

INTERNATIONAL STANDARD

IEC 61076-3-104

First edition
2003-04

Connectors for electronic equipment –

Part 3-104:

Rectangular connectors –

Detail specification for 8-way, shielded free
and fixed connectors for data transmissions
with frequencies up to 600 MHz minimum

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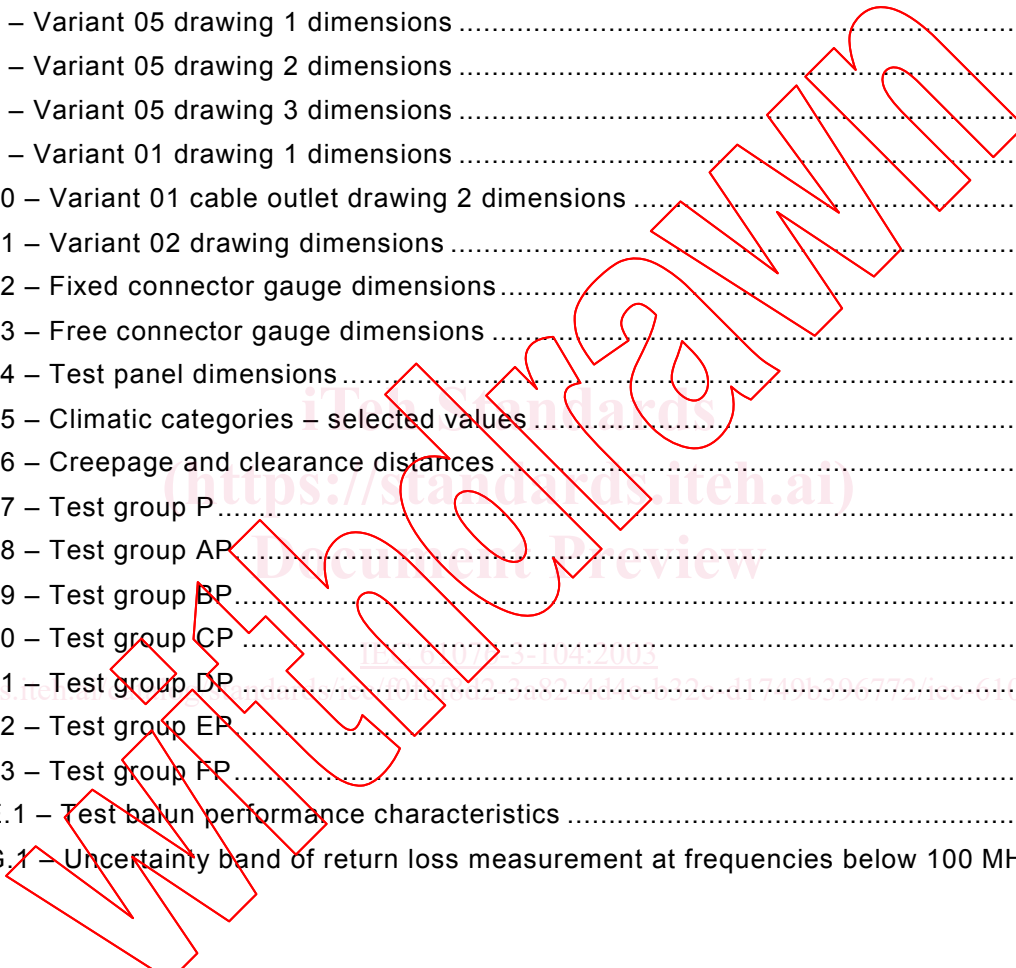
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CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 3-104: Rectangular connectors – Detail specification for 8-way, shielded free and fixed connectors for data transmissions with frequencies up to 600 MHz minimum

FOREWORD

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The IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from

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International Standard IEC 61076-3-104 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This standard cancels and replaces IEC/PAS 61076-3-104 published in 2002. This first edition constitutes a technical revision.

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

FDIS	Report on voting
48B/1303/FDIS	48B/1335/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.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

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- withdrawn;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

A bilingual version of this publication may be issued at a later date.

