SVENSK STANDARD SS-EN 61076-3-110

Fastställd	Utgåva	Sida	Ansvarig kommitté
2008-05-19	1	1 (1+56)	SEK TK 48B

Anslutningsdon för elektronikutrustning – Del 3-110: Rektangulära anslutningsdon – Detaljspecifikation för skärmade anslutningsdon med fast don och kabeldon för dataöverföring med frekvenser upp till 1000 MHz

Connectors for electronic equipment –
Product requirements –
Part 3-110: Rectangular connectors –
Detail specification for shielded, free and fixed connectors
for data transmission with frequencies up to 1000 MHz

Som svensk standard gäller europastandarden EN 61076-3-110:2008. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61076-3-110:2008.

Nationellt förord

Europastandarden EN 61076-3-110:2008

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61076-3-110, First edition, 2007 - Connectors for electronic equipment - Product requirements - Part 3-110: Rectangular connectors - Detail specification for shielded, free and fixed connectors for data transmission with frequencies up to 1000 MHz**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 31.220.10

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@elstandard.se. *Internet*: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61076-3-110

April 2008

ICS 31.220.10

English version

Connectors for electronic equipment - Product requirements - Part 3-110: Rectangular connectors - Detail specification for shielded, free and fixed connectors for data transmission with frequencies up to 1 000 MHz

(IEC 61076-3-110:2007)

Connecteurs pour équipements électroniques - Exigences de produit - Partie 3-110: Connecteurs rectangulaires - Spécification particulière pour les fiches et les embases écrantées pour la transmission de données à des fréquences jusqu'à 1 000 MHz (CEI 61076-3-110:2007)

Steckverbinder für elektronische Einrichtungen - Produktanforderungen - Teil 3-110: Rechteckige Steckverbinder - Bauartspezifikation für geschirmte freie und feste Steckverbinder für Datenübertragungen bis 1 000 MHz (IEC 61076-3-110:2007)

This European Standard was approved by CENELEC on 2008-03-01. 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, 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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61076-3-110:2008 E

SEK Svensk Elstandard

Foreword

The text of document 48B/1796/FDIS, future edition 1 of IEC 61076-3-110, 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 61076-3-110 on 2008-03-01.

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)	2008-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61076-3-110:2007 was approved by CENELEC as a European Standard without any modification.

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.

Publication	Year	Title	EN/HD	Year
-	-	Communication cables - Specifications for test methods - Part 1-14: Electrical test methods - Coupling attenuation or screening attenuation of connecting hardware	EN 50289-1-14	-[1)]
IEC 60068-1	-[1)]	Environmental testing - Part 1: General and guidance	EN 60068-1	1994[2)]
IEC 60068-2-38	-[1)]	Environmental testing - Part 2: Tests - Test Z/AD: Composite temperature/humidity cyclic test	EN 60068-2-38	1999[2)]
IEC 60352	Series	Solderless connections	EN 60352	Series
IEC 60352-2	-[1)]	Solderless connections - Part 2: Crimped connections - General requirements, test methods and practical guidance	EN 60352-2	2006[2)]
IEC 60352-3	-[1)]	Solderless connections - Part 3: Solderless accessible insulation displacement connections - General requirements, test methods and practical guidance	EN 60352-3	1994[2)]
IEC 60352-4	-[1)]	Solderless connections - Part 4: Solderless non-accessible insulation displacement connections - General requirements, test methods and practical guidance	EN 60352-4	1994[2)]
IEC 60352-5	-[1)]	Solderless connections - Part 5: Press-in connections - General requirements, test methods and practical guidance	EN 60352-5	2008[2)]
IEC 60352-6	-[1)]	Solderless connections - Part 6: Insulation piercing connections - General requirements, test methods and practical guidance	EN 60352-6	1997[2)]
IEC 60352-7	-[1)]	Solderless connections - Part 7: Spring clamp connections - General requirements, test methods and practical guidance	EN 60352-7	2002[2)]

[1)] Undated reference.

[2)] Valid edition at date of issue.

Publication	Year	Title	EN/HD	Year
IEC 60512	Series	Connectors for electronic equipment - Tests and measurements	EN 60512	Series
IEC 60512-1-100	-[1)]	Connectors for electronic equipment - Tests and measurements - Part 1-100: General - Applicable publications	EN 60512-1-100	2006[2)]
IEC 60603-7	Series	Connectors for electronic equipment - Part 7: Detail specification for 8-way, shielded free and fixed connectors with common mating features, with assessed quality	EN 60603-7	Series
IEC 60664-1	-[1)]	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007[2)]
IEC 61076-1	2006	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	2006
IEC 61076-3	200X[3)]	Connectors for electronic equipment - Product requirements - Part 3: Rectangular connectors - Sectional specification	EN 61076-3	200X[3)]
IEC 61156	Series	Multicore and symmetrical pair/quad cables for digital communications	-	-
IEC 61156-2	-[1)]	Multicore and symmetrical pair/quad cables for digital communications - Part 2: Horizontal floor wiring - Sectional specification	-	-
IEC 61156-3	-[1)]	Multicore and symmetrical pair/quad cables for digital communications - Part 3: Work area wiring - Sectional specification	-	-
IEC 61156-4	-[1)]	Multicore and symmetrical pair/quad cables for digital communications - Part 4: Riser cables - Sectional specification	-	-
IEC 61156-5	-[1)]	Multicore and symmetrical pair/quad cables for digital communications - Part 5: Symmetrical pair/quad cables with transmission characteristics up to 600 MHz - Horizontal floor wiring - Sectional specification	-	-
IEC 61156-6	-[1)]	Multicore and symmetrical pair/quad cables for digital communications - Part 6: Symmetrical pair/quad cables with transmission characteristics up to 600 MHz - Work area wiring - Sectional specification	-	-
ISO/IEC 11801	2002	Information technology - Generic cabling for customer premises	-	-
ISO 1302	-[1)]	Geometrical Product Specifications (GPS) - Indication of surface texture in technical product documentation	EN ISO 1302	2002[2)]
ITU-T Recommendation K.20	-[1)]	Resistibility of telecommunication equipment installed in a telecommunications centre to overvoltages and overcurrents	-	-

[3)] At draft stage.

