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PUBLICLY AVAILABLE SPECIFICATION

PRE-STANDARD

**Connectors for electronic equipment – Product requirements –
Part 2-109: Circular connectors – Detail specification for connectors M 12 × 1
with screw-locking, for data transmissions with frequencies up to 500 MHz**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-109: Circular connectors – Detail specification for connectors M 12 × 1 with screw-locking, for data transmissions with frequencies up to 500 MHz

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IEC/PAS 61076-2-109 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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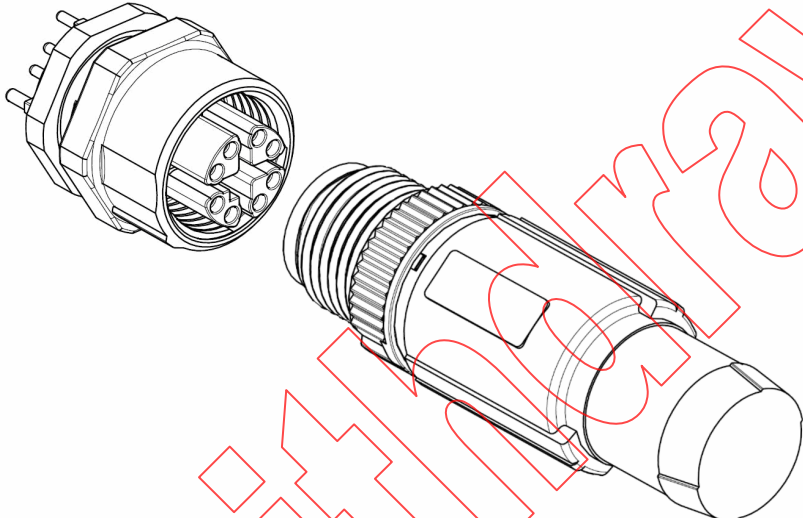
This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document

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This PAS shall remain valid for an initial maximum period of 3 years starting from the publication date. The validity may be extended for a single 3-year period, following which it shall be revised to become another type of normative document, or shall be withdrawn.

Withdrawn

<p>INTERNATIONAL ELECTROTECHNICAL COMMISSION</p> <p>IEC SC 48B – Connectors</p>	<p>IEC 61076-2-109</p>
<p>ELECTRONIC COMPONENTS</p> <p>in accordance with IEC 61076-1</p>	
	<p>Circular connectors M12 × 1 mm 2 to 8 ways, for data transmissions with frequencies up to 500 MHz</p> <p>Connectors with round contact Rewireable</p>
	<p>Free cable connectors Straight and right angle connectors</p> <p>Fixed connectors</p> <p>Flange mounting Rear mounting</p>

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

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1 General information

Throughout this detail specification dimensions are in mm.

1.1 Scope

This Publicly Available Specification (PAS) describes circular connectors with IP 65 and IP 67 protection degree and specified up to 500 MHz, typically used for data transmissions. These connectors consist of fixed and free connectors, either rewirable or non-rewirable, with M12 × 1 screw-locking.

Male connectors have round contacts $\varnothing 0,6$ mm.

1.2 Recommended method of termination

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

1.2.1 Number of contacts or contact cavities

2 to 8 contacts and 8 cavities.

Table 1 – Contact termination

Number of contacts	Typical. termination
2 to 8	0,14 mm ² to 0,25 mm ² 1)
NOTE 1 Equals to AWG 26 to 24	

1.3 Ratings and characteristics

Rated voltage: 48 V, see 4.2.1, Table 6

Current rating: 0,5 A, see 4.2.3

Insulation resistance: 10⁸ Ω, see 4.2.5

Climatic category: –25 °C / +85 °C / 21 days, see 4.1, Table 5

Contact spacing: see Clause 3

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 60050-581, *International Electrotechnical Vocabulary – Part 581: Electromechanical components for electronic equipment*

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1 (1992)

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

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

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

IEC 61076-2:1998, *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 61076-2-101:2008, *Connectors for electronic equipment – Product requirements – Part 2-101: Circular connectors – Detail specification for M12 connectors with screw-locking*

IEC 61984, *Connectors – Safety requirements and tests*

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