



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 50116:2006

ICS 35.020
35.260.10

INFORMATION TECHNOLOGY
EQUIPEMENT - ROUTINE ELECTRICAL
SAFETY TESTING IN PRODUCTION

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

8 December 2006

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EUROPEAN STANDARD

EN 50116

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2006

ICS 35.020; 35.260.10

Supersedes EN 50116:1996

English version

**Information technology equipment -
Routine electrical safety testing in production**

Matériel de traitement de l'information -
Essais individuels de série, en production,
pour la vérification de la sécurité
électrique

Einrichtungen der Informationstechnik -
Stückprüfungen für die Fertigung in Bezug
auf elektrische Sicherheit

This European Standard was approved by CENELEC on 2006-10-01. 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, 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

This European Standard was prepared by the Technical Committee CENELEC TC 108, Safety of electronic equipment within the fields of audio/video, information technology and communication technology.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50116 on 2006-10-01.

This European Standard supersedes EN 50116:1996. A list of the significant changes is given in Annex A.

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) 2007-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-10-01

This European Standard applies to equipment that complies with EN 60950 or EN 60950-1. Most of the tests specified in those standards are TYPE TESTS. For ROUTINE TESTS, to be carried out during or after manufacture, TYPE TESTS may not be suitable. Nevertheless it is recognized that some tests are necessary in order to guarantee an acceptable level of safety.

This European Standard defines ROUTINE TESTS to measure the resistance of the earthing path and to check the insulation between the PRIMARY CIRCUIT and accessible conductive parts. In addition, this European Standard defines the documentation to be maintained by the manufacturer in respect of these tests.

This standard is complementary to the product safety standards (EN 60950 or EN 60950-1) and is to be considered only as a tool for voluntary application by manufacturers.

This European Standard can be used in association with Permanent Document CIG 021, *Factory inspection procedures - Harmonised requirements*, of the European Electrical Products Certification Association.

Permanent Document CIG 021 can be obtained from signatory bodies (certification bodies).

In this European Standard, the following print types are used:

- normative text: roman type;
- *test specifications: italic type;*
- terms which are defined in EN 60950 or EN 60950-1: SMALL CAPITALS.

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1 Scope

This European Standard defines routine test procedures for use during or after manufacturing of complete equipments, sub-assemblies or components, certified or declared as complying with EN 60950 or EN 60950-1 and powered by an a.c. or d.c. mains supply.

The application of the tests detailed in this European Standard is design dependent and needs to be defined by the manufacturer.

2 Normative references

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>
EN 60950	2000	<i>Safety of information technology equipment</i> (IEC 60950:1999 + corrigendum Jan. 2000, mod.)
EN 60950-1	2001	<i>Information technology equipment - Safety</i> <i>Part 1: General requirements</i> (IEC 60950-1:2001, mod.)
EN 60950-1	2006	<i>Information technology equipment - Safety</i> <i>Part 1: General requirements</i> (IEC 60950-1:2005, mod.)

3 Definitions

For the purposes of this document, the definitions of EN 60950 or EN 60950-1 apply.

In addition, for purpose of this standard, the following definition applies:

3.1

routine electrical safety test

a test to which each individual device is subjected during or at the end of manufacture, to detect manufacturing failures and unacceptable tolerances in manufacturing and materials

4 Conformance

In order to conform to this European Standard, an equipment shall pass the tests of Clause 5 where applicable and the results of these tests shall be recorded according to Clause 6.

5 Routine tests

5.1 Resistance of protective earthing paths

ROUTINE TESTS shall be carried out by passing a test current through each PROTECTIVE BONDING CONDUCTOR that connects an accessible part to the main protective earthing terminal or earthing contact.

The test current is 150 % of the rating of the overcurrent device protecting the PROTECTIVE BONDING CONDUCTOR, but not more than 25 A (a.c. or d.c.) and is applied for any duration between 1 s and 4 s.

The resistance, calculated from the voltage drop, shall not exceed 0,1 Ω .

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