Publication	Year	Title	EN/HD	Year
ITU-T Recommendation K.44	2000	Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents - Basic Recommendation	-	-

CONTENTS

INTRODUCTION

This part of IEC 61076 describes connectors according to IEC 61076-3 series connectors requirements.

The connectors are similar to and compatible with IEC 60603-7 series connectors.

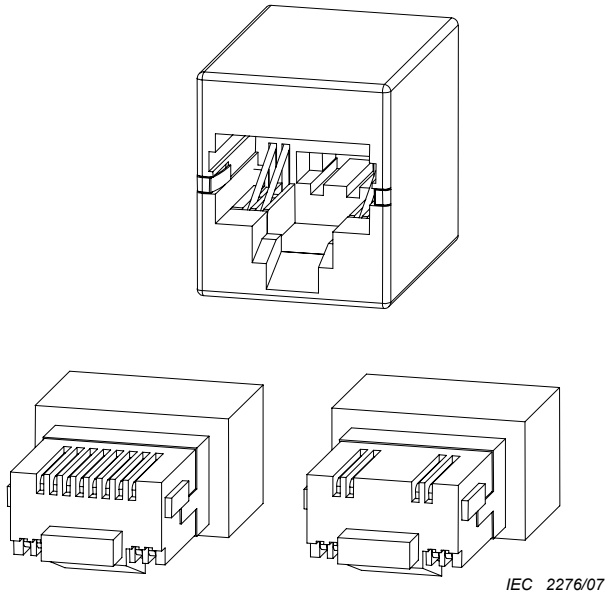
The IEC 61076-3-110 free connector can be used in data communication cabling systems with the IEC 60603-7-7 and IEC 60603-7-71 fixed connector.

The IEC 61076-3-110 connector includes up to 12 contacts, including up to 8 contacts (1,2,3,4,5,6,7,8) that are similar to a standard IEC 60603-7 series connector. In addition, the IEC 61076-3-110 connector includes up to 4 additional contacts (6',3',4',5') located on the opposite side from the original contact positions of a basic IEC 60603-7 series connector.

For use in high speed communications cabling systems, IEC 60603-7-7 and IEC 60603-7-71 fixed connectors include a switch or other means to engage these two different sets of four contacts to enable backward compatibility for transmission performance. In this application the IEC 61076-3-110 free connector simply uses 8 contacts (1,2,3',4',5',6',7,8) and no switch.

The IEC 61076-3-110 fixed connector includes a board mounted style in addition to the cable mounted style.

The complete requirements for the connectors described in this specification correspond to this detail specification and the current issues of IEC 61076-3 and IEC 60603-7 series, which are referenced herein accordingly.

IEC SC 48B: CONNECTORS Specification available from: IEC Central Office or from the addresses shown on the inside cover	**IEC 61076-3-110**
 *IEC 2276/07*	Detail specification for two-part connector used in: – high speed communications applications up to 1 000 MHz – up to 6 balanced contact pairs (up to 12 contacts) – compatible with IEC 60603-7 series connectors 4 balanced contact pairs (1,2,3,4,5,6,7,8) up to 500 MHz and 4 balanced contact pairs (1,2,3',4',5',6',7,8) of IEC 60603-7-7 up to 600 MHz and IEC 60603-7-71 up to 1 000 MHz – intended for inside-building cabling systems
	Fixed connector: cable mount or for mounting on printed boards Free connector: cable mount only
	Performance level(s): 1, 2 Assessment level(s): not specified
	Reference data: not available

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 3-110: Rectangular connectors – Detail specification for shielded, free and fixed connectors for data transmission with frequencies up to 1 000 MHz

1 General

1.1 Scope

This part of IEC 61076 is a detail specification, forming part of IEC 61076-3, for IEC 61076-3-110, two-part connector.

It covers mechanical and environmental requirements, and electrical transmission requirements for frequencies up to 1 000 MHz.

These connectors can be used as category 7 connectors in class F cabling systems, as specified in ISO/IEC 11801:2002.[1]

The connectors are intermateable with IEC 60603-7-X series connectors.[2]

The connectors are interoperable with IEC 60603-7-7 and IEC 60603-7-71 connectors.[3]

The connectors are backward compatible with IEC 60603-7-7 and IEC 60603-7-71 connectors.[4]

1.2 Normative references

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.

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-38, *Environmental testing – Part 2-38: Tests – Test Z/AD: Composite temperature/ humidity cyclic test*

IEC 60352 (all parts), *Solderless connections*

IEC 60352-2, *Solderless connections – Part 2: Crimped connections – General requirements, test methods and practical guidance*

IEC 60352-3, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance*

IEC 60352-4, *Solderless connections – Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance*

---

1 ISO/IEC 11801 contains various ‘category’ designations corresponding to various frequency ranges.

2 Intermateability definition and requirements are given in 2.2.2.

3 Interoperability definition and requirements are given in 2.2.3.

4 Backward compatibility definition and requirements are given in 2.2.4.