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Connectors for electronic equipment –

Part 4-111:
Printed board connectors with assessed quality – Detail specification for two-part power connector modules, for printed boards and backplanes having early mating features, and having a basic grid of 2,5 mm in accordance with IEC 60917-1

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FOREWORD

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6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61076-4-111 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:

FDIS	Report on voting
48B/1123/FDIS	48B/1171/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 3.

Annex A forms an integral part of this standard.

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.

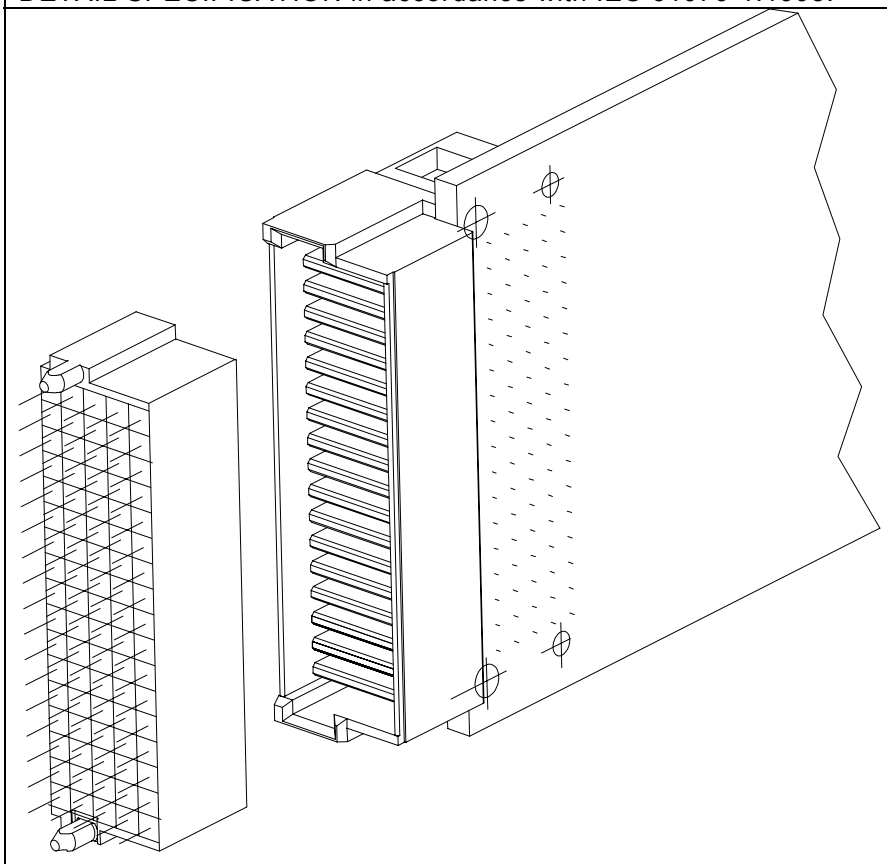
The QC number that appears on the front of cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

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- withdrawn;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

CONNECTORS FOR ELECTRONIC EQUIPMENT –

Part 4-111: Printed board connectors with assessed quality – Detail specification for two-part power connector modules, for printed boards and backplanes having early mating features, and having a basic grid of 2,5 mm in accordance with IEC 60917-1

IEC SC 48B – Connectors Specification available from: IEC Central Office or from the addresses shown on the inside cover.	IEC 61076-4-111 QC 480301XX0012
ELECTRONIC COMPONENTS OF ASSESSED QUALITY DETAIL SPECIFICATION in accordance with IEC 61076-1:1995.	Blank detail specification number 61076-4-001
 IEC 481/01	Modular two-part power connector for printed boards and backplanes having a basic grid of 2,5 mm in accordance with IEC 60917-1. Modular two part power connector having 15 mm mounting pitch and height multiple modules of n x 25 mm with n = 1 and 2. Female press-in connector on the backplane. Male press-in connector on the daughterboard. Performance levels (PL): 1, 2 Assessment level: B, G

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

1 General data

This specification contains modular two-part power connectors having a grid of 2,5 mm for printed boards and backplanes. The described modules are n x 25 mm with n = 1 and n = 2. The required board mounting spacing is 15 mm or more. The standard power contact has a first make / last break function in respect to the first make / last break signal contact described in IEC 61076-4-100. The connector is not intended for mating and unmating under heavy load (non-signal).

