

Connectors for electronic equipment — Tests and measurements —

**Part 16-11: Mechanical tests on contacts
and terminations — Test 16k: Stripping
force, solderless wrapped connections**

ICS 31.220.10

National foreword

This British Standard is the UK implementation of EN 60512-16-11:2008. It is identical to IEC 60512-16-11:2008.

The UK participation in its preparation was entrusted to Technical Committee EPL/48, Electromechanical components and mechanical structures for electronic equipment.

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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Amendments/corrigenda issued since publication

Date	Comments

**Connectors for electronic equipment -
Tests and measurements -
Part 16-11: Mechanical tests on contacts and terminations -
Test 16k: Stripping force, solderless wrapped connections
(IEC 60512-16-11:2008)**

Connecteurs
pour équipements électroniques -
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Essai 16k: Force d'arrachement,
connexions enroulées sans soudure
(CEI 60512-16-11:2008)

Steckverbinder
für elektronische Einrichtungen -
Mess- und Prüfverfahren -
Teil 16-11: Mechanische Prüfungen
an Kontakten und Anschlüssen -
Prüfung 16k: Abzugskraft,
Wickelverbindungen
(IEC 60512-16-11:2008)

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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 GENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 48B/1873/FDIS, future edition 1 of IEC 60512-16-11, 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 60512-16-11 on 2008-06-01.

This standard is to be read in conjunction with EN 60512-1 and EN 60512-1-100 which explains the structure of the EN 60512 series.

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) 2009-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60512-16-11:2008 was approved by CENELEC as a European Standard without any modification.

CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 16-11: Mechanical tests on contacts and terminations – Test 16k: Stripping force, solderless wrapped connections

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 technical committee 48. It may also be used for similar devices when specified in a detail specification.

The object of this part of IEC 60512 is to detail a standard test method to determine ability of a component to resist forces that might strip a wrapped connection from its post along the axis of the post. Such wrapped connections are described in IEC 60352-1.

NOTE This test is considered as destructive to specimens used.

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.

IEC 60352-1, *Solderless connections – Part 1: Wrapped connections – General requirements, test methods and practical guidance*

IEC 60512-1-1, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

3 Preparations

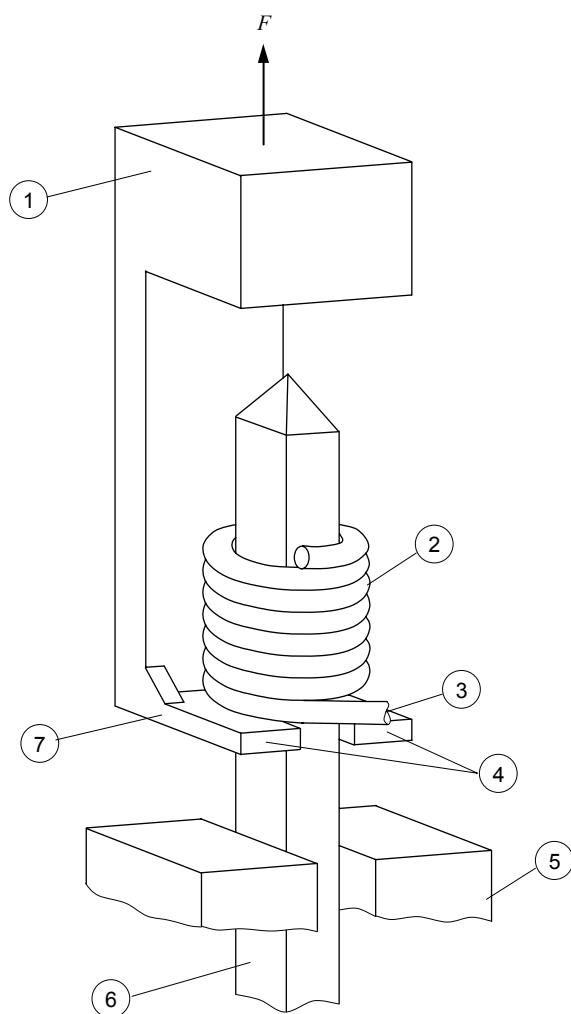
3.1 Preparation of specimen

The specimen shall consist of a wrap post with a wrapped connection as described in the detail specification. The wrap post may be cut off from a component. Any pre-conditioning of the samples required by the applicable detail specification shall be applied.

3.2 Equipment

A holding device and stripping tool, such as those shown in Figure 1 shall be provided. Clearance shall exist between the post and the test fork. The total clearance shall not exceed 50 % of the diameter of the wrapping wire.

Figure 1 also gives an example of sample mounting.



IEC 746/08

Key

- F* force and direction
- 1 stripping tool
- 2 wrapped connection
- 3 connection lead
- 4 fork jaws
- 5 holding device
- 6 wrap post
- 7 forked hook

Figure 1 – Example of test equipment

4 Test method

4.1 Procedure

A stripping force shall be applied to the wrapped connection so as to move the whole connection along the axis of the wrap post. The movable part of the test device shall travel steadily, at a speed between 25 mm/min to 50 mm/min.

The test shall continue until the whole wrapped connection has moved along the axis of the post for a distance of approximately equal to one diameter of the wrapping wire.

4.2 Measurements and requirements

4.2.1 Before testing

Visual examination according to IEC 60512-1-1 shall be carried out. There shall be no defects, nor any features, or other items, which would impair the validity of the test.

4.2.2 During testing

The peak force required to achieve the specified movement of the wrapped connection shall be recorded. It shall not be less than that given in the detail specification. The rate at which the stripping force was applied shall be recorded.

5 Details to be specified

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

- a) whether preconditioning is required;
- b) details of the specimen;

NOTE Geometrical, metallurgical and surface finish details of the post and wire as well as tooling and application details, are considered essential

- c) number of specimens to be tested;
 - d) the minimum allowable peak force required to achieve the specified movement;
 - e) any deviation from the standard test method.
-

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 60352-1	- ¹⁾	Solderless connections - Part 1: Wrapped connections - General requirements, test methods and practical guidance	EN 60352-1	1997 ²⁾
IEC 60512-1-1	- ¹⁾	Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination	EN 60512-1-1	2002 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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