

Connectors for electronic equipment –

Part 3-104:

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

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INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT –

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

FOREWORD

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public.

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

The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document:

Draft PAS	Report on voting
48B/1167/PAS	48B/1215A/RVD

Following publication of this PAS, the technical committee or subcommittee concerned will investigate the possibility of transforming the PAS into an International Standard.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this PAS may involve the use of patents concerning 8-way, shielded free and fixed connectors for data transmissions with frequencies up to 600 MHz minimum.

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CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 3-104: 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 ways connectors, with up to 4 pairs, for frequencies up to 600 MHz minimum, and intended to be used at different locations within cabling for ICT, 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 normative documents contain provisions that, through reference in this text, constitute provisions of this part of IEC 61076. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61076 are encouraged to investigate the possibility of applying the most recent editions of the normative documents listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60352-2:1990, *Solderless connections – Part 2: Solderless crimped connections – General requirements, test methods and practical guidance*

IEC 60352-3:1993, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance.*

IEC 60352-4:1994, *Solderless connections – Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance*

IEC 60352-6:1994, *Solderless connections – Part 6: Insulation piercing connections – General requirements, test methods and practical guidance*

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 specifications – Capability approval*

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

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

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 60512-1 *Electromechanical components for electronic equipment, Basic testing procedures and measuring methods – Part 1: General*

IEC 60512-2 *Electromechanical components for electronic equipment, basic testing procedures and measuring methods – Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests*

IEC 60512-3 *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 3: Current-carrying capacity tests*

IEC 60512-4 *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 4: Dynamic stress tests*

IEC 60512-5 *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 5: Impact tests (free components), static load tests (fixed components), endurance tests and overload tests*

IEC 60512-6 *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 6: Climatic tests and soldering tests*

IEC 60512-7 *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 7: Mechanical operating tests and sealing tests*

IEC 60512-8 *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 8: Connector tests (mechanical) and mechanical tests on contacts and terminations*

ISO 1302 *Technical Drawings – Method of indicating surface texture*

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 sectional specification.

The number of the detail specification (without dashes), being nine characters (e.g. 610764100).

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 same type and range but different style. A group of related connectors is covered by a single detail specification.

