

Connectors for electronic equipment —

**Part 3-112: Rectangular connectors —
Detail specification for rectangular
connectors with four contacts for high
performance serial bus for consumer
audio/video equipment**

The European Standard EN 61076-3-112:2006 has the status of a
British Standard

ICS 31.220.10

National foreword

This British Standard is the official English language version of EN 61076-3-112:2006. It is identical with IEC 61076-3-112:2006.

The UK participation in its preparation was entrusted to Technical Committee EPL/48, Electrotechnical components and mechanical structures for electronic equipment, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 36, an inside back cover and a back cover.

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**Connectors for electronic equipment
Part 3-112: Rectangular connectors -
Detail specification for rectangular connectors with
four contacts for high performance serial bus for
consumer audio/video equipment
(IEC 61076-3-112:2006)**

Connecteurs pour équipements
électroniques
Partie 3-112: Connecteurs rectangulaires -
Spécification particulière
pour connecteurs rectangulaires
à quatre contacts pour bus série
à haute performance utilisés dans les
équipements audio/vidéo grand public
(CEI 61076-3-112:2006)

Steckverbinder für elektronische
Einrichtungen
Teil 3-112: Rechteckige Steckverbinder -
Bauartspezifikation für rechteckige
Steckverbinder mit vier Kontakten
für serielle Hochgeschwindigkeitsbusse
in Audio- und Videosystemen
(IEC 61076-3-112:2006)

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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/1620/FDIS, future edition 1 of IEC 61076-3-112, 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 61076-3-112 on 2006-05-01.

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) 2007-02-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-05-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61076-3-112:2006 was approved by CENELEC as a European Standard without any modification.

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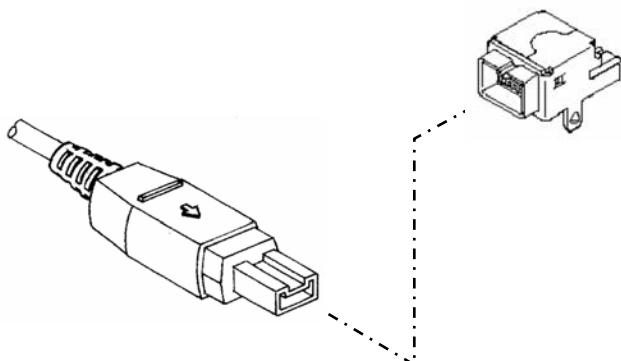
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CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 3-112: Rectangular connectors –

Detail specification for rectangular connectors with four contacts for high performance serial bus for consumer audio/video equipment

IEC SC48B – Connectors Specification available from IEC General secretariat or from the address shown on the inside cover.	IEC 61076-3-112
Connectors in accordance with Generic specification IEC 61076-1	
 The diagram shows two views of the IEC SC48B connector. On the left is a perspective view of a cable connector with a shielded cable and a locking mechanism. On the right is a perspective view of a fixed board connector with a locking mechanism. Dashed lines connect the two views, indicating they are part of the same connector system.	Two part connectors for printed boards. The fixed board connector is suitable for mounting on printed boards. The free cable connector is suitable for cable and is over moulded or insulated with moulded covers.
Information on the availability of components qualified to this detail specification is given in the qualified products lists.	

1 General

1.1 Scope

These connectors are designed based on IEEE standard 1394a-2000 and applicable for high performance serial bus used for consumer audio/video equipment. These connectors consist of fixed and free connectors having four contacts.

1.2 Recommended method of mounting

The fixed connector is mounted on the printed circuit board with surface mount solder tag and dip solder tag having board lock.

1.2.1 Number of contacts or contact cavities

The connectors in this detail specification have four contacts.

1.3 Ratings and characteristics

Rated voltage:	10 V a.c./d.c.
Insulation resistance:	100 MΩ minimum
Climatic category:	55/085/4

1.4 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 60512 (all parts), *Connectors for electric equipment – Tests and measurements*

IEC 60512-1-100, *Connectors for electric equipment – Tests and measurements – Part 1-100: General – Applicable publications*

IEC 61000-4-1, *Electromagnetic compatibility (EMC) – Part 4-1: Testing and measurement techniques – Overview of IEC 61000-4 series*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

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

IEC 61076-3:1999, *Connectors for use in d.c., low-frequency analogue and digital high-speed data applications – Part 3: Rectangular connectors with assessed quality – Sectional specification*

IEC 62197-1:2006, *Connectors for electronic equipment – Quality assessment requirements – Part 1: Generic specification*

1.5 Marking

The connector and the package shall be marked the following information.

On the connector:

- a) mark of origin (manufacturer's name or mark);
- b) mark indicating mating direction (see Figure 12).

