Connectors for electronic equipment –

Part 2-101:
Circular connectors –
Detail specification for circular connectors M8 with screw- or snap-locking, M12 with screw-locking for low voltage applications

Connecteurs pour équipements électroniques –

Partie 2-101:
Connecteurs circulaires –
Spécification particulière pour les connecteurs circulaires M8 à vis ou à encliquetage, M12 à vis pour applications basse tension
Publication numbering

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Connectors for electronic equipment —

Part 2-101: Circular connectors —
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CONTENTS

FOREWORD ....................................................................................................................... 5

1 General information ......................................................................................................... 8
  1.1 Scope ..................................................................................................................... 8
  1.2 Recommended method of termination ..................................................................... 8
  1.3 Ratings and characteristics ..................................................................................... 8
  1.4 Normative references ............................................................................................. 9
  1.5 Marking .................................................................................................................. 9
  1.6 IEC Type designation ............................................................................................10
  1.7 Ordering information..............................................................................................11

2 Technical information......................................................................................................11
  2.1 Definitions .............................................................................................................11
  2.2 Survey of styles and variants .................................................................................11

3 Dimensions .................................................................................................................... .29
  3.1 General .................................................................................................................29
  3.2 Interface dimensions..............................................................................................30
  3.3 Engagement (mating) information ..........................................................................34
  3.4 Gauges..................................................................................................................36

4 Characteristics............................................................................................................... .37
  4.1 Climatic category...................................................................................................37
  4.2 Electrical ...............................................................................................................37
  4.3 Mechanical ............................................................................................................39

5 Test schedule ................................................................................................................. 40
  5.1 General .................................................................................................................40
  5.2 Test schedule ........................................................................................................43

Annex A (informative) Steel conduit thread, sizes ................................................................49

Figure 1 – Tube insert mounting without thread, male contacts .............................................12
Figure 2 – Tube insert mounting with thread M12x1, male contacts.......................................12
Figure 3 – Fixed connector, square flange front mounting, male contacts..............................13
Figure 4 – Fixed connector, with wire ends, single hole mounting Pg9, male contacts ..........14
Figure 5 – Fixed connector, with wire ends, single hole mounting Pg13,5, male contacts ..........14
Figure 6 – Fixed connector with wire ends, single hole mounting Pg9, keyway orientation, male contacts ..........................................................15
Figure 7 – Fixed connector, with wire ends, single hole rear mounting Pg13,5, keyway orientation, male contacts ..........................................................15
Figure 8 – Fixed connector, with wire ends, single hole mounting Pg9, female contacts ......16
Figure 9 – Fixed connector, with wire ends, single hole mounting Pg13,5, female contacts ...16
Figure 10 – Fixed connector, with wire ends, single hole rear mounting Pg9 keyway orientation, female contacts .....................................................17
Figure 11 – Fixed connector, with wire ends, single hole rear mounting Pg13,5, keyway orientation, female contacts .....................................................17
Figure 12 – Rewireable connector, straight version, with locking nut, male contacts .........18
This is a preview - click here to buy the full publication
Table 11 – Voltage proof connectors type D .................................................................38
Table 12 – Voltage proof connectors type E .................................................................39
Table 13 – Number of mechanical operations ..............................................................40
Table 14 – Insertion and withdrawal forces .................................................................40
Table 15 – Number of test specimens ...........................................................................41
Table 16 – Test group P ...............................................................................................43
Table 17 – Test group AP ............................................................................................44
Table 18 – Test group BP ............................................................................................46
Table 19 – Test group CP ............................................................................................47
Table 20 – Test group DP ............................................................................................47
Table 21 – Test group EP ............................................................................................48
Table A.1 – Dimensions ..............................................................................................50
INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 2-101: Circular connectors –
Detail specification for circular connectors M8
with screw- or snap-locking, M12 with screw-locking
for low voltage applications

FOREWORD

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International Standard IEC 61076-2-101 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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

<table>
<thead>
<tr>
<th>FDIS</th>
<th>Report on voting</th>
</tr>
</thead>
<tbody>
<tr>
<td>48B/1362/FDIS</td>
<td>48B/1384/RVD</td>
</tr>
</tbody>
</table>

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.
Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated when a new edition is prepared.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

A bilingual edition of this standard may be issued at a later date.
CONNECTORS FOR ELECTRONIC EQUIPMENT –
Part 2-101: Circular connectors –
Detail specification for circular connectors M8 with screw- or snap-locking, M12 with screw-locking for low voltage applications

<table>
<thead>
<tr>
<th>INTERNATIONAL ELECTROTECHNICAL COMMISSION</th>
<th>IEC 61076-2-101</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC SC 48B – Connectors</td>
<td></td>
</tr>
<tr>
<td>ELECTRONIC COMPONENTS in accordance with IEC 61076-1</td>
<td>Blank detail specification</td>
</tr>
<tr>
<td></td>
<td>IEC 61076-2-001</td>
</tr>
</tbody>
</table>

Circular connectors
M8/∅8 mm  3 and 4 poles
M12        2 to 8 poles
Pin and socket connectors
Rewireable – Non-rewireable

Free cable connectors
Straight and right angle connectors
Fixed connectors
Flange mounting
Single hole mounting
Pin sockets

Assessment level: B, G

Information on the availability of components qualified to this detail specification is given in the qualified products list.
1 General information

Throughout this detail specification dimensions are in mm.

1.1 Scope

This part of IEC 61076 describes circular connectors for use in industrial control circuits devices like switchgear and controlgear. These connectors consist of fixed and free connectors either rewireable or non-rewireable, M8 with screw-locking or ∅ 8 mm with snap-locking, M12 with screw-locking.

Male connectors have round contacts ∅ 0,8 mm and ∅ 1,0 mm.

1.2 Recommended method of termination

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

1.2.1 Number of contacts or contact cavities

Connectors type D M12 2 to 8 contacts
Connectors type E M8/ ∅ 8 mm 3 and 4 contacts

1.3 Ratings and characteristics

Rated voltage:
- Connectors type D: 2 to 4 poles 250 V AC/DC
- 5 poles 60 V AC/DC
- 6 to 8 poles 30 V AC/DC
- Connectors type E: 3 poles 60 V AC/DC
- 4 poles 30 V AC/DC

Current rating:
- Type D 2 to 5 poles = 4 A
- 6 to 8 poles = 2 A
- Type E 3 poles = 3 A
- 4 poles = 3 A

Insulation resistance: > 10⁸ Ω

Climatic category: see 4.1 and Table 8

Contact spacing: see Clause 3

Information on the availability of components or manufacturer who have components qualified to this detail specification is given in the qualified products list.
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 60068-1:1988, Environmental testing – Part 1: General and guidance
Amendment 1 (1992)

IEC 60352 (all parts), Solderless connections

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

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

IEC 60529:1989, Degrees of protection provided by enclosures (IP code)

IEC 60664-1:1992, 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 61076-1:1995, Connectors with assessed quality, for use in d.c., low frequency analogue and in digital high speed data applications – Part 1: Generic specification
Amendment 1 (1996)

IEC 61076-2, Connectors for use in d.c., low-frequency analogue and digital high speed data applications – Part 2: Circular connectors with assessed quality – Sectional specification

IEC 61076-2-001, Connectors for electronic equipment – Part 2-001: Circular connectors – Blank detail specification

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