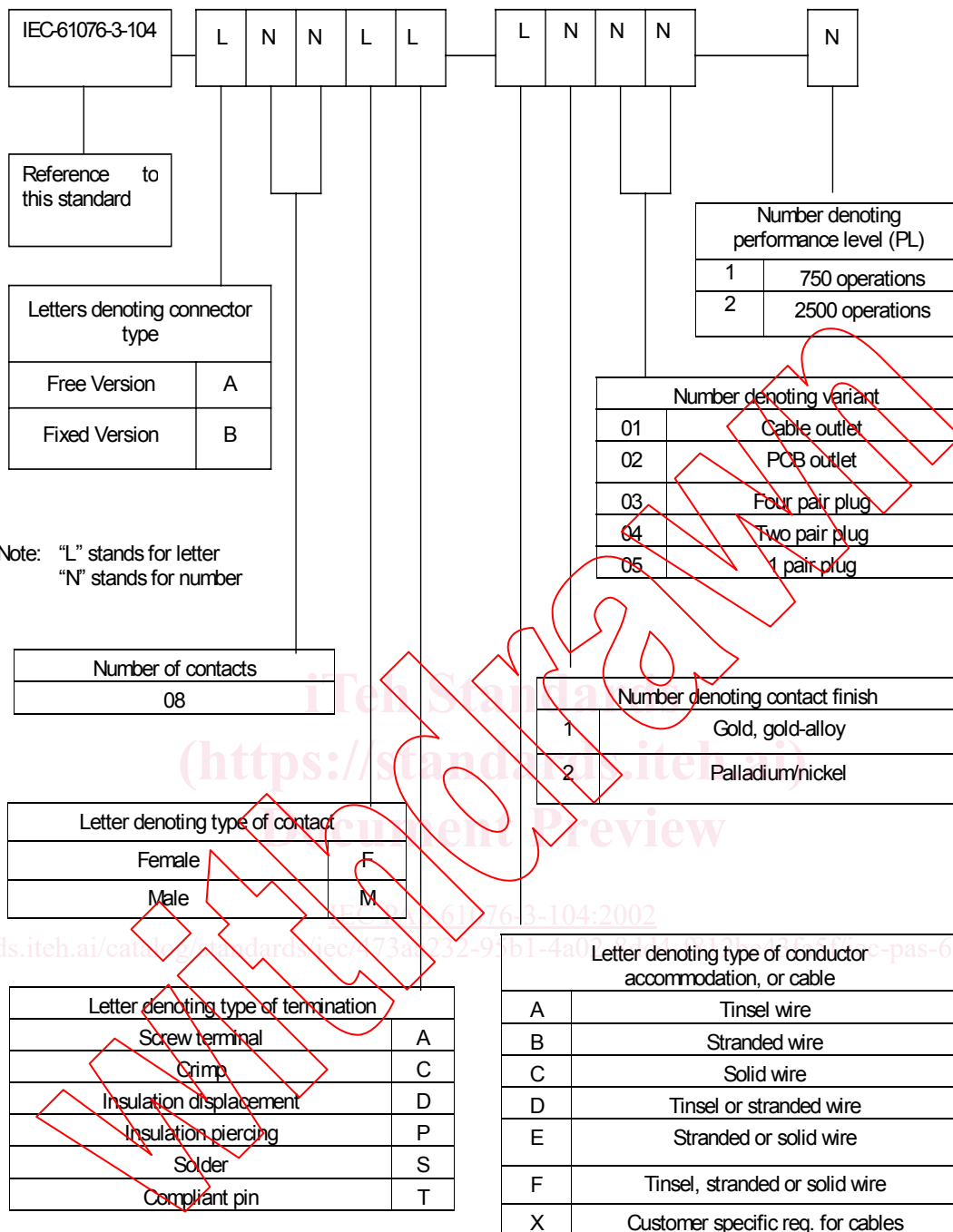
- **Type:** Connectors within a particular subfamily such as a multicontact connector with one, two or four pairs.
- **Range:** The housing (shell) sizes and contacts arrangements within a type. For example a housing containing one, two or four pairs.
- **Style:** A particular connector within a type, 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, e.g. 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 e.g. 2 × 2 pairs or 4 × 1 pair plugs mated directly with a single 4 pairs socket.