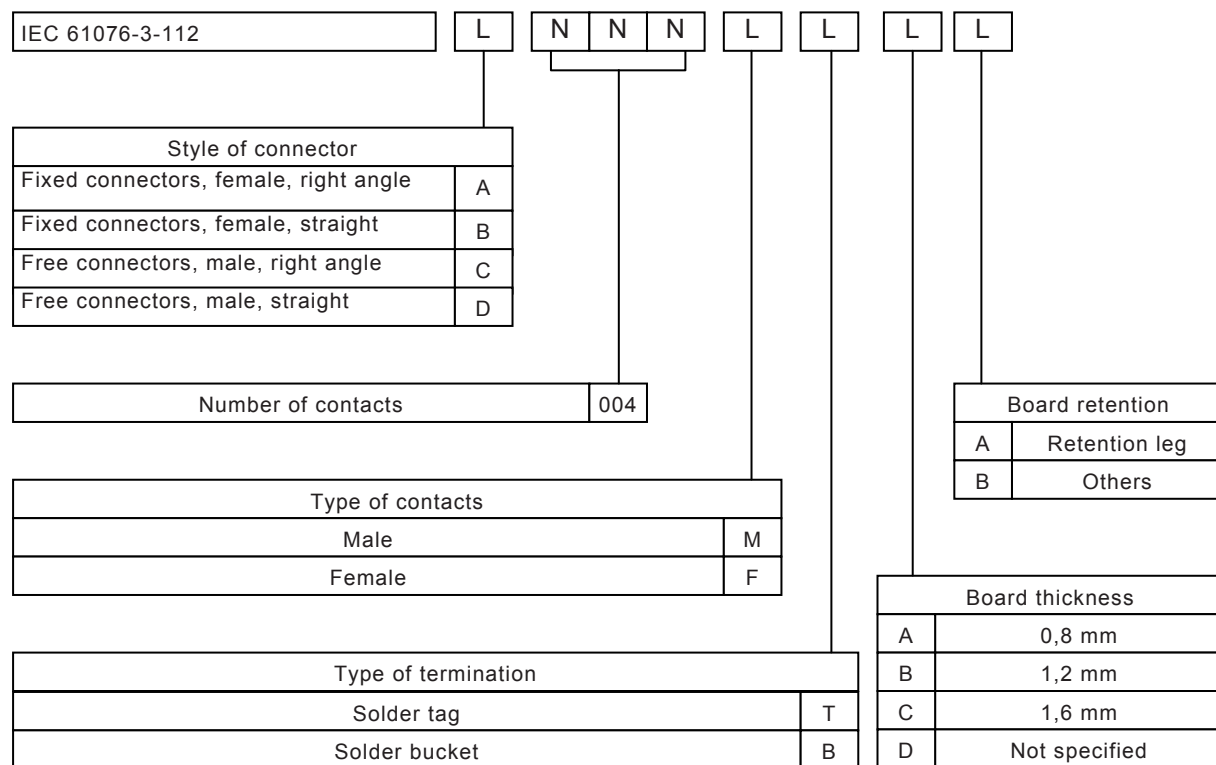
On the package:

- a) mark of origin (manufacturer's name or mark);
- b) year and month (or week) of manufacture;
- c) IEC type designation (see 1.6) or manufacturer's part number.

If a manufacturer's part number is used, a cross-reference list between the manufacturer's and IEC designations should be included in the catalogue or specification sheet.

1.6 IEC type designation

The designation shall be derived from 2.5 of IEC 61076-3:



“L” stand for letter. “N” stands for number.

Example: IEC 61076-3-112-A004FTBA

Fixed connectors, female, right angle, 4 contacts, female contact, solder tag, board thickness 1,2 mm, retention leg.

1.7 Ordering information

For ordering connectors according to this detail specification, the type designation described in 1.6 shall be used.

The manufacturer may use his own part number, provided that a cross-reference list is made available.

2 Technical information

2.1 Terms and definitions

No supplementary terms and definitions are used in this standard.

2.2 Survey of connector styles (see Table 1)

Table 1 – Connector styles

Style	Description
A	Fixed connectors, female, shielded with metal shell, right-angle with keying feature
B	Fixed connectors, female, shielded with metal shell, straight with keying feature
C	Free connectors, male, shielded with metal shell, right angle with keying feature and wire termination
D	Free connectors, male, shielded with metal shell, straight with keying feature and wire termination

2.3 Information on application

2.3.1 Complete connectors (pairs)

A complete connector consists of free connector and fixed connector, every connector with metal shell having keying feature and non removable contact on 0,8 mm pitch single row.

These connectors are mainly used for consumer audio/video equipment.

