BRITISH STANDARD

BS EN
60512-3-1:2002

Connectors for electronic equipment — Tests and measurements —

Part 3-1: Insulation tests — Test 3a: Insulation resistance

The European Standard EN 60512-3-1:2002 has the status of a British Standard

ICS 31.220.10

National foreword

This British Standard is the official English language version of EN 60512-3-1:2002. It is identical with IEC 60512-3-1:2002.

The UK participation in its preparation was entrusted by Technical Committee EPL/48, Electromechanical components and mechanical structures for electronic equipment, to Subcommittee EPL/48/2, Connectors for electronic equipment, which has the responsibility to:

— aid enquirers to understand the text;

— 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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This British Standard, having been prepared under the direction of the Electrotechnical Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 16 May 2002

Summary of pages

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English version

Connectors for electronic equipment – Tests and measurements Part 3-1: Insulation tests – Test 3a: Insulation resistance

(IEC 60512-3-1:2002)

Connecteurs pour équipements électroniques – Essais et mesures Partie 3-1: Essais d'isolement – Essai 3a: Résistance d'isolement (CEI 60512-3-1:2002)

Steckverbinder für elektronische Einrichtungen Mess- und Prüfverfahren – Teil 3-1: Prüfungen der Isolation – Prüfung 3a: Isolationswiderstand (IEC 60512-3-1:2002)

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

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Foreword

The text of document 48B/1133/FDIS, future edition 1 of IEC 60512-3-1, prepared by SC 48B, Connectors, of IEC TC 48, Electromechanical components and mechanical structures for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60512-3-1 on 2002-04-01.

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) 2003-01-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow) 2005-04-01

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Endorsement notice

The text of the International Standard IEC 60512-3-1:2002 was approved by CENELEC as a European Standard without any modification.

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CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 3-1: Insulation tests – Test 3a: Insulation resistance

1 Scope and object

This part of IEC 60512, when required by the detail specification, is used for testing electromechanical components within the scope of IEC technical committee 48. This test may also be used for similar devices when specified in a detail specification.

The object of this test is to define a standard test method to assess the insulation resistance of electromechanical components.

2 Mounting of specimen

The specimen shall be mounted in accordance with the detail specification.

3 General requirements

The insulation resistance shall be measured with a closed-circuit d.c. voltage of 10 V ± 1 V, 100 V ± 15 V or 500 V ± 50 V, using method A, B or C specified in the detail specification.

The insulation resistance shall be measured only when a stable reading is obtained.

If a stable condition is not reached, the insulation resistance reading shall be recorded within 60 s ± 5 s after the application of voltage.

The insulation resistance shall be not less than that specified in the detail specification.

4 Measuring methods

Method A

The insulation resistance shall be measured on specimens using the specified test voltage applied in turn between each termination being tested and all others connected together and to the housing and/or the mounting plate.

Method B

Alternate terminations shall be connected together to form two groups.

The insulation resistance shall be measured on specimens using the specified test voltage applied between:

1) the first group of terminations and the second group connected to the housing and/or the mounting plate, and
2) the second group of terminations and the first group connected to the housing and/or the mounting plate.

NOTE In the case of terminations arranged in two or more rows, it will be necessary to form a second arrangement of two groups in order to measure the insulation resistance of each pair of adjacent terminations.

Method C

The insulation resistance shall be measured between two adjacent terminations having a minimum spacing using the specified test voltage.

5 Detail to be specified

When this test is required by the detail specification, the following details shall be specified:

a) measuring method to be used;
b) value of the test voltage;
c) minimum value of the insulation resistance;
d) contacts to be tested;
e) any deviation from the standard test method.

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