BS EN 50514:2014



BSI Standards Publication

Audio, video and information technology equipment — Routine electrical safety testing in production

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National foreword

This British Standard is the UK implementation of EN 50514:2014. It supersedes BS EN 50514:2008 which will be withdrawn on 21 July 2017.

The UK participation in its preparation was entrusted to Technical Committee EPL/108, Safety of electronic equipment within the field of audio/video, information technology and communication technology.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Audio, video and information technology equipment - Routine electrical safety testing in production

Appareils audio, vidéo et matériel de traitement de l'information - Essais individuels de série, en production, pour la vérification de la sécurité électrique

Audio- und Video- Geräte und Einrichtungen der Informationstechnik - Stückprüfungen der elektrischen Sicherheit in der Fertigung

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

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Foreword

This document (EN 50514:2014) has been prepared by CLC/TC 108X, Safety of electronic equipment within the fields of audio/video, information technology and communication technology.

The following dates are fixed:

• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2015-07-21
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2017-07-21

This document supersedes EN 50514:2008.

In comparison with EN 50514:2008, the technical change in this document is the addition of requirements for equipment operating on a d.c. mains.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This European Standard applies to equipment that complies with EN 60065 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 60065 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 60065 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 equipment, sub-assemblies or components, certified or declared as complying with EN 60065 or EN 60950-1 and powered by an a.c. or d.c. mains supply. It defines the ROUTINE ELECTRICAL SAFETY TEST and their procedures to be applied during or at the end of the manufacturing process of apparatus certified or declared as complying with EN 60065 or EN 60950-1.

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 documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60065, *Audio, video and similar electronic apparatus - Safety requirements (IEC 60065)*

EN 60950-1, *Information technology equipment - Safety - Part 1: General requirements (IEC 60950-1)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 60065 or EN 60950-1 and the following apply.

3.1
routine electrical safety test
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, 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

For CLASS I apparatus, the continuity of the protective earthing connection shall be checked between the protective earth contact of the MAINS plug or appliance inlet, or the PROTECTIVE EARTHING TERMINAL in case of a PERMANENTLY CONNECTED APPARATUS, and

— the ACCESSIBLE conductive parts, including TERMINALS regarded as ACCESSIBLE, which shall be connected to the PROTECTIVE EARTHING TERMINAL, and

— the protective earth contact of the socket-outlets respectively, if provided to deliver power to other apparatus.

The test current is 150 % of the rating of the overcurrent device protecting the PROTECTIVE BONDING CONDUCTOR, but not less than 10 A and not more than 25 A (a.c. or d.c.) and is applied for any duration between 1 s and 4 s. The source shall have a no-load voltage not exceeding 12 V.

The measured resistance shall not exceed 0,1 Ω.