IEC 61076-2-104

Edition 2.0 2014-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Connectors for electronic equipment – Product requirements – Part 2-104: Circular connectors – Detail specification for circular connectors with M8 screw-locking or snap-locking

Connecteurs pour équipements électroniques – Exigences de produit – Partie 2-104: Connecteurs circulaires – Spécification particulière pour les connecteurs circulaires M8 à vis ou à encliquetage

IEC 61076-2-104:2014-09(en-fr)

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International Standard IEC 61076-2-104 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

The main technical changes with regard to the previous edition are as follows:

- three new type ways have been added to the A-coding, including new gauges and contact diameters;
- the type designation has been removed.

A list of all parts of the IEC 61076 series, under the general title *Connectors for electronic equipment – Product requirements*, can be found on the IEC website.

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

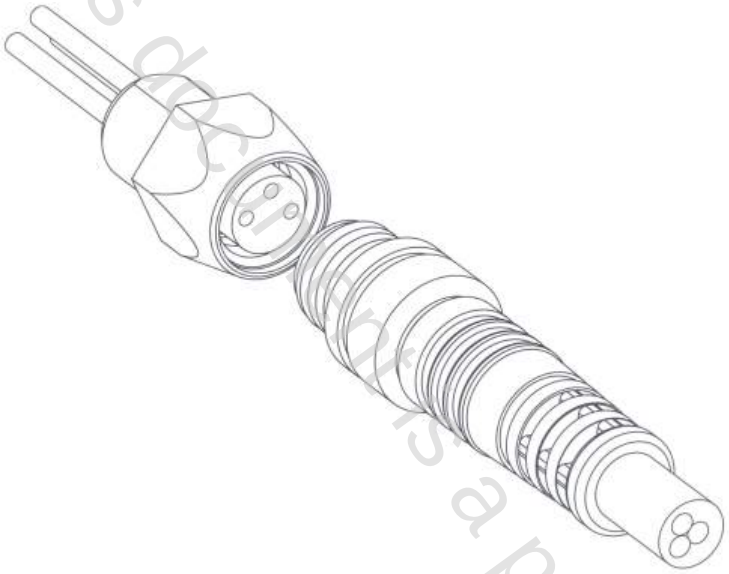
FDIS	Report on voting
48B/2384/FDIS	48B/2399/RVD

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 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- withdrawn,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.

International Electrotechnical Commission IEC SC 48B – Connectors Specification available from: IEC General secretariat or from the addresses shown on the inside cover.	IEC 61076-2-104
ELECTRONIC COMPONENTS detail specification in accordance with IEC 61076-1	
	Circular connectors M8/ diameter 8 mm 3 to 8 way Male and female contacts Male and female connectors Rewireable – Non-rewireable
	Free cable connectors Straight and right angle connectors Fixed connectors Flange mounting Single hole mounting

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-104: Circular connectors – Detail specification for circular connectors with M8 screw-locking or snap-locking

1 Scope

This part of IEC 61076 describes circular connectors M8 screw-locking or with nominal diameter 8 mm snap-locking, typically used for industrial process measurement and control. These connectors consist of fixed and free connectors either rewireable or non-rewireable. Male connectors have round contacts of diameter 0,6 mm, diameter 0,7 mm and diameter 1,0 mm.

Throughout this detail specification, dimensions are in mm.

NOTE M8 is the dimension of the thread of the screw-locking mechanism of these circular connectors.

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 (all parts): *International Electrotechnical Vocabulary* (available at http://www.electropedia.org)

IEC 60068-1:2013, *Environmental testing - Part 1: General and guidance*

IEC 60068-2-60, *Environmental testing – Part 2: Tests – Test Ke: Flowing mixed gas corrosion test*

IEC 60352 (all parts), *Solderless connections*

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

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*
Amendment 2:2013
Amendment 1:1999

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60998-2-1, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units*

IEC 60999 (all parts), *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units*

IEC 61076-1:2006, *Connectors for electronic equipment – Product requirements – Part 1: Generic specification*

IEC 61984, *Connectors – Safety requirements and tests*

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

3 Technical information

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-581 apply.

3.2 Recommended method of termination

The contact terminations shall be of the following types: screw, crimp, insulation piercing, insulation displacement, press-in or solder.

3.3 Number of contacts, ratings and characteristics

Table 1 – Connector ratings related to coding and number of contacts

Coding	Contacts	Rated voltage	Rated current
A	3	50 V a.c./ 60 V d.c.	3 A
A	4	50 V a.c./ 60 V d.c.	3 A
A	6	30 V a.c./ 30 V d.c.	1,5 A
A	8	30 V a.c./ 30 V d.c.	1,5 A
B	5	30 V a.c./ 30 V d.c.	3 A

Insulation resistance: 10^8 Ω min.

Climatic category: see 5.1, Table 7

Contact spacing: see Clause 4, dimensions

3.4 Creepage and clearance distances

The permissible operating voltages, depends on the application and also on the safety requirements.

The creepage and clearance distances in Table 2 are given as operating characteristics of mated connectors and shall be measured according to IEC 60512-1-2. The minimum values for clearance and creepage can be found in Table 2.

Table 2 – Creepage and clearance distances

Dimensions are in millimeter

Connector style and number of contacts	Minimum distance between contacts and earth contact		Minimum distance between adjacent contacts	
	Creepage	Clearance	Creepage	Clearance
A-coding 3+4 contacts	0,6	0,6	0,6	0,6
A-coding 6+8 contact and B-coding	0,6	0,6	0,6	0,6