SLOVENSKI STANDARD
SIST EN 60512-20-2:2001

01-september-2001

Electromechanical components for electronic equipment - Basic testing procedures and measuring methods - Part 20-2: Test 20b - Flammability tests - Fireproofness (IEC 60512-20-2:2000)

Electromechanical components for electronic equipment - Basic testing procedures and measuring methods -- Part 20-2: Test 20b - Flammability tests - Fireproofness

Elektrisch-mechanische Bauelemente für elektronische Einrichtungen - Meß- und Prüfverfahren -- Teil 20-2: Prüfung 20b - Brennbarkeitsprüfungen - Feuerfestigkeit

Composants électromécaniques pour équipements électroniques - Procédures d'essai de base et méthodes de mesure -- Partie 20-2: Essai 20b - Essais de risque d'incendie - Tenue au feu

Ta slovenski standard je istoveten z: **EN 60512-20-2:2000**

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
31.220.01	Elektromehanske komponente (sestavni deli, gradniki) na splošno	Electromechanical components in general

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EUROPEAN STANDARD **EN 60512-20-2**

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English version

Electromechanical components for electronic equipment Basic testing procedures and measuring methods Part 20-2: Test 20b - Flammability tests - Fireproofness (IEC 60512-20-2:2000)

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This European Standard was approved by CENELEC on 2000-06-01. 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.

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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/855/FDIS, future edition 1 of IEC 60512-20-2, 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 60512-20-2 on 2000-06-01.

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) 2001-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-06-01

Endorsement notice

The text of the International Standard IEC 60512-20-2:2000 was approved by CENELEC as a European Standard without any modification.

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Electromechanical components for electronic equipment – Basic testing procedures and measuring methods –

Part 20-2: Test 20b – Flammability tests – Fireproofness

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMECHANICAL COMPONENTS FOR ELECTRONIC EQUIPMENT – BASIC TESTING PROCEDURES AND MEASURING METHODS –

Part 20-2: Test 20b – Flammability tests – Fireproofness

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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International Standard IEC 60512-20-2 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This standard should be read in conjunction with IEC 60512-1.

The complete publication will include other tests which will be issued as they become available.

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

FDIS	Report on voting
48B/855/FDIS	48B/867/RVD

Full information 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 2004. At this date, the publication will be

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

ELECTROMECHANICAL COMPONENTS FOR ELECTRONIC EQUIPMENT – BASIC TESTING PROCEDURES AND MEASURING METHODS –

Part 20-2: Test 20b – Flammability tests – Fireproofness

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 components when specified in a detail specification.

The object of this test is to detail a standard method to assess the ability of a connector to withstand specified flame and vibration during a 20 min exposure by providing specified electrical performance for the first 6 min of exposure and preventing the flame from penetrating the fireproof bulkhead on which the connector is mounted throughout the test.

2 Test equipment

2.1 An inspirator torch capable of producing and maintaining a flame at a constant temperature of 1 100 °C ± 25 °C from propane gas with a flow rate equivalent to an input of 9,67 kW to 10,84 kW (33 000 Btu/h to 37 000 Btu/h) is required. The primary cone diameter shall be 12,7 mm to 19 mm at the nozzle exit. The primary cone length shall be 38,1 mm to 63,5 mm from the nozzle. The secondary cone shall engulf the test specimen or provide representative impingement coverage, depending on the size of the test specimen.

2.2 A gas flowmeter with a suitable range and an accuracy of ±2 % of full scale is required.

2.3 A thermocouple with an exposed junction as shown in figure 1 and a temperature meter capable of continuously measuring 1 100 °C ± 25 °C, with an accuracy of 1 % of the reading, are required.

2.4 A firewall test fixture is required which provides a steel mounting plate on which to mount the fixed connector, a rigid steel fixture which provides for attachment of the connector mounting plate in a vertical plane on the table of a vibration machine and a thermal barrier sheet to prevent destructive heat transfer from the connector mounting plate to the vibration machine. Details of a suitable fixture are shown in figures 2, 3 and 4.

2.5 Vibration equipment is required which is capable of vibrating the test specimen and test fixture continuously at 33 Hz with a total excursion of 6,3 mm.

2.6 A current-regulated d.c. power supply is required which will provide test currents of between 5 A minimum and 150 A maximum, with a maximum open-circuit voltage of 28 V d.c.

2.7 An a.c. power supply is required which has a center-tapped output transformer capable of producing 110/220 V to 130/260 V at 50 Hz to 60 Hz and capable of delivering a current of 2 A minimum.