2.3.2 Fixed connectors

There are two connector styles, style A and style B for fixed connectors.

The connectors are provided with tags for dip solder and shielded with metal shell.

2.3.3 Free connectors

There are two connector styles, style C and D for free connectors.

The free connectors are provided with solder bucket and are shielded with metal shell.

2.3.4 Accessories

2.3.4.1 Special contacts

Not applicable.

2.3.4.2 Coding devices

The keying feature fitted into each connector will prevent improper insertion.

2.3.4.3 Mounting devices

Not applicable.

2.3.5 Shielding / grounding

Both free and fixed connectors are shielded with a metal shell.

2.3.6 Basic type of terminations

Female contact:

- solder tag.

Male contact:

- solder bucket.

2.4 Contact arrangements

The contact arrangement is one row as shown in Figure 1 and Figure 2.

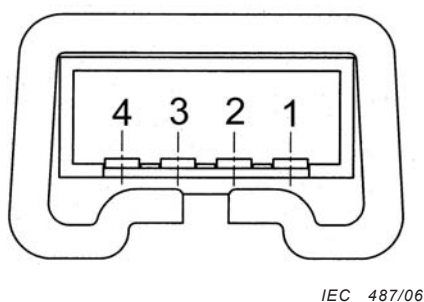


Figure 1 – Free connector

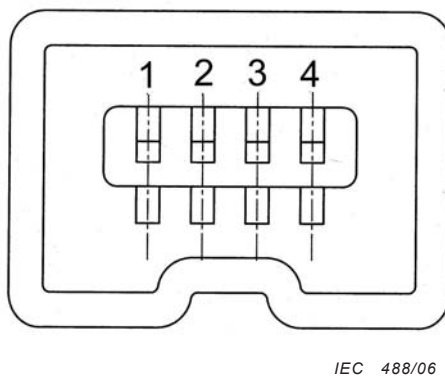


Figure 2 – Fixed connector

3 Dimensional information

3.1 General

Original dimensions are in millimeters.

Drawings are shown in third-angle projection.

The shape of the connectors may deviate from those given in the following drawings as long as the dimensions specified in 3.3 are not influenced.

Dimensions in parentheses are only for reference on design, but not for inspection.

3.2 Isometric view (see Figure 3)

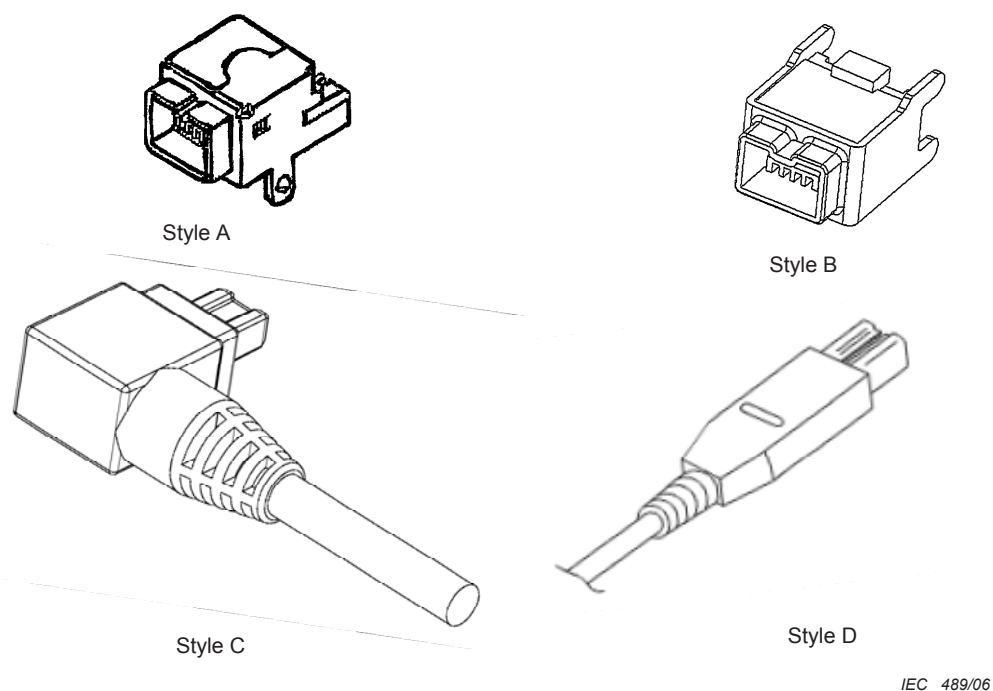


Figure 3 – Isometric view

3.3 Engagement (mating) information

3.3.1 Contact levels and sequencing

All contacts have the same level and the electrical connection will be made simultaneously.