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Interested committees:

Title: BS EN IEC 61076-8-110 ED1 Connectors for electrical and electronic equipment - Product requirements

Part 61076-8-110: Power connectors - Detail specification for 2P power plus 2P signal plastic housing rectangular shielded connectors with 300A rated current and IP68/IPXXB degree of protection

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



48B/3076/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

IEC 61076-8-110 ED1

DATE OF CIRCULATION:

2023-10-27

CLOSING DATE FOR COMMENTS:

2024-01-19

SUPERSEDES DOCUMENTS:

48B/2978/NP, 48B/3003/RVN

IEC SC 48B : ELECTRICAL CONNECTORS	
SECRETARIAT: United States of America	SECRETARY: Mr Jeffrey Toran
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY	

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TITLE:

Connectors for electrical and electronic equipment - Product requirements- Part 61076-8-110: Power connectors-Detail specification for 2P power plus 2P signal plastic housing rectangular shielded connectors with 300A rated current and IP68/IPXXB degree of protection

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –
PRODUCT REQUIREMENTS****Part 8-110: Power connectors – Detail specification for 2P 300 A, 1 000 V plus
2P 5 A 50 V rectangular housing shielded connectors with IP65/IP68 degree of
protection when mated and locked, and IPXXB when unmated**

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IEC 61076-8-110 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.

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

PWI	Report on voting
48/XX/PWI	48/XX/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,

169 available at www.iec.ch/members_experts/refdocs . The main document types developed by
170 IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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

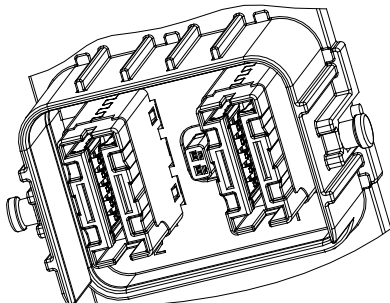
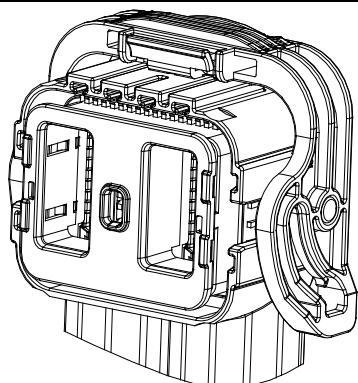
- 174 • reconfirmed,
- 175 • withdrawn,
- 176 • replaced by a revised edition, or
- 177 • amended.

178

179 The National Committees are requested to note that for this publication the stability date
180 is 20XX.

181 THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE
182 DELETED AT THE PUBLICATION STAGE.

183

The International Electrotechnical Commission IEC SC 48B — Electrical connectors		IEC 61076-8-110 Ed.1
Detail specification in accordance with IEC 61076-8		
Fixed connector	 Fixed connector	For rated current of 300 A DC; 2-pole; Female contacts for power; Female contacts for signal; Straight insertion and withdrawal; 360° shielding; Four codings to prevent mismatching.
Free connector	 Free connector	For rated current of 250 A DC; 2P power plus 2P signal; Male contacts for power; First break last make male contacts for signal; Straight insertion and withdrawal; 360° shielding; Four codings to prevent mismatching.

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT– PRODUCT REQUIREMENTS –

Part 8-110: Power connectors – Detail specification for 2P 300 A, 1 000 V plus 2P 5 A 50 V rectangular housing shielded connectors with IP