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

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## SAFETY OF POWER TRANSFORMERS, POWER SUPPLY UNITS AND SIMILAR DEVICES –

### Part 2-19: Particular requirements for perturbation attenuation transformers

#### 1 Scope

##### *Replacement:*

This International Standard deals with all aspects of safety such as electrical, thermal and mechanical.

This part 2-19 of IEC 61558 applies to **stationary** or **portable**, single-phase or poly-phase, air-cooled (natural or forced), **independent** or **associated**, **isolating** or **safety isolating transformers**, having a **rated supply voltage** not exceeding 1 000 V a.c., a **rated frequency** not exceeding 500 Hz, a **rated output** not exceeding 10 kVA. **Perturbation attenuation transformers** are intended to the supply of office machines and the like and have a mid-point lead out in the **output circuit** in order to attenuate mains borne disturbances.

In addition, **double** or **reinforced insulation** between circuits required by the installation rules or by the appliance specification is fulfilled by using this transformer.

NOTE 1 Connection of an appliance via transformers of the kind referred to here does not imply that the requirements for this appliance are allowed to be less stringent.

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##### **Perturbation attenuation isolating transformers:**

- have a **no-load output voltage** and a **rated output voltage** exceeding 50 V a.c. or 120 V ripple-free d.c. and not exceeding 500 V a.c. or 708 V ripple free d.c.; the **no-load output voltage** and the **rated output voltage** may exceed these limits in order to be in accordance with the national wiring rules or special purposes, however they shall not exceed 1 000 V a.c. or 1 415 V ripple free d.c.

##### **Perturbation attenuation safety isolating transformers:**

- have a **no-load output voltage** and a **rated output voltage** not exceeding 50 V a.c. or 120 V ripple-free d.c.

This standard is applicable to **dry-type transformers**. The windings may be encapsulated or non-encapsulated.

Where an **isolating transformer** provides supply to two or more items of equipment, a connection of exposed-conductive-parts of such equipment is required in accordance with section 413.5 of IEC 60364-4-41.

NOTE 2 For transformers filled with liquid dielectric or pulverised material, such as sand, additional requirements are under consideration.

NOTE 3 Attention is drawn to the fact that:

- for transformers intended to be used in tropical countries, special requirements may be necessary;
- in locations where special environmental conditions prevail, particular requirements may be necessary.