2.5 Wiring Conventions

2.5.1 Outlet

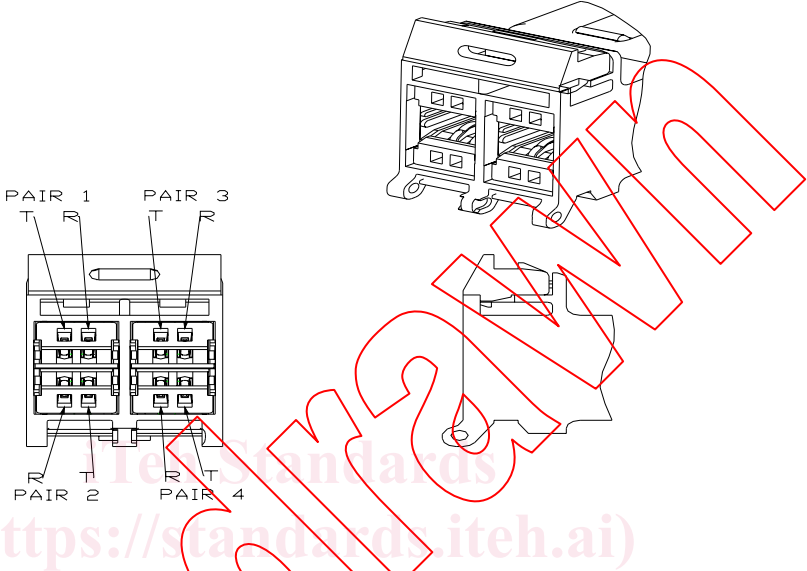


Figure 1

2.5.2 Plug

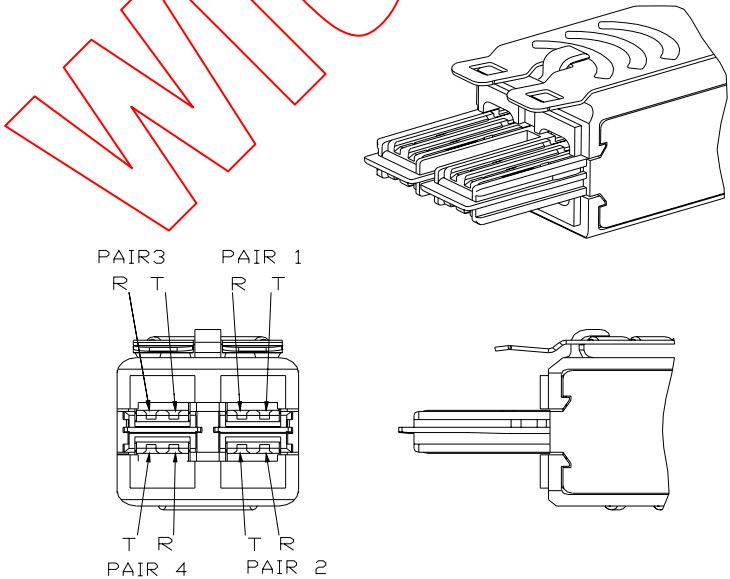


Figure 2

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

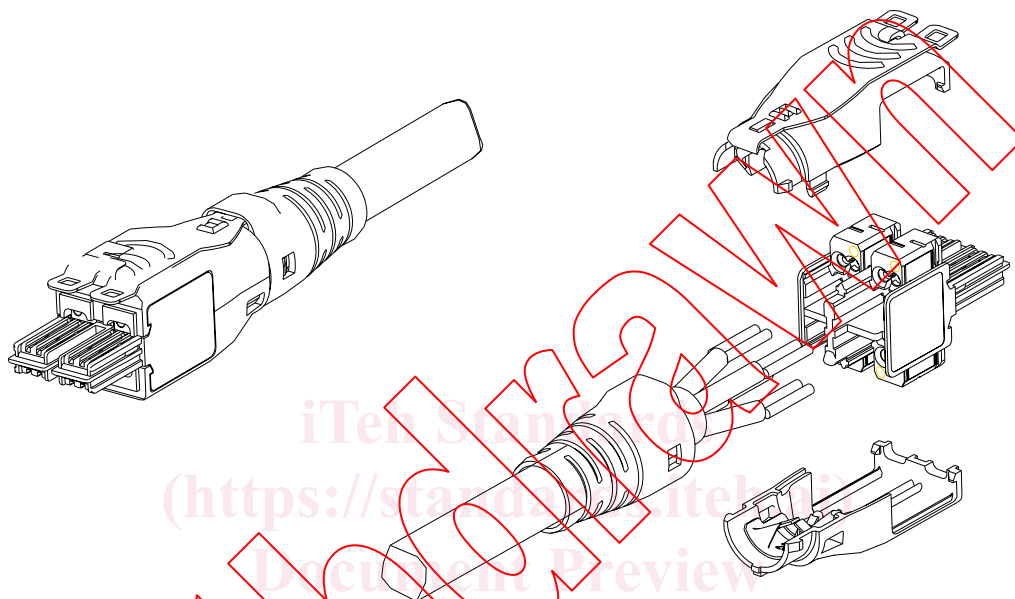


Figure 3 – Variant 03, 4-pair plug