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CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 3-104: Rectangular connectors – Detail specification for 8-way, shielded free and fixed connectors for data transmissions with frequencies up to 600 MHz minimum

1 General

1.1 Scope

This part of IEC 61076 establishes uniform specifications, type testing requirements and quality assessment procedures for 8-way connectors, with up to 4 pairs, for frequencies up to 600 MHz minimum, and intended to be used at different locations within cabling for information and communications technology, home entertainment and multimedia. It contains a choice of all test methods and sequences, severity and preferred values for dimensions and characteristics.

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 60068-2-6, *Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60169-16, *Radio-frequency connectors. Part 16: R.F. coaxial connectors with inner diameter of outer conductor 7 mm (0.276 in) with screw coupling – Characteristic impedance 50 ohms (75 ohms) (Type N)*

IEC 60512 (all parts), *Connectors for electronic equipment – Tests and measurements*

IEC 60512-1-100:2001, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

IEC 60603-7, *Connectors for frequencies below 3 MHz for use with printed boards – Part 7: Detail specification for connectors, 8-way, including fixed and free connectors with common mating features, with assessed quality*

IEC 60664-1, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 61076-1:1995, *Connectors with assessed quality, for use in d.c., low frequency analogue applications and in digital high speed data application – Part 1: Generic specification – Capability approval*

IEC 61156 (all parts), *Multicore and symmetrical pair/quad cables for digital communications*

IEC 61196 (all parts), *Radio-frequency cables*

ISO/IEC 11801, *Information technology – Generic cabling for customer premises*

ISO 1302, *Geometrical Product Specifications (GPS) – Indication of surface texture in technical product documentation*

ITU-T G.117, *Transmission aspects of unbalance about earth*

ITU-T K.20, *Resistibility of telecommunication equipment installed in a telecommunications centre to overvoltages and overcurrents*

ITU-T O.9, *Measuring arrangements to assess the degree of unbalance about earth*

CENELEC EN 50289-1-14, *Basic reference standard for communication cables – Specification – Part 1-14 Electrical test methods – Coupling attenuation or screening attenuation of connecting hardware*

2 Marking Information

2.1 IEC type designation

Connectors, connector bodies and connectors with pre-inserted contacts according to this standard shall be designated by the following system.

Connectors conforming to this standard shall be identified by the following indications and in the order given:

- the letters “IEC”;
- the number denoting this detail specification;
- the number of the detail specification (without dashes), being nine characters (e.g. IEC 61076-3-104 B08 FS-G101-1 Shielded connector, fixed version B, having 8 female contacts, solder termination, board mount));
- a letter denoting the style of the connector (the system shall be specified in the detail specification).

2.2 Marking

Each connector and its associated package shall be marked in accordance with the requirements specified in 2.6 of IEC 61076-1.

2.3 Groups of related connectors

Groups of connectors within a subfamily having common features. Typical examples are of the same type and range but of a different style. A group of related connectors is covered by a single detail specification.

- **type:** connectors within a particular subfamily such as a multicontact connector with one, two or four pairs;
- **range:** the housing (shell) sizes and contacts arrangements within a type. For example a housing containing one, two or four pairs;
- **style:** a particular connector within a type, for example fixed panel, PCB or free connector;
- **variant:** variations within a type, style or range.

2.4 Interchangeability level

These connectors shall be fully interchangeable and intermateable. The mechanical and electrical characteristics shall be met whatever is the source of the connector. Moreover, it is desirable that the mechanical and electrical compatibility with lower performance connecting hardware as defined in ISO/IEC 11801 and IEC 60603-7 is ensured when connected to this connector.

This can be achieved through the use of an adapter cord. Elements of connecting hardware, for example plugs, sockets that terminate more than one cable are permitted.

The plug/socket interface may be constructed so as to permit the use of multiple modules, for example 2 × 2 pairs or 4 × 1 pair plugs mated directly with a single 4 pairs socket.

