

STN	Nespájkované spoje Časť 6: Spoje prepichujúce izoláciu Všeobecné požiadavky, skúšobné metódy a praktický návod	STN EN IEC 60352-6 35 4061
------------	---	--

Solderless connections - Part 6: Insulation piercing connections - General requirements, test methods and practical guidance

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/23

Obsahuje: EN IEC 60352-6:2023, IEC 60352-6:2022

Oznámením tejto normy sa od 11.01.2026 ruší
STN EN 60352-6 (35 4061) z mája 2001

136573

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 60352-6

January 2023

ICS 29.120.20

Supersedes EN 60352-6:1997

English Version

**Solderless connections - Part 6: Insulation piercing connections -
General requirements, test methods and practical guidance
(IEC 60352-6:2022)**

Connexions sans soudure - Partie 6: Connexions à
perçement d'isolant - Exigences générales, méthodes
d'essai et guide pratique
(IEC 60352-6:2022)

Lötfreie Verbindungen - Teil 6: Durchdringverbindungen -
Allgemeine Anforderungen, Prüfverfahren und
Anwendungshinweise
(IEC 60352-6:2022)

This European Standard was approved by CENELEC on 2023-01-11. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60352-6:2023 (E)**European foreword**

The text of document 48B/3001/FDIS, future edition 2 of IEC 60352-6, prepared by SC 48B "Electrical connectors" of IEC/TC 48 "Electrical connectors and mechanical structures for electrical and electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60352-6:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-10-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-01-11

This document supersedes EN 60352-6:1997 and all of its amendments and corrigenda (if any).

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60352-6:2022 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

- IEC 60228:2004 NOTE Harmonized as EN 60228:2005 (not modified)
- IEC 60512-5-2:2002 NOTE Harmonized as EN 60512-5-2:2002 (not modified)
- IEC 60603-7:2020 NOTE Harmonized as EN IEC 60603-7:2020 (not modified)
- IEC 61984:2008 NOTE Harmonized as EN 61984:2009 (not modified)
- IEC 62430:2019 NOTE Harmonized as EN IEC 62430:2019 (not modified)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	2013	Environmental testing - Part 1: General and guidance	EN 60068-1	2014
IEC 60512-1	2018	Connectors for electrical and electronic equipment - Tests and measurements - Part 1: Generic specification	EN IEC 60512-1	2018
IEC 60512-1-1	2002	Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination	EN 60512-1-1	2002
IEC 60512-1-2	2002	Connectors for electronic equipment - Tests and measurements - Part 1-2: General examination - Test 1b: Examination of dimension and mass	EN 60512-1-2	2002
IEC 60512-2-1	2002	Connectors for electronic equipment - Tests and measurements - Part 2-1: Electrical continuity and contact resistance tests - Test 2a: Contact resistance - Millivolt level method	EN 60512-2-1	2002
IEC 60512-2-2	2003	Connectors for electronic equipment - Tests and measurements - Part 2-2: Electrical continuity and contact resistance tests - Test 2b: Contact resistance - Specified test current method	EN 60512-2-2	2003
IEC 60512-2-5	2003	Connectors for electronic equipment - Tests and measurements - Part 2-5: Electrical continuity and contact resistance tests - Test 2e: Contact disturbance	EN 60512-2-5	2003
IEC 60512-6-4	2002	Connectors for electronic equipment - Tests and measurements - Part 6-4: Dynamic stress tests - Test 6d: Vibration (sinusoidal)	EN 60512-6-4	2002

EN IEC 60352-6:2023 (E)

IEC 60512-9-2	2011	Connectors for electronic equipment - Tests and measurements - Part 9-2: Endurance tests - Test 9b: Electrical load and temperature	EN 60512-9-2	2012
IEC 60512-11-1	2019	Connectors for electrical and electronic equipment - Tests and measurements - Part 11-1: Climatic tests - Test 11a - Climatic sequence	EN IEC 60512-11-1	2019
IEC 60512-11-4	2002	Connectors for electronic equipment - Tests and measurements - Part 11-4: Climatic tests - Test 11d: Rapid change of temperature	EN 60512-11-4	2002
IEC 60512-11-7	2003	Connectors for electronic equipment - Tests and measurements - Part 11-7: Climatic tests - Test 11g: Flowing mixed gas corrosion test	EN 60512-11-7	2003
IEC 60512-11-9	2002	Connectors for electronic equipment - Tests and measurements - Part 11-9: Climatic tests - Test 11i: Dry heat	EN 60512-11-9	2002
IEC 60512-11-10	2002	Connectors for electronic equipment - Tests and measurements - Part 11-10: Climatic tests - Test 11j: Cold	EN 60512-11-10	2002
IEC 60512-11-12	2002	Connectors for electronic equipment - Tests and measurements - Part 11-12: Climatic tests - Test 11m: Damp heat, cyclic	EN 60512-11-12	2002
IEC 60512-16-20	1996	Electromechanical components for electronic equipment - Basic testing procedures and measuring methods - Part 16: Mechanical tests on contacts and terminations - Section 20: Test 16t: Mechanical strength (wired termination of solderless connections)	EN 60512-16-20	1996



IEC 60352-6

Edition 2.0 2022-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Solderless connections –
Part 6: Insulation piercing connections – General requirements, test methods
and practical guidance**

**Connexions sans soudure –
Partie 6: Connexions à percement d'isolant – Exigences générales, méthodes
d'essai et guide pratique**



THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2022 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch

Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 300 terminological entries in English and French, with equivalent terms in 19 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

A propos de l'IEC

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Recherche de publications IEC -

webstore.iec.ch/advsearchform

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études, ...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch

Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

Electropedia - www.electropedia.org

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 300 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 19 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.



