



# SLOVENSKI STANDARD SIST EN 61558-2-13:2000

01-junij-2000

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## Safety of power transformers, power supply units and similar devices - Part 2-13: Particular requirements for auto-transformers for general use

Safety of power transformers, power supply units and similar devices -- Part 2-13:  
Particular requirements for auto-transformers for general use

Sicherheit von Transformatoren, Netzgeräten und dergleichen -- Teil 2-13: Besondere  
Anforderungen an Spartansformatoren für allgemeine Anwendungen

Sécurité des transformateurs, blocs d'alimentation et analogues -- Partie 2-13: Règles  
particulières pour les autotransformateurs pour usage général

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Ta slovenski standard je istoveten z: **EN 61558-2-13:2000**

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### **ICS:**

29.180            Transformatorji. Dušilke            Transformers. Reactors

**SIST EN 61558-2-13:2000**

**en**

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English version

**Safety of power transformers, power supply units and similar devices  
Part 2-13: Particular requirements for auto-transformers for general use  
(IEC 61558-2-13:1999)**

Sécurité des transformateurs, blocs  
d'alimentation et analogues  
Partie 2-13: Règles particulières pour les  
autotransformateurs pour usage général  
(CEI 61558-2-13:1999)

Sicherheit von Transformatoren,  
Netzgeräten und dergleichen  
Teil 2-13: Besondere Anforderungen  
an Spartransformatoren für allgemeine  
Anwendungen  
(IEC 61558-2-13:1999)

This European Standard was approved by CENELEC on 1999-12-01. 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, 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 96/131/FDIS, future edition 1 of IEC 61558-2-13, 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 61558-2-13 on 1999-12-01.

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) 2000-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2002-12-01

This part 2-13 is intended to be used in conjunction with EN 61558-1:1997.

This part 2-13 supplements or modifies the corresponding clauses of EN 61558-1. Where a particular clause or subclause of part 1 is not mentioned in this part 2-13, that clause or subclause applies as far as is reasonable. Where this part 2-13 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.

In the text of this standard, the words in **bold** 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 61558-2-13:1999 was approved by CENELEC as a European Standard without any modification.

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NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC

61558-2-13

Première édition  
First edition  
1999-10

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PUBLICATION GROUPEE DE SÉCURITÉ  
GROUP SAFETY PUBLICATION

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

**Partie 2-13:  
Règles particulières pour les autotransformateurs  
pour usage général**

iTeh STANDARD PREVIEW

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

**Part 2-13:** SIST EN 61558-2-13:2000

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**Particular requirements for auto-transformers  
for general use**

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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CODE PRIX  
PRICE CODE

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## CONTENTS

	Page
FOREWORD .....	5
Clause	
1 Scope .....	9
2 Normative references .....	11
3 Definitions .....	11
4 General requirements .....	11
5 General notes on tests .....	13
6 Ratings .....	13
7 Classification .....	13
8 Marking and other information .....	15
9 Protection against accessibility to hazardous live parts .....	15
10 Change of input voltage setting .....	15
11 Output voltage and output current under load .....	15
12 No-load output voltage .....	17
13 Short-circuit voltage .....	17
14 Heating .....	19
15 Short-circuit and overload protection .....	19
16 Mechanical strength .....	19
17 Protection against harmful ingress of dust, solid objects and moisture .....	19
18 Insulation resistance and electric strength .....	19
19 Construction .....	19
20 Components .....	21
21 Internal wiring .....	21
22 Supply connection and other external flexible cables or cords .....	21
23 Terminals for external conductors .....	21
24 Provision for protective earthing .....	21
25 Screws and connections .....	23
26 Creepage distances, clearances and distances through insulation .....	23
27 Resistance to heat, abnormal heat, fire and tracking .....	23
28 Resistance to rusting .....	23
Annexes .....	25

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 2-13: Particular requirements for auto-transformers  
for general use**

## 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.
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- 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 61558-2-13 has been prepared by IEC technical committee 96: Small power transformers, reactors and power supply units: Safety requirements.

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 revision.

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 on the following documents:

FDIS	Report on voting
96/131/FDIS	96/137/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.

The committee has decided that this publication remains valid until 2005-06.

At this date, in accordance with the committee's decision, the publication will be

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

This part 2-13 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 2-13 supplements or modifies the corresponding clauses in IEC 61558-1, so as to convert that publication into the IEC standard: Particular requirements for auto-transformers.

This standard replaces Chapter III of IEC 60989.

When a particular subclause of part 1 is not mentioned in this part 2-13, 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.

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Subclauses which are additional to those in part 2-13 are numbered starting from 101; supplementary annexes are entitled AA, BB, etc.



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

### Part 2-13: Particular requirements for auto-transformers for general use

#### 1 Scope

##### *Replacement:*

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

This part 2-13 of IEC 61558 applies to stationary or portable, single-phase or polyphase, air-cooled (natural or forced), independent or associated **auto-transformers**, having a **rated supply voltage** not exceeding 1 000 V a.c., a **rated frequency** not exceeding 500 Hz.

The **core power** does not exceed:

- 1 kVA for single-phase **auto-transformers**;
- 5 kVA for polyphase **auto-transformers**.

The **rated output** does not exceed:

- 20 kVA for single-phase **auto-transformers**;
- 100 kVA for polyphase **auto-transformers**.

This standard is also applicable to **auto-transformers** having a **core power** up to 40 kVA, however such transformers are considered as special transformers and are subjected to an agreement between the purchaser and the supplier. Such special **auto-transformers** have no limitation for the **rated output**.

The **no-load output voltage** and the **rated output voltage** do not exceed 1 000 V a.c. or 1 415 V ripple-free d.c.

For **independent auto-transformers**, the **no-load output voltage** and the **rated output voltage** are not less than 50 V a.c. or 120 V ripple free d.c.

This standard is applicable to transformers where no insulation between circuits is required by the installation rules or by the equipment specifications.

NOTE 1 – Normally, the transformers are intended to be associated with equipment to provide voltages different from the supply voltage for the functional requirements of the equipment. The safety insulation may be provided by other features of the equipment, such as the **body**.

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

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

NOTE 3 – Attention is drawn to the fact that:

- for transformers intended to be used in vehicles or on board ships or aircraft, additional requirements may be necessary;
- 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.