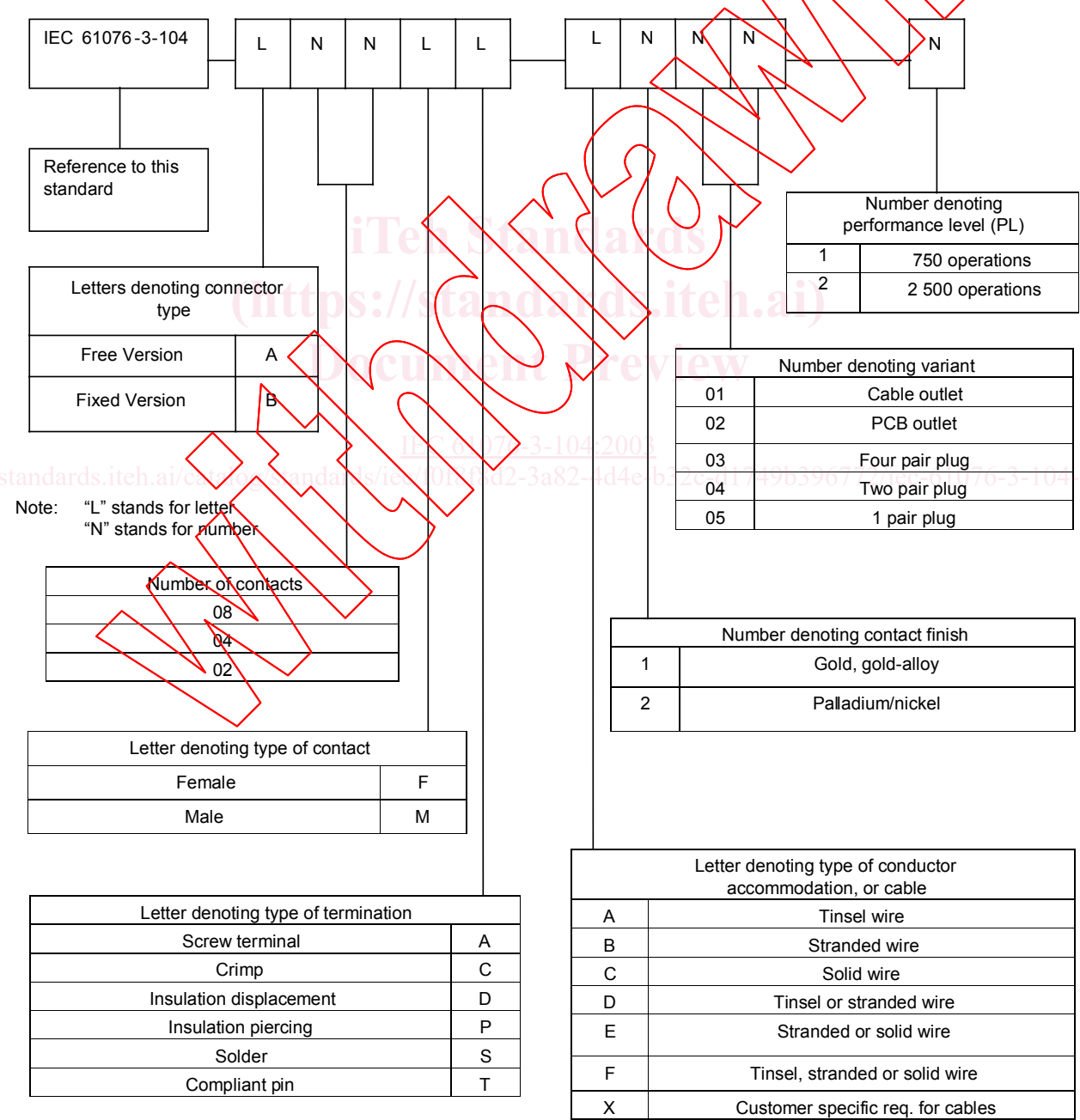


Figure 1 – IEC type designation

2.5 Isometric views and common features

2.5.1 Fixed connector

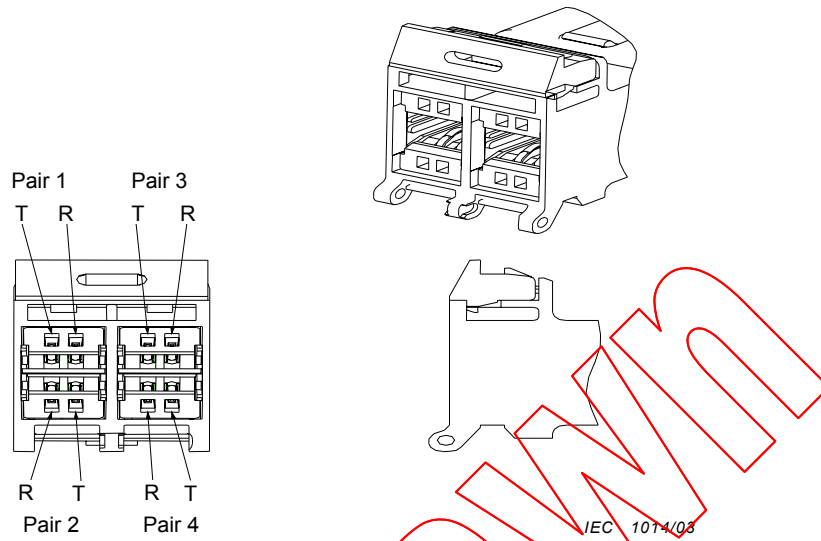


Figure 2 – Fixed connector

