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INTERNATIONAL STANDARD

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

CONTENTS

FOREWORD.....	5
1 Scope.....	8
2 Normative references.....	8
3 Terms and definitions.....	9
4 Technical information.....	10
4.1 Recommended method of termination for connectors.....	10
4.2 Connector coding, number of contacts, ratings and characteristics	10
4.3 Systems of levels.....	10
4.3.1 Performance level	10
4.3.2 Compatibility levels, according to IEC 61076-1.....	10
4.4 Classification into climatic categories.....	10
4.5 Creepage and clearance distances.....	11
4.6 Current-carrying capacity	11
4.7 Marking	11
4.8 Safety aspects	11
5 Dimensional information.....	11
5.1 General	11
5.2 Fixed connectors.....	12
5.2.1 General.....	12
5.2.2 Style EM	12
5.2.3 Styles EF1 and EF2	13
5.3 Free connectors	15
5.3.1 General.....	15
5.3.2 Style JM.....	16
5.3.3 Style KM	16
5.3.4 Style NM	17
5.3.5 Style OM.....	17
5.3.6 Style LM	19
5.3.7 Style MM.....	20
5.3.8 Style JF	21
5.3.9 Style KF.....	21
5.3.10 Style NF.....	22
5.3.11 Style QF	23
5.3.12 Style LF	24
5.3.13 Style MF	25
5.4 Interface dimensions.....	26
5.4.1 Pin front and side view A-coding 3-way	26
5.4.2 Pin front and side view A-coding 4-way	27
5.4.3 Pin front and side view A-coding 6-way	28
5.4.4 Pin front and side view A-coding 8-way	30
5.4.5 Pin front and side view B-coding 5-way	31
5.4.6 Pin front and side view C-coding, 12-way	33
5.4.7 Pin side view for snap- and screw-, snap- and screw-locking	35
5.5 Engagement (mating) information.....	37
5.6 Gauges.....	39
5.6.1 Sizing gauges and retention force gauges	39
6 Characteristics	40

6.1	General	40
6.2	Pin assignment and other definitions	40
6.3	Classification into climatic categories.....	40
6.4	Electrical characteristics.....	41
6.4.1	Rated insulation voltage – Rated impulse voltage – Pollution degree.....	41
6.4.2	Voltage proof.....	41
6.4.3	Current-carrying capacity.....	42
6.4.4	Contact resistance	42
6.4.5	Insulation resistance	42
6.5	Mechanical characteristics.....	42
6.5.1	Mechanical operation	42
6.5.2	Insertion and withdrawal forces	43
6.5.3	Contact retention in insert.....	43
6.5.4	Polarizing and coding method	43
6.6	Other characteristics	44
6.6.1	Vibration (sinusoidal).....	44
6.6.2	Shock	44
6.6.3	Degree of protection provided by enclosures (IP code)	44
6.7	Environmental aspects - marking of insulation material (plastics).....	44
7	Test schedule.....	44
7.1	General	44
7.1.1	General aspects.....	44
7.1.2	Climatic category	44
7.1.3	Creepage and clearance distances	44
7.1.4	Arrangement for contact resistance measurement	45
7.1.5	Arrangement for dynamic stress tests	46
7.1.6	Wiring of specimens.....	47
7.2	Test schedules	47
7.2.1	Basic (minimum) test schedule	47
7.2.2	Full test schedule.....	47
Annex A (informative)	Recommended outer diameter of the female connector body.....	56
Annex B (informative)	Orientation of the cable outlet in relation to coding.....	57
Annex C (normative)	Dimension of connector inserts.....	58
C.1	General	58
C.2	Connector insert, with male contacts dip solder long version with screw- and snap-locking.....	58
C.3	Connector insert, with male contacts dip solder, short version with screw- and snap-locking	59
Bibliography.....		60
Figure 1 – Fixed connector with wires, male contacts, and single hole mounting	12	
Figure 2 – Fixed connector with wires, female contacts, and single hole mounting	13	
Figure 3 – Fixed connector with wires, female contacts, and single hole mounting	14	
Figure 4 – Rewirable connector, male contacts, straight version with screw-locking.....	16	
Figure 5 – rewirable connector, male contacts, right angled version with screw-locking	16	
Figure 6 – non-rewirable connector, male contacts, straight version with screw- and snap-locking	17	
Figure 7 – non-rewirable connector, male contacts, straight version with snap-locking.....	17	