Throughout this specification, all dimensions are in millimetres.

1.1 Recommended method of mounting

The free board connector is provided with compliant press-in terminations. The mounting of the free board connector is achieved by press-in pivots; the terminations of the free board connector fit into holes in the printed board according to IEC 60352-5 located on a grid of 2,5 mm. Each contact has five press-in sections.

The fixed board connector is provided with compliant press-in terminations. The mounting of the fixed board connector is achieved by press-in pivots, the terminations of the fixed board connector fit into holes in the printed board according to IEC 60352-5 located on a grid of 2,5 mm. Each contact has five press-in sections. Care must be taken that the five terminations are connected to each other by traces adequate to bear the required current on the backplane, for it might be that, on multispring designs, there are no internal connections within the connector.

For the press-in operation, the tooling recommended by the connector supplier should be used.

See annex A for guidance on the application of these connectors in mechanical structures according to IEC 60917-1.

1.1.1 Number of contacts

Style	A	B
Number of contacts	7	17

1.2 Ratings and characteristics

Rated voltage:	500 V r.m.s. for pollution degree 1 (according to IEC 60664-1, table 4)
	100 V r.m.s. for pollution degree 2 (according to IEC 60664-1, table 4)
Impulse withstand voltage:	2 kV for pollution degrees 1 and 2 (according to IEC 60664-1, table 2)
Current rating:	15 A at 70 °C
Insulation resistance:	10^4 MΩ
Climatic category:	PL1: 55/125/56
	PL2: 55/125/21
Printed board:	Hole diameter: plated-through hole 0,94 mm to 1,09 mm according to IEC 60352-5.
	Board thickness: 1,4 mm min.
Backplane:	Hole diameter: plated-through hole 0,94 mm to 1,09 mm according to IEC 60352-5.
	Board thickness: 1,4 mm min.
Contact spacing:	2,5 mm

1.3 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61076. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61076 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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

IEC 60326-3:1991, *Printed boards – Part 3: Design and use of printed boards*

IEC 60352-5:1995, *Solderless connections – Part 5: Solderless press-in connections – General requirements, test methods and practical guidance*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

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

IEC 60512-1-100:2001, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

IEC 60664-1:1992, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60917-1:1998, *Modular order for the development of mechanical structures for electronic equipment practices – Part 2: Generic standard*

IEC 60917-2-2:1994, *Modular order for the development of mechanical structures for electronic equipment practices – Part 2: Sectional specification – Interface co-ordination dimensions for the 25 mm equipment practice – Section 2: Detail specification – Dimensions for subracks, chassis, backplanes, front panels and plug-in 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*

IEC 61076-4:1995*, Connectors with assessed quality for use in d.c., low frequency analogue and in digital high speed data applications – Part 4: Sectional specification – Printed board connectors*

IEC 61076-4-001:1996, *Connectors with assessed quality, for use in d.c., low-frequency analogue and in digital high-speed data application – Part 4: Printed board connectors – Section 001: Blank detail specification.*

IEC 61076-4-100:2001*, Connectors for electronic equipment – Part 4-100: Printed board connectors with assessed quality – Detail specification for two-part connector modules having a grid of 2,5 mm, for printed boards and backplanes.*

IEC 61076-4-102:1997, *Connectors with assessed quality for use in d.c., low frequency analogue and in digital high speed data applications – Part 4: Printed board connectors – Section 102: Detail specification for two-part single-pole connectors, for multiple uses on plug-in units, with pre-centring, coding and early mating features, having a metric grid in accordance with IEC 60917*

ISO 1302:1992, *Technical drawings – Method of indicating surface texture*