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Connectors for electronic equipment - Tests and measurements - Part 4-3: Voltage stress tests - Test 4c: Voltage proof of pre-insulated crimp barrels (IEC 60512-4-3:2002)

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English version

**Connectors for electronic equipment -  
Tests and measurements  
Part 4-3: Voltage stress tests -  
Test 4c: Voltage proof of pre-insulated crimp barrels  
(IEC 60512-4-3:2002)**

Connecteurs pour équipements

électroniques -

Essais et mesures

Partie 4-3: Essais de contrainte

diélectrique -

Essai 4c: Tension de tenue pour

fûts préisolés de sertissage

(CEI 60512-4-3:2002)

Steckverbinder für elektronische

Einrichtungen -

Mess- und Prüfverfahren

Teil 4-3: Prüfungen mit

Spannungsbeanspruchung -

Prüfung 4c: Spannungsfestigkeit

vorisolierter Crimphülsen

(IEC 60512-4-3:2002)

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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.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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 48B/1135/FDIS, future edition 1 of IEC 60512-4-3, 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 60512-4-3 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- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-04-01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 60512-4-3:2002 was approved by CENELEC as a European Standard without any modification.

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NORME  
INTERNATIONALE  
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STANDARD

CEI  
IEC

60512-4-3

Première édition  
First edition  
2002-02

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**Connecteurs pour équipements électroniques –  
Essais et mesures –**

**Partie 4-3:  
Essais de contrainte diélectrique –  
Essai 4c: Tension de tenue pour fûts  
préisolés de sertissage**

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**Connectors for electronic equipment –  
Tests and measurements –**

**Part 4-3:  
Voltage stress tests –  
Test 4c: Voltage proof of pre-insulated  
crimp barrels**

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International Electrotechnical Commission  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**CONNECTORS FOR ELECTRONIC EQUIPMENT –  
TESTS AND MEASUREMENTS –**
**Part 4-3: Voltage stress tests –  
Test 4c: Voltage proof of pre-insulated crimp barrels**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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*SIST EN 60512-4-3:2003*
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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60512-4-3 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This standard cancels and replaces test 4c of IEC 60512-2, issued in 1985, and constitutes a technical revision.

The text of this standard is based on the following documents:

FDIS	Report on voting
48B/1135/FDIS	48B/1186/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

## CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

### Part 4-3: Voltage stress tests – Test 4c: Voltage proof of pre-insulated crimp barrels

#### 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 detail a standard method to determine the ability of pre-insulated crimp barrels to withstand the crimp operation without damage to the insulation.

#### 2 Preparation of the specimen

The specimen shall consist of a crimp contact or a terminal end having a pre-insulated crimp barrel and the appropriate cable/wire and shall be prepared in accordance with the detail specification.

The cable/wire, stripped as specified, shall be fitted to the crimp barrel and then crimped in the normal manner.

The conductive area of the contact/terminal end and the end of the conductor to which it is attached shall be sealed, for example by beeswax or other suitable sealing compound, ensuring that the sealing used does not cover the area of the contact deformed by the crimping tool.

#### 3 Test method

The end of the specimen with the contact/terminal end shall be immersed in a 5 % aqueous sodium chloride solution to a depth such as will cover the crimp indentations, but will not immerse the open end.

A voltage shall be applied between the specimen and an immersed electrode placed at a distance not more than 50 mm from the specimen. The voltage shall be steadily increased at a rate not exceeding 500 V/s up to the proof voltage specified in the detail specification and kept at this value for  $60 \text{ s} \pm 5 \text{ s}$ .

#### 4 Requirement

There shall be no breakdown.

## **5 Details to be specified**

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

- a) preparation of the specimen;
  - b) cable/wire to be used;
  - c) type and die setting of crimping tool;
  - d) proof voltage;
  - e) any deviation from the standard test method.
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