



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 60664-1:2007

ICS 29.080.30
29.080

**INSULATION COORDINATION FOR
EQUIPMENT WITHIN LOW-VOLTAGE
SYSTEMS -- PART 1: PRINCIPLES,
REQUIREMENTS AND TESTS (IEC 60664
-1:2007 (EQV))**

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales

<http://www.standards.ie>

*This Irish Standard was
published under the authority
of the National Standards
Authority of Ireland and
comes into effect on:
8 August 2007*

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
.....**

© NSAI 2007

Price Code AD

Údarás um Chaighdeáin Náisiúnta na hÉireann

This page is intentionally left BLANK.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60664-1

July 2007

ICS 29.080.30; 29.080

Supersedes EN 60664-1:2003

English version

**Insulation coordination for equipment
within low-voltage systems -
Part 1: Principles, requirements and tests
(IEC 60664-1:2007)**

Coordination de l'isolement
des matériels dans les systèmes
(réseaux) à basse tension -
Partie 1: Principes, exigences
et essais
(CEI 60664-1:2007)

Isolationskoordination
für elektrische Betriebsmittel
in Niederspannungsanlagen -
Teil 1: Grundsätze, Anforderungen
und Prüfungen
(IEC 60664-1:2007)

This European Standard was approved by CENELEC on 2007-07-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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 109/58/CDV, future edition 2 of IEC 60664-1, prepared by IEC TC 109, Insulation co-ordination for low-voltage equipment, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 60664-1 on 2007-07-01.

This European Standard supersedes EN 60664-1:2003.

In addition to a number of editorial improvements, the following main changes have been made with respect to EN 60664-1:2003:

- amendment of Japanese mains conditions with regard to the rated impulse voltages, the rationalized voltages and the nominal voltages of supply systems for different modes of overvoltage control;
- amendment of dimensioning of clearances smaller than 0,01 mm;
- alignment of the table and the corresponding formula regarding test voltages for verifying clearances at different altitudes;
- amendment of interpolation of the creepage distance values for functional insulation;
- amendment of creepage distance dimensioning taking into account ribs;
- revision of the former Clause 4 "Tests and measurements" (now Clause 6) to achieve a more detailed description of the tests and their purpose, the test equipment and possible alternatives;
- change of Annex C "Partial discharge test methods" from a former technical report, Type 2 (now called TS), to a normative Annex C.

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) | 2008-04-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-07-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60664-1:2007 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:

ISO/IEC Guide 2	NOTE Harmonized as EN 45020:1998 (not modified).
IEC 60529 + A1	NOTE Harmonized as EN 60529:1991 + A1:2000 (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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60038	1983	IEC standard voltages ¹⁾	HD 472 S1 + corr. February + A1	1989 2002 1995
IEC 60050-151	2001	International Electrotechnical Vocabulary (IEV) - Part 151: Electrical and magnetic devices	-	-
IEC 60050-212	1990	International Electrotechnical Vocabulary (IEV) - Chapter 212: Insulating solids, liquids and gases	-	-
IEC 60050-604 + A1	1987 1998	International Electrotechnical Vocabulary (IEV) - Chapter 604: Generation, transmission and distribution of electricity - Operation	-	-
IEC 60050-826	2004	International Electrotechnical Vocabulary (IEV) - Part 826: Electrical installations	-	-
IEC 60068-1	1988	Environmental testing - Part 1: General and guidance	EN 60068-1 ²⁾	1994
IEC 60068-2-2	1974	Environmental testing - Part 2: Tests - Tests B: Dry heat	EN 60068-2-2 ³⁾	1993
IEC 60068-2-14	1984	Environmental testing - Part 2: Tests - Test N: Change of temperature	EN 60068-2-14 ⁴⁾	1999
IEC 60068-2-78	2001	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	2001
IEC 60085	2004	Electrical insulation - Thermal classification	EN 60085	2004
IEC 60099-1	1991	Surge arresters - Part 1: Non-linear resistor type gapped surge arresters for a.c. systems	EN 60099-1	1994

¹⁾ The title of HD 472 S1 is: Nominal voltages for low voltage public electricity supply systems.

²⁾ EN 60068-1 includes A1:1992 to IEC 60068-1 + corr. October.

³⁾ EN 60068-2-2 includes supplement A to IEC 60068-2-2.

⁴⁾ EN 60068-2-14 includes A1:1986 to IEC 60068-2-14.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60112	2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	2003
IEC 60216	Series	Electrical insulating materials - Properties of thermal endurance	EN 60216	Series
IEC 60243-1	1998	Electrical strength of insulating materials - Test methods - Part 1: Tests at power frequencies	EN 60243-1	1998
IEC 60270	2000	High-voltage test techniques - Partial discharge measurements	EN 60270	2001
IEC 60364-4-44 + A1 (mod)	2001 2003	Electrical installations of buildings - Part 4-44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances	-	-
IEC 60664-4	2005	Insulation coordination for equipment within low-voltage systems - Part 4: Consideration of high-frequency voltage stress	EN 60664-4 + corr. October	2006 2006
IEC 60664-5	- ⁵⁾	Insulation coordination for equipment within low-voltage systems - Part 5: A comprehensive method for determining clearances and creepage distances equal to or less than 2 mm	EN 60664-5	2003 ⁶⁾
IEC 61140 A1 (mod)	2001 2004	Protection against electric shock - Common aspects for installation and equipment	EN 61140 A1	2002 2006
IEC 61180-1	1992	High-voltage test techniques for low-voltage equipment - Part 1: Definitions, test and procedure requirements	EN 61180-1	1994
IEC 61180-2	1994	High-voltage test techniques for low-voltage equipment - Part 2: Test equipment	EN 61180-2	1994
IEC Guide 104	1997	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-

⁵⁾ Undated reference.

⁶⁾ Valid edition at date of issue.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-