2.5.2 Free connector

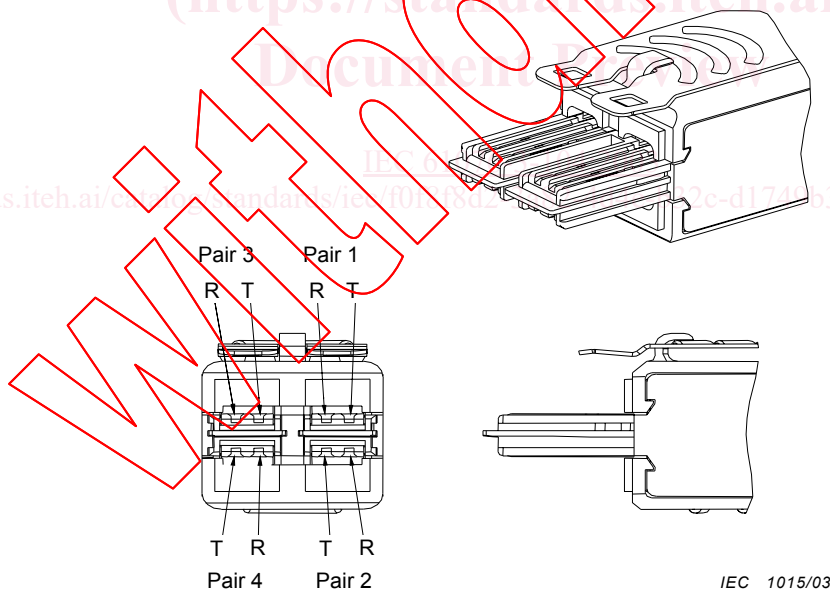


Figure 3 – Free connector

3 Dimensional information

3.1 General

Original dimensions are in millimetres except where noted.

