



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 61558-1:2005**

ICS 29.180

**SAFETY OF POWER TRANSFORMERS,  
POWER SUPPLIES, REACTORS AND  
SIMILAR PRODUCTS -- PART 1: GENERAL  
REQUIREMENTS AND TESTS**

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EUROPEAN STANDARD

**EN 61558-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2005

ICS 29.180

Supersedes EN 61558-1:1997 + A1:1998 + A11:2003

English version

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

Sécurité des transformateurs,  
alimentations, bobines d'inductance  
et produits analogues  
Partie 1: Exigences générales et essais  
(CEI 61558-1:2005)

Sicherheit von Transformatoren,  
Netzgeräten, Drosseln und dergleichen  
Teil 1: Allgemeine Anforderungen und  
Prüfungen  
(IEC 61558-1:2005)

This European Standard was approved by CENELEC on 2005-10-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 96/224/FDIS, future edition 2 of IEC 61558-1, prepared by IEC TC 96, Small power transformers, reactors, power supply units and similar products, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61558-1 on 2005-10-01.

This European Standard supersedes EN 61558-1:1997 + corrigendum April 2003 + A1:1998 + A11:2003.

The changes with respect to EN 61558-1:1997 were necessitated by the introduction of new technology and implementation of requirements from equipment committees.

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) 2006-07-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2008-10-01

This new edition of Part 1 is only to be used in conjunction with parts 2 based on this edition. The parts 2 contain clauses to supplement or modify the corresponding clauses of this Part 1 in order to provide the relevant requirements for each type of transformer.

However, individual countries may wish to consider its application, to the extent reasonable, to transformers not mentioned in the parts 2, and to transformers designed on new principles.

NOTE Annex U contains the optional  $t_w$  system (marking, requirements and tests).

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.

Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 61558-1:2005 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60038	NOTE	Harmonized as HD 472 S1:1989 (modified).
IEC 60051	NOTE	Harmonized in EN 60051 series (not modified).
IEC 60584-1	NOTE	Harmonized as EN 60584-1:1995 (not modified).
IEC 60738-1	NOTE	Harmonized as EN 60738-1:1999 (not modified).
IEC 60998-1	NOTE	Harmonized as EN 60998-1:2004 (modified).
IEC 61000-3-2	NOTE	Harmonized as EN 61000-3-2:2000 (modified).
IEC 61000-3-3	NOTE	Harmonized as EN 61000-3-3:1995 (not modified).
IEC 62041	NOTE	Harmonized as EN 62041:2003 (not modified).
CISPR 14	NOTE	Harmonized in EN 55014 series (not modified).

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## 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 Where 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 60065 (mod)	2001	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	2002
IEC 60068-2-2	1974	Basic environmental testing procedures Part 2: Tests - Tests B: Dry heat	EN 60068-2-2 <sup>1)</sup>	1993
IEC 60068-2-6	- <sup>2)</sup>	Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995 <sup>3)</sup>
IEC 60068-2-32	- <sup>2)</sup>	Part 2: Tests - Test Ed: Free fall (Procedure 1)	EN 60068-2-32	1993 <sup>3)</sup>
IEC 60068-2-75	- <sup>2)</sup>	Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	1997 <sup>3)</sup>
IEC 60076-1 (mod)	- <sup>2)</sup>	Power transformers Part 1: General	EN 60076-1 + A11 + A12	1997 <sup>3)</sup> 1997 2002
IEC/TR 60083	- <sup>2)</sup>	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60085	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1 <sup>4)</sup>	1990
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
IEC 60127-3	- <sup>2)</sup>	Miniature fuses Part 3: Sub-miniature fuse-links	EN 60127-3 + corr. June	1996 <sup>3)</sup> 1996
IEC 60216	Series	Electrical insulating materials - Thermal endurance properties	EN 60216	Series

<sup>1)</sup> EN 60068-2-2:1993 includes supplement A:1976 to IEC 60068-2-2:1974.

<sup>2)</sup> Undated reference.

<sup>3)</sup> Valid edition at date of issue.

<sup>4)</sup> HD 566 S1 is superseded by EN 60085:2004, which is based on IEC 60085:2004.

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