



NSAI
Standards

Irish Standard
I.S. EN 60512-28-100:2013

Connectors for electronic equipment -
Tests and measurements -- Part 28
-100: Signal integrity tests up to 1 000
MHz on IEC 60603-7 and IEC 61076-3
series connectors - Tests 28a to 28g
(IEC 60512-28-100:2013 (EQV))

I.S. EN 60512-28-100:2013

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EUROPEAN STANDARD
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EUROPÄISCHE NORM

EN 60512-28-100

April 2013

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English version

**Connectors for electronic equipment -
Tests and measurements -
Part 28-100: Signal integrity tests up to 1 000 MHz on IEC 60603-7
and IEC 61076-3 series connectors - Tests 28a to 28g
(IEC 60512-28-100:2013)**

Connecteurs pour équipements
électroniques - Essais et mesures -
Partie 28-100: Essais d'intégrité
des signaux jusqu'à 1 000 MHz
sur les connecteurs des séries
CEI 60603-7 et CEI 61076-3 -
Essais 28a à 28g
(CEI 60512-28-100:2013)

Steckverbinder für elektronische
Einrichtungen -
Mess- und Prüfverfahren -
Teil 28-100: Signalintegritätsprüfungen
bis 1 000 MHz an Steckverbindern der
Reihen IEC 60603-7 und IEC 61076-3 -
Prüfungen 28a bis 28g
(IEC 60512-28-100:2013)

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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/2322/FDIS, future edition 1 of IEC 60512-28-100, 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 approved by CENELEC as EN 60512-28-100:2013.

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) 2013-12-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-03-13

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 60050-581	-	International Electrotechnical Vocabulary (IEV) - Part 581: Electromechanical components for electronic equipment	-	-
IEC 60512-1	-	Connectors for electronic equipment - Tests and measurements - Part 1: General	EN 60512-1	-
IEC 60512-26-100	2008	Connectors for electronic equipment - Tests and measurements - Part 26-100: Measurement setup, test and reference arrangements and measurements for connectors according to IEC 60603-7 - Tests 26a to 26g	EN 60512-26-100	2008
IEC 60603-7	Series	Connectors for electronic equipment	EN 60603-7	Series
IEC 61076-1	-	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	-
IEC 61076-3-104	-	Connectors for electronic equipment - Product requirements - Part 3-104: Detail specification for 8-way, shielded free and fixed connectors for data transmissions with frequencies up to 1 000 MHz	EN 61076-3-104	-
IEC 61076-3-110	-	Connectors for electronic equipment - Product requirements - Part 3-110: Detail specification for shielded, free and fixed connectors for data transmission with frequencies up to 1 000 MHz	EN 61076-3-110	-
IEC 61156	Series	Multicore and symmetrical pair/quad cables - for digital communications - Part 1-2: Electrical transmission characteristics and test methods of symmetrical pair/quad cables	-	-
IEC 61156-6	-	Multicore and symmetrical pair/quad cables - for digital communications - Part 6: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz - Work area wiring - Sectional specification	-	-

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61169-16	-	Radio-frequency connectors - Part 16: RF coaxial connectors with inner diameter of outer conductor 7 mm (0,276 in) with screw coupling - Characteristic impedance 50 ohms (75 ohms) (Type N)	EN 61169-16	-
IEC 62153-4-12	-	Metallic communication cable test methods - - Part 4-12: Electromagnetic compatibility (EMC) - Coupling attenuation or screening attenuation of connecting hardware - Absorbing clamp method		-
ISO/IEC 11801	-	Information technology - Generic cabling for - customer premises		-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRONIC EQUIPMENT –
TESTS AND MEASUREMENTS –****Part 28-100: Signal integrity tests up to 1 000 MHz
on IEC 60603-7 and IEC 61076-3 series connectors –
Tests 28a to 28g**

FOREWORD

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International Standard IEC 60512-28-100 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/2322/FDIS	48B/2332/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 IEC 60512 series, under the general title *Connectors for electronic equipment – Tests and measurements*, 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.

CONNECTORS FOR ELECTRONIC EQUIPMENT – TESTS AND MEASUREMENTS –

Part 28-100: Signal integrity tests up to 1 000 MHz on IEC 60603-7 and IEC 61076-3 series connectors – Tests 28a to 28g

1 Scope

This part of IEC 60512 specifies the test methods for transmission performance for IEC 60603-7 and IEC 61076-3 series connectors up to 1 000 MHz. It is also suitable for testing lower frequency connectors, however the test methodology specified in the detailed specification for any given connector remains the reference conformance test for that connector.

The test methods provided here are:

- insertion loss, test 28a;
- return loss, test 28b;
- near-end crosstalk (NEXT) test 28c;
- far-end crosstalk (FEXT), test 28d;
- transverse conversion loss (TCL), test 28f;
- transverse conversion transfer loss (TCTL), test 28g.

For the transfer impedance (ZT) test, see IEC 60512-26-100, test 26e.

For the coupling attenuation, see IEC 62153-4-12.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-581, *International Electrotechnical Vocabulary (IEV) – Part 581: Electromechanical components for electronic equipment*

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

IEC 60512-26-100:2008, *Connectors for electronic equipment – Tests and measurements – Part 26-100: Measurement setup, test and reference arrangement and measurements for connectors according to IEC 60603-7 – Tests 26a to 26g*

IEC 60603-7 (all parts), *Connectors for electronic equipment*

IEC 61076-1, *Connectors for electronic equipment – Product requirements – Part 1: Generic specification*

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