Figure 8 – non-rewirable connector, male contacts, angled version with snap-locking.....	18
Figure 9 – Non-rewirable connector, male contacts, straight version with screw-locking.....	19
Figure 10 – non-rewirable connector, male contacts, right angled version with screw-locking	20
Figure 11 – Rewirable connector, female contacts, straight version with screw-locking	21
Figure 12 – rewirable connector, female contacts, right angled version, with screw-locking	21
Figure 13 – Non-rewirable connector, female contacts, straight version with snap-locking	22
Figure 14 – Non-rewirable connector, female contacts, right angled version with snap-locking	23
Figure 15 – Non-rewirable connector, female contacts, straight version, with screw-locking	24
Figure 16 – Non-rewirable connector, female contacts, right angled version, with screw-locking	25
Figure 17 – Pin front and side view A-coding, 3-way	26
Figure 18 – Contact position A-coding, 3-way, front view	26
Figure 19 – Pin front and side view A-coding, 4-way	27
Figure 20 – Contact position A-coding, 4-way, front view	28
Figure 21 – Pin front and side view A-coding, 6-ways.....	28
Figure 22 – Contact position A-coding, 6-way, front view	29
Figure 23 – Pin front and side view A-coding, 8-ways.....	30
Figure 24 – Contact position A-coding, 8-way, front view	31
Figure 25 – Pin front and side view B-coding, 5-ways.....	31
Figure 26 – Contact position B-coding 5-way, front view	32
Figure 27 – Pin front and side view C-coding, 12-ways.....	33
Figure 28 – Contact position C-coding 12-way, front view	34
Figure 29 – Pin side view snap- and screw-, snap- and screw-locking.....	35
Figure 30 – Engagement (mating) information	37
Figure 31 – Gauge information.....	39
Figure 32 – Contact resistance arrangement	45
Figure 33 – Dynamic stress test arrangement.....	46
Figure A.1 – Diameter of the female connector body, coding variant A	56
Figure A.2 – Shape of the female connector body, coding variant B	56
Figure A.3 – Diameter of the female connector body, coding variant C	56
Figure B.1 – Orientation of cable outlet in relation to the coding – Free connectors according to Table 6	57
Figure C.1 – Connector insert, with male contacts, dip solder long version with screw- and snap-locking	58
Figure C.2 – Connector insert, with male contacts, dip solder short version with screw- and snap-locking	59
Table 1 – Ratings of connectors.....	10
Table 2 – Styles of fixed connectors	12
Table 3 – Dimensions of style EM, Figure 1.....	13
Table 4 – Dimensions of style EF1, Figure 2	14

Table 5 – Dimensions of style EF2, Figure 3	15
Table 6 – Styles of free connectors	15
Table 7 – Dimensions of style JM, Figure 4	16
Table 8 – Dimensions of style KM, Figure 5.....	17
Table 9 – Dimensions of style NM, Figure 6	17
Table 10 – Dimensions of style OM, Figure 7	18
Table 11 – Dimensions of style PM, Figure 8.....	18
Table 12 – Dimensions of style LM, Figure 9.....	19
Table 13 – Dimensions of style MM, Figure 10.....	20
Table 14 – Dimensions of style JF, Figure 11.....	21
Table 15 – Dimensions of style KF, Figure 12.....	22
Table 16 – Dimensions of style NF, Figure 13.....	22
Table 17 – Dimensions of style QF, Figure 14	23
Table 18 – Dimensions of style LF, Figure 15.....	24
Table 19 – Dimensions of style MF, Figure 16	25
Table 20 – Pin front and side view A-coding, 3-way.....	26
Table 21 – Dimensions for Figure 19	27
Table 22 – Dimensions for Figure 21	29
Table 23 – Dimensions for Figure 23	30
Table 24 – Dimensions for Figure 25	32
Table 25 – Dimensions for Figure 27	33
Table 26 – Dimensions for Figure 29	36
Table 27 – Connectors dimensions in mated and locked position.....	38
Table 28 – Gauges	40
Table 29 – Climatic category	40
Table 30 – Rated insulation voltage – Rated impulse voltage – Pollution degree	41
Table 31 – Voltage proof	41
Table 32 – Current-carrying capacity	42
Table 33 – Number of mechanical operations	43
Table 34 – Insertion and withdrawal forces.....	43
Table 35 – Number of test specimens	47
Table 36 – Test group P	48
Table 37 – Test group AP.....	49
Table 38 – Test group BP.....	51
Table 39 – Test group CP.....	53
Table 40 – Test group DP.....	54
Table 41 – Test group EP.....	54
Table 42 – Test group NP.....	55
Table C.1 – Dimensions of connector insert, Figure C.1	58
Table C.2 – Connector insert, with male contacts, dip solder short version with screw- and snap locking	59

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Connectors for electrical and electronic equipment -
Product requirements -**

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

FOREWORD

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IEC 61076-2-104 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment. It is an International Standard.