3.2 Free connector (plug)

3.2.1 Free connector isometric views

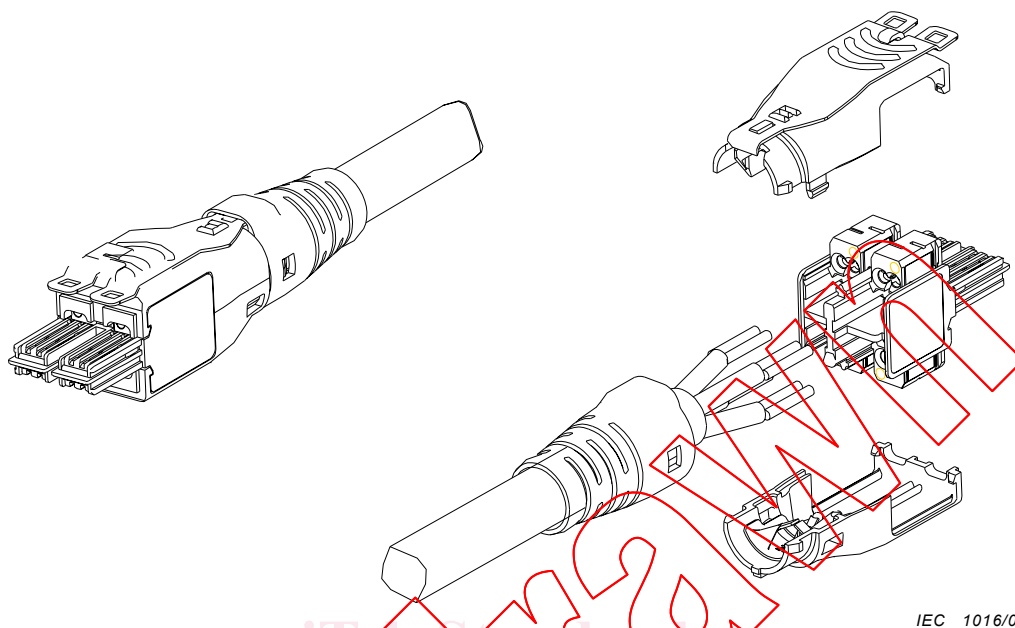


Figure 4 – Variant 03, 4-pair plug

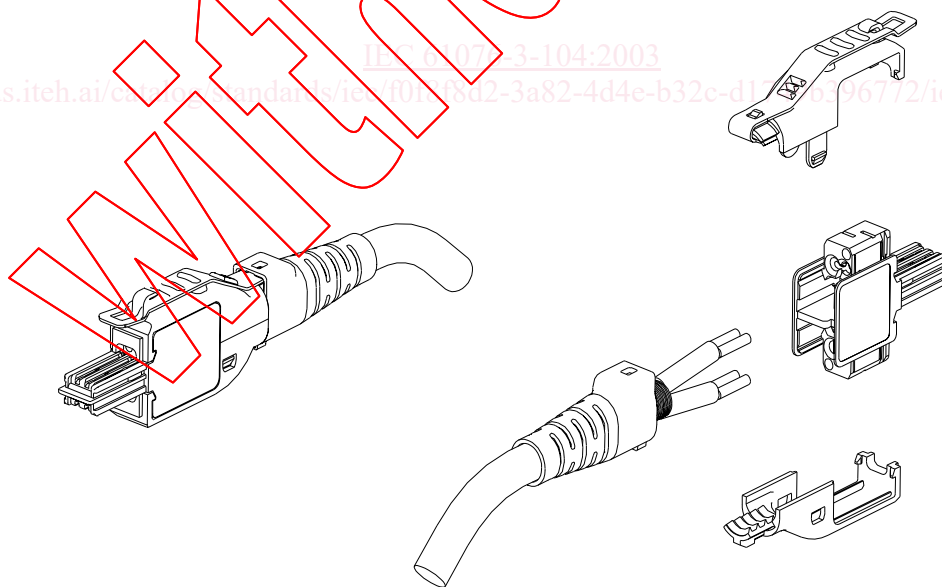


Figure 5 – Variant 04, 2-pair plug

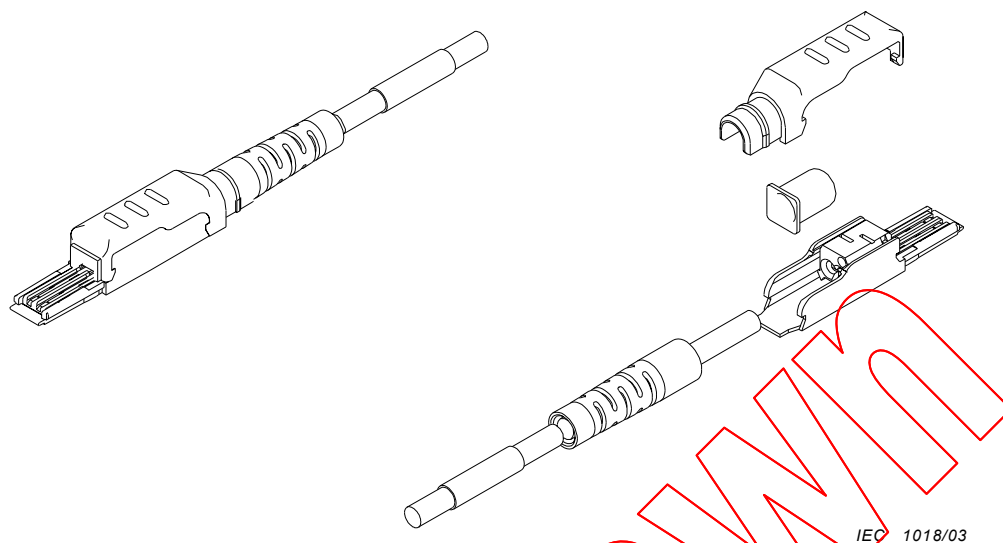


Figure 6 – Variant 05, 1-pair plug

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