IEC 60352-6

Edition 2.0 2022-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Solderless connections –
Part 6: Insulation piercing connections – General requirements, test methods
and practical guidance**

**Connexions sans soudeure –
Partie 6: Connexions à percement d'isolant – Exigences générales, méthodes
d'essai et guide pratique**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.120.20

ISBN 978-2-8322-6085-2

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms and definitions	9
4 Requirements	12
4.1 Workmanship.....	12
4.2 Tools	12
5 Pre-requisites for the qualification test schedule.....	12
5.1 Insulation piercing terminations.....	12
5.1.1 Materials	12
5.1.2 Dimensions.....	12
5.1.3 Surface finishes.....	13
5.1.4 Design features	13
5.2 Insulated conductors.....	13
5.2.1 General	13
5.2.2 Materials	13
5.2.3 Dimensions.....	13
5.2.4 Surface finishes.....	13
5.2.5 Insulation.....	13
5.3 Insulation piercing connections	14
6 Testing.....	14
6.1 Overview.....	14
6.2 General.....	14
6.3 Standard conditions for testing.....	14
6.4 Preconditioning.....	14
6.5 Recovery	15
6.6 Mounting of the specimen	15
7 Tests	15
7.1 General examination.....	15
7.2 Mechanical tests.....	15
7.2.1 Tensile strength.....	15
7.2.2 Bending of the wire/cable	15
7.2.3 Vibration.....	17
7.3 Electrical tests	18
7.3.1 General	18
7.3.2 Contact resistance.....	18
7.3.3 Electrical load and temperature	20
7.4 Climatic tests	20
7.4.1 General	20
7.4.2 Rapid change of temperature.....	21
7.4.3 Climatic sequence	21
7.4.4 Flowing mixed gas corrosion test.....	21
7.4.5 Damp heat cyclic	21
8 Test schedules	22
8.1 General.....	22

8.1.1	Overview	22
8.1.2	Insulation piercing connections with terminations suitable for a range of wire diameters	22
8.1.3	Multipole components	22
8.2	Qualification test schedule	23
8.2.1	General	23
8.2.2	Initial examination.....	23
8.2.3	Testing of insulation piercing connections.....	23
8.3	Application test schedule	25
8.3.1	General	25
8.3.2	Initial examination.....	25
8.3.3	Testing of insulation piercing connections.....	25
8.4	Flow charts	26
Annex A (informative)	Practical guidance	29
A.1	General information on insulation piercing terminations	29
A.2	Current-carrying capacity	29
A.3	Tool information	29
A.4	Termination information	30
A.4.1	General	30
A.4.2	Materials	31
A.4.3	Surface finishes	31
A.4.4	Dimensions.....	31
A.5	Conductor information.....	31
A.5.1	General	31
A.5.2	Material	31
A.5.3	Dimensions.....	31
A.5.4	Surface finishes	31
A.5.5	Insulation.....	31
A.5.6	Stripping information for cables (cords) and wires.....	31
A.6	Connection information	32
A.7	Axial load.....	33
Bibliography	34

Figure 1	– Example of an integrated insulation piercing connection (one connection shown).....	10
Figure 2	– Example of an insulation piercing connection with insulated flat conductor.....	11
Figure 3	– Example of an insulation piercing connection in a barrel with stranded wires	11
Figure 4	– Test arrangement, bending of single wire	16
Figure 5	– Test arrangement, bending of flat conductor, flat flexible circuitry	17
Figure 6	– Test arrangement, vibration	17
Figure 7	– Test arrangement, contact resistance (measuring method for tinsel wire, flat conductor, flat flexible circuitry).....	19
Figure 8	– Test arrangement, contact resistance (measuring method for stranded wires).....	19
Figure 9	– Qualification test schedule (see 8.2)	27
Figure 10	– Application test schedule (see 8.3).....	28
Figure A.1	– Example of an insulation piercing termination as an integral part of a component.....	30

Figure A.2 – Example of an insulation piercing termination for flat conductor	30
Figure A.3 – Example of an insulation piercing termination for stranded wires	30
Figure A.4 – Examples of round, flat and flat oval sheath cable	32
Figure A.5 – Example of a flexible circuitry	32
Figure A.6 – Example of an integrated insulation piercing connection	32
Figure A.7 – Example of an integrated insulation piercing connection in a barrel with stranded wires	33
Table 1 – Vibration, preferred test severities	18
Table 2 – Contact resistance of insulation piercing connections, maximum permitted values	20
Table 3 – Number of specimens required	22
Table 4 – Qualification test schedule – Test group A	23
Table 5 – Qualification test schedule – Test group B	23
Table 6 – Qualification test schedule – Test group C	24
Table 7 – Qualification test schedule – Test group D	25
Table 8 – Application test schedule – Test group 1	26
Table 9 – Application test schedule – Test group 2	26
Table A.1 – Axial load F	33

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SOLDERLESS CONNECTIONS –**Part 6: Insulation piercing connections –
General requirements, test methods and practical guidance**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60352-6 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment. It is an International Standard.

This second edition cancels and replaces the first edition published in 1997. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) axial load in 7.2.2 provided in a table in Annex A rather than as percentage of breaking load of the wire;
- b) different approach to measure contact resistance provided in 7.3.2.3.

The text of this International Standard is based on the following documents:

Draft	Report on voting
48B/3001/FDIS	48B/3009/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 60352 series, published under the general title *Solderless connections*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

INTRODUCTION

This part of IEC 60352 applies to solderless connections made by insulation piercing (IP) and includes requirements, tests and practical guidance information for such connection technology.

Two test schedules are provided:

- a qualification test schedule that applies to insulation piercing connections which conform to all pre-requisites of Clause 5, which are derived from experience with successful applications of such insulation piercing connections;
- an application test schedule that applies to insulation piercing connections made with suitable IP termination which are integral part of a component and are already fulfilling the pre-requisites of Clause 5.

IEC Guide 109 advocates the need to minimize the impact of a product on the natural environment throughout the product life cycle. IEC 62430 provides principles, requirements and guidance to implement environmentally conscious design.

It is understood that some of the materials permitted in this document may have a negative environmental impact. As technological advances lead to acceptable alternatives to these materials, they will be eliminated from this document.

SOLDERLESS CONNECTIONS –

Part 6: Insulation piercing connections – General requirements, test methods and practical guidance

1 Scope

This part of IEC 60352 is applicable to insulation piercing connections made with stranded wires and tinsel wires, insulated flat conductors and flat flexible circuitries for use in electrical and electronic equipment.

Information on materials and data from industrial experience is included in addition to the test procedures to provide electrically stable connections under prescribed environmental conditions.

The object of this document is to:

- determine the suitability of insulation piercing connections under specified mechanical, electrical, and atmospheric conditions;
- provide a means of comparing test results when the tools used to make the connections, if any, are of different designs or manufacture.

There are different designs and materials for insulation piercing terminations in use. For this reason, only fundamental parameters of the termination, the performance requirements of the conductor and the complete connection are specified in this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60512-1:2018, *Connectors for electrical and electronic equipment – Tests and measurements – Part 1: Generic specification*

IEC 60512-1-1:2002, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

IEC 60512-1-2:2002, *Connectors for electronic equipment – Tests and measurements – Part 1-2: General examination – Test 1b: Examination of dimension and mass*

IEC 60512-2-1:2002, *Connectors for electronic equipment – Tests and measurements – Part 2-1: Electrical continuity and contact resistance tests – Test 2a: Contact resistance – Millivolt level method*

IEC 60512-2-2:2003, *Connectors for electronic equipment – Tests and measurements – Part 2-2: Electrical continuity and contact resistance tests – Test 2b: Contact resistance – Specified test current method*

IEC 60512-2-5:2003, *Connectors for electronic equipment – Tests and measurements – Part 2-5: Electrical continuity and contact resistance tests – Test 2e: Contact disturbance*

IEC 60512-6-4:2002, *Connectors for electronic equipment – Tests and measurements – Part 6-4: Dynamic stress tests – Test 6d: Vibration (sinusoidal)*

IEC 60512-9-2:2011, *Connectors for electronic equipment – Tests and measurements – Part 9-2: Endurance tests – Test 9b: Electrical load and temperature*

IEC 60512-11-1:2019, *Connectors for electrical and electronic equipment – Tests and measurements – Part 11-1: Climatic tests – Test 11a - Climatic sequence*

IEC 60512-11-4:2002, *Connectors for electronic equipment – Tests and measurements – Part 11-4: Climatic tests – Test 11d: Rapid change of temperature*

IEC 60512-11-7:2003, *Connectors for electronic equipment – Tests and measurements – Part 11-7: Climatic tests – Test 11g: Flowing mixed gas corrosion test*

IEC 60512-11-9:2002, *Connectors for electronic equipment – Tests and measurements – Part 11-9: Climatic tests – Test 11i: Dry heat*

IEC 60512-11-10:2002, *Connectors for electronic equipment – Tests and measurements – Part 11-10: Climatic tests – Test 11j: Cold*

IEC 60512-11-12:2002, *Connectors for electronic equipment – Tests and measurements – Part 11-12: Climatic tests – Test 11m: Damp heat, cyclic*

IEC 60512-16-20:1996, *Electromechanical components for electronic equipment – Basic testing procedures and measuring methods – Part 16: Mechanical tests on contacts and terminations – Section 20: Test 16t: Mechanical strength (wired termination of solderless connections)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN