

SLOVENSKI STANDARD

SIST EN 60603-7-71:2010

01-december-2010

Konektorji za elektronsko opremo - 7-71. del: Podrobna specifikacija za 8-redne, zaslonjene, proste in pritrjene konektorje za prenos podatkov s frekvencami do 1000 MHz (IEC 60603-7-71:2010)

Connectors for electronic equipment - Part 7-71: Detail specification for 8-way, shielded, free and fixed connectors, for data transmission with frequencies up to 1 000 MHz (IEC 60603-7-71:2010)

Steckverbinder für elektronische Einrichtungen - Teil 7-71: Bauartspezifikation für geschirmte freie und feste Steckverbinder, 8polig, für Datenübertragungen bis 1 000 MHz (IEC 60603-7-71:2010)

Connecteurs pour équipements électroniques - Partie 7-71 Spécification particulière pour les fiches et les embases blindées à 8 voies pour la transmission de données à des fréquences jusqu'à 1 000 MHz (CEI 60603-7-71:2010)

Ta slovenski standard je istoveten z: EN 60603-7-71:2010

ICS:

31.220.10 Vtiči in vtičnice, konektorji Plug-and-socket devices.
Connectors

SIST EN 60603-7-71:2010 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60603-7-71:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/d3371830-09cc-43ff-a5b8-606edeb0c136/sist-en-60603-7-71-2010>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60603-7-71

October 2010

ICS 31.220.10

English version

**Connectors for electronic equipment -
Part 7-71: Detail specification for 8-way, shielded, free and fixed
connectors, for data transmission with frequencies up to 1 000 MHz
(IEC 60603-7-71:2010)**

Connecteurs pour équipements
électroniques -
Partie 7-71: Spécification particulière pour
les fiches et les embases blindées à
8 voies pour la transmission de données à
des fréquences jusqu'à 1 000 MHz
(CEI 60603-7-71:2010)

Steckverbinder für elektronische
Einrichtungen -
Teil 7-71: Bauartspezifikation für
geschirmte freie und feste Steckverbinder,
8polig, für Datenübertragungen bis
1 000 MHz
(IEC 60603-7-71:2010)

iteh STANDARD PREVIEW
(standards.iteh.ai)

This European Standard was approved by CENELEC on 2010-10-01. 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.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 48B/2173/FDIS, future edition 1 of IEC 60603-7-71, 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 60603-7-71 on 2010-10-01.

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

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) | 2011-07-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-10-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60603-7-71:2010 was approved by CENELEC as a European Standard without any modification. (standards.iteh.ai)

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

- | | | |
|-----------------------|------|--|
| IEC 60512-2-1 | NOTE | Harmonized as EN 60512-2-1 |
| IEC 60512-26-100:2008 | NOTE | Harmonized as EN 60512-26-100:2008 (not modified). |
-

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 60512-1-100	-	Connectors for electronic equipment - Tests and measurements - Part 1-100: General - Applicable publications	EN 60512-1-100	-
IEC 60512-25-9	-	Connectors for electronic equipment - Tests and measurements - Part 25-9: Signal integrity tests - Test 25i: Alien crosstalk	EN 60512-25-9	-
IEC 60512-27-100	201X ¹⁾	Connectors for electronic equipment - Tests and measurements - Part 27-100: Signal integrity tests up to 500 MHz on IEC 60603-7 series connectors - Tests 27a to 27g	EN 60512-27-100	201X ¹⁾
IEC 60603-7	2008	Connectors for electronic equipment - Part 7: Detail specification for 8-way, unshielded, free and fixed connectors	EN 60603-7	2009
IEC 60603-7-1	2009	Connectors for electronic equipment - Part 7-1: Detail specification for 8-way, shielded, free and fixed connectors	EN 60603-7-1	2009
IEC 60603-7-7	2006	Connectors for electronic equipment - Part 7-7: Detail specification for 8-way, shielded, free and fixed connectors for data transmission with frequencies up to 600 MHz	EN 60603-7-7	2006
IEC 61156	Series	Multicore and symmetrical pair/quad cables for digital communications	-	-

¹⁾ At draft stage.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60603-7-71:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/d3371830-09cc-43ff-a5b8-606edeb0c136/sist-en-60603-7-71-2010>



IEC 60603-7-71

Edition 1.0 2010-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Connectors for electronic equipment –
Part 7-71: Detail specification for 8-way, shielded, free and fixed connectors,
for data transmission with frequencies up to 1 000 MHz**

**Connecteurs pour équipements électroniques –
Partie 7-71: Spécification particulière pour les fiches et les embases blindées
à 8 voies pour la transmission de données à des fréquences jusqu'à 1 000 MHz**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX



ICS 31.220.10

ISBN 978-2-88912-028-4

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 General.....	7
1.1 Scope.....	7
1.2 Normative references	7
2 Terms and definitions	8
3 Common features and isometric view	8
4 Cable terminations and internal connections – Fixed and free connectors	8
5 Gauges	8
6 Characteristics	8
6.1 General.....	8
6.2 Pin and pair grouping assignment	8
6.3 Classification into climatic category.....	8
6.4 Electrical characteristics.....	9
6.5 Transmission characteristics	9
6.5.1 General	9
6.5.2 Insertion loss.....	9
6.5.3 Return loss.....	9
6.5.4 Propagation delay.....	10
6.5.5 Delay skew.....	10
6.5.6 NEXT	10
6.5.7 Power sum NEXT (for information only).....	10
6.5.8 FEXT	11
6.5.9 Power sum FEXT (for information only)	11
6.5.10 Transverse conversion loss	11
6.5.11 Transverse conversion transfer loss	11
6.5.12 Power sum alien (exogenous) NEXT.....	12
6.5.13 Power sum alien (exogenous) FEXT	12
6.6 Mechanical.....	13
6.6.1 Mechanical operation	13
6.6.2 Effectiveness of connector coupling devices.....	13
6.6.3 Insertion and withdrawal forces	13
7 Tests and test schedule.....	13
7.1 General.....	13
7.2 Arrangement for contact resistance test	13
7.3 Arrangement for vibration test	13
7.4 Test procedures and measuring methods	13
7.5 Preconditioning	13
7.6 Wiring and mounting of specimens	13
7.6.1 Wiring.....	13
7.6.2 Mounting	13
7.7 Test schedules	13
7.7.1 Basic (minimum) test schedule	13
7.7.2 Full test schedule	14
Bibliography.....	16

Table 1 – Test group EP 14

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 60603-7-71:2010](https://standards.iteh.ai/catalog/standards/sist/d3371830-09cc-43ff-a5b8-606edeb0c136/sist-en-60603-7-71-2010)

<https://standards.iteh.ai/catalog/standards/sist/d3371830-09cc-43ff-a5b8-606edeb0c136/sist-en-60603-7-71-2010>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT –**Part 7-71: Detail specification for 8-way, shielded,
free and fixed connectors, for data transmission
with frequencies up to 1 000 MHz**

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.

International Standard IEC 60603-7-71 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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

FDIS	Report on voting
48B/2173/FDIS	48B/2199/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 2.

A list of all parts of the IEC 60603 series, under the general title *Connectors for electronic equipment*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60603-7-71:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/d3371830-09cc-43ff-a5b8-606edeb0c136/sist-en-60603-7-71-2010>