This third edition cancels and replaces the second edition published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) The structure of this document has been adapted to the new IEC template for standards. New subclauses have been added. Clause 5 and Clause 6 have been updated.
- b) The mating face for a M8 12-pole connector has been added.

- c) Annex B Orientation of cable outlet in relation to coding has been added.
- d) The styles for connector inserts have been moved to the normative Annex C.

The text of this International Standard is based on the following documents:

Draft	Report on voting
48B/3188/FDIS	48B/3194/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

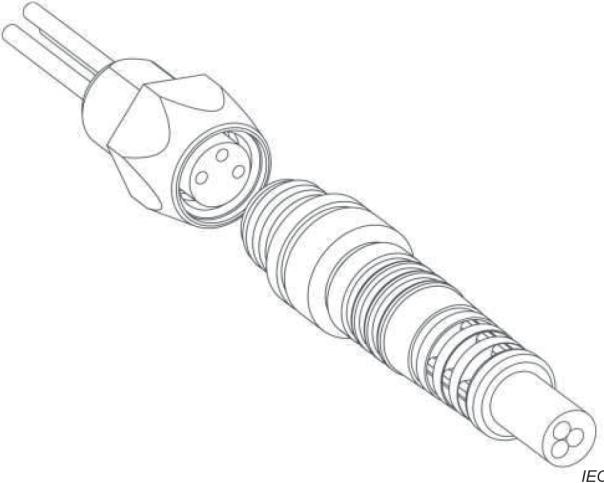
The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IEC SC 48B – Electrical connectors Specification available from: IEC General secretariat or from the addresses shown on the inside cover.	IEC 61076-2-104 Ed 3
Electronic components of assessed quality in accordance with: IEC 61076-1	
 IEC	<p>Circular connectors M8 (screw-locking) – diameter 8 mm (snap-locking)</p> <p>3 to 12 way</p> <p>Male and female contacts</p> <p>Male and female connectors</p> <p>Rewirable – Non-rewirable</p> <p>Free cable connectors straight and right angled</p> <p>Fixed connectors -flange mounting and single hole mounting</p> <p>Connector insert</p>

1 Scope

This part of IEC 61076 describes 3-way to 12-way circular connectors with M8 screw-locking or with nominal \varnothing 8 mm snap-locking, for connection of automation devices, for signal and power transmission up to 50 V AC / 60 V DC rated voltage and up to 4 A rated current.

These connectors are available as fixed or free connectors, either rewirable or non-rewirable. Male connectors have round contacts \varnothing 0,48 mm, \varnothing 0,6 mm, \varnothing 0,7 mm and \varnothing 1,0 mm, depending on the number of ways and coding, with all contacts being of the same size.

The different codings prevent the mating of differently coded male and female connectors.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-581, *International Electrotechnical Vocabulary (IEV) - Part 581: Electromechanical components for electronic equipment*

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

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

IEC 60352-3, *Solderless connections - Part 3: Accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance*

IEC 60352-4, *Solderless connections - Part 4: Non-accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance*

IEC 60352-5, *Solderless connections - Part 5: Press-in connections - General requirements, test methods and practical guidance*

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

IEC 60352-7, *Solderless connections - Part 7: Spring clamp connections - General requirements, test methods and practical guidance*

IEC 60352-9, *Solderless connections - Part 9: Ultrasonically welded connections - General requirements, test methods and practical guidance*

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

IEC 60512-1, *Connectors for electrical and electronic equipment - Tests and measurements - Part 1: General specification*

IEC 60512-1-2, *Connectors for electronic equipment - Tests and measurements - Part 1-2: General examination - Test 1b: Examination of dimension and mass*

Bibliography

IEC 60512-5-2, *Connectors for electronic equipment - Tests and measurements - Part 5-2: Current-carrying capacity tests - Test 5b: Current-temperature derating*

IEC 61076-2, *Connectors for electrical and electronic equipment - Product requirements - Part 2: Sectional specification for circular connectors*

IEC 61076-2-114, *Connectors for electrical and electronic equipment - Product requirements - Part 2-114: Circular connectors - Detail specification for connectors with M8 screw-locking with power contacts and signal contacts for data transmission up to 100 MHz*

IEC TR 63040, *Guidance on clearances and creepage distances in particular for distances equal to or less than 2 mm - Test results of research on influencing parameters*

ISO 11469, *Plastics - Generic identification and marking of plastics products*

ISO 21920-1:2021, *Geometrical product specifications (GPS) - Surface texture: Profile - Part 1: Indication of surface texture*
