

Safety of power transformers, power supply units and similar devices —

Part 2-3: Particular requirements for ignition transformers for gas and oil burners

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The UK participation in its preparation was entrusted to Technical Committee PEL/96, Small transformers, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, the EN foreword page, pages 3 to 14, and inside back cover and a back cover.

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Amendments issued since publication

Amd. No.	Date	Comments

**Safety of power transformers, power supply units and similar devices
Part 2-3: Particular requirements for ignition transformers for gas and
oil burners
(IEC 61558-2-3:1999)**

Sécurité des transformateurs, blocs
d'alimentation et dispositifs analogues
Partie 2-3: Règles particulières pour les
transformateurs d'allumage pour
brûleurs à gaz et combustibles liquides
(CEI 61558-2-3:1999)

Sicherheit von Transformatoren,
Netzgeräten und dergleichen
Teil 2-3: Besondere Anforderungen
an Zündtransformatoren für Gas- und
Ölbrenner
(IEC 61558-2-3:1999)

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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.

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CENELEC

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

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Foreword

The text of document 96/132/FDIS, future edition 1 of IEC 61558-2-3, 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 61558-2-3 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 2-3 is intended to be used in conjunction with EN 61558-1:1997.

This part 2-3 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 2-3, that clause or subclause applies as far as is reasonable. Where this part 2-3 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.

Endorsement notice

The text of the International Standard IEC 61558-2-3:1999 was approved by CENELEC as a European Standard without any modification.

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

Part 2-3: Particular requirements for ignition transformers for gas and oil burners

1 Scope

Replacement:

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

This part of IEC 61558 applies to **fixed** single-phase air-cooled (natural or forced) **associated transformers** (incorporated or not) used in the ignition system of gas and oil burners, having a **rated supply voltage** not exceeding 1 000 V a.c. and a **rated frequency** not exceeding 500 Hz. The **rated output current** does not exceed 500 mA a.c.

NOTE 1 Due to the national safety law, in Japan the **rated output current** does not exceed 50 mA.

The **no-load output voltage** and the **rated no-load output voltage** does not exceed 15 000 V a.c.

This standard applies to transformers where **double** or **reinforced insulation** between circuits is not required by the installation rules or by the appliance specification.

NOTE 2 The transformers are intended to be associated with equipment to provide voltages different from the supply voltage for the functional requirement of the equipment. The safety insulation may be provided (or completed) 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 3 For transformers filled with liquid dielectric or pulverised material, such as sand, additional requirements are under consideration.

NOTE 4 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.

This standard also applies to transformers incorporating electronic circuits. This standard does not apply to external circuits and their components intended to be connected to the input and output terminals or socket-outlets of the transformer.

NOTE 5 Electronic **ignition transformers** are under consideration.

2 Normative references

This clause of part 1 is applicable except as follows:

Addition:

ISO 3864: 1984, *Safety colours and safety signs*

3 Definitions

This clause of part 1 is applicable except as follows:

Addition:

3.1.101

ignition transformer

fixed single-phase air-cooled **associated transformer** which is part of the equipment which, from a high potential, generates an arc between two electrodes which are connected to the high voltage output of the transformer. This transformer needs to be used with a control unit being part of the ignition equipment.

3.1.102

rated duty factor

time interval during which the transformer operates, expressed as a percentage of the duration of the whole cycle

3.1.103

functional insulation

insulation between conductive parts, which is necessary only for the proper functioning of the equipment

3.5.4 *Replacement:*

rated output current

output current at **rated supply voltage** and **rated frequency** when the **output winding** is short-circuited, assigned to the transformer by the manufacturer

3.5.5 *Replacement:*

rated output voltage

output voltage when the transformer is connected to **rated supply voltage** at **rated frequency** under no-load conditions

4 General requirements

This clause of part 1 is applicable.

5 General notes on tests

This clause of part 1 is applicable.

6 Rating

This clause of part 1 is applicable except as follows:

Addition:

6.101 The **rated output voltage** shall not exceed 15 000 V a.c.

6.102 Void

6.103 The **rated frequency** shall not exceed 500 Hz.