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PUBLICLY AVAILABLE SPECIFICATION

PRE-STANDARD

**Connectors for electronic equipment – Product requirements –
Part 2-110: Circular connectors – Detail specification for circular connectors
M 12 × 1 with screw-locking, for high speed Ethernet and high speed data
communication with frequencies up to 500 MHz and 10 gigabits/s**

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PRODUCT REQUIREMENTS****Part 2-110: Circular connectors –
Detail specification for circular connectors
M 12 × 1 with screw-locking, for high speed Ethernet and high speed
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IEC/PAS 61076-2-110 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

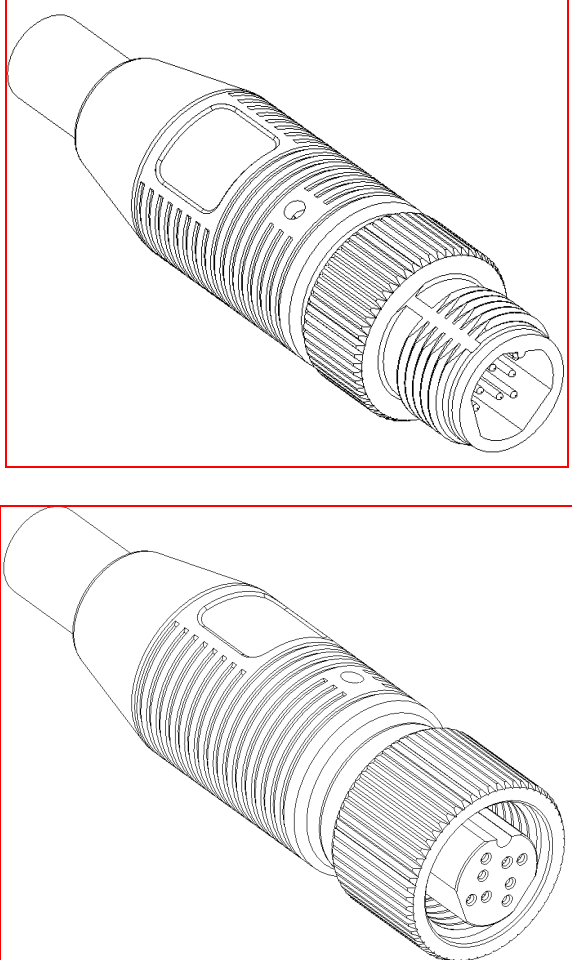
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This PAS shall remain valid for an initial maximum period of 3 years starting from the publication date. The validity may be extended for a single 3-year period, following which it shall be revised to become another type of normative document, or shall be withdrawn.

INTERNATIONAL ELECTROTECHNICAL COMMISSION	IEC 61076-2-110
ELECTRONIC COMPONENTS in accordance with IEC 61076-1	
	<p>Circular connectors M12 × 1 mm 8 poles, for data communication with frequencies up to 500 MHz</p> <p>Pin and socket connector Rewireable – Non- rewireable</p> <p>Free cable connectors Straight and right angle connectors</p> <p>Fixed connectors</p> <p>Flange mounting Rear mounting Single hole mounting</p>

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-110: Circular connectors – Detail specification for circular connectors M 12 × 1 with screw-locking, for high speed Ethernet and high speed data communication with frequencies up to 500 MHz and 10 gigabits/s

1 General information

Throughout this detail specification dimensions are in mm.

1.1 Scope

This Publicly Available Specification (PAS) describes M12 circular connectors for use in industrial environments for high speed Ethernet and high speed data transfer. Applications include, but are not limited to, vision systems and data acquisition. Screw locking M12 connectors consist of fixed and free connectors.

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

1.2 Recommended method of termination

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

1.2.1 Number of contacts or contact cavities

Connector type H	M12	2 to 8 contacts
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1.3 Ratings and characteristics

Rated voltage: 48 V, see 4.2.1, Table 3

Current rating: 0,5 A, see 4.2.3

Insulation resistance: $10^8 \Omega$, see 4.2.5

Climatic category: $-25\text{ }^\circ\text{C} / +85\text{ }^\circ\text{C} / 21$ days see 4.1, Table 2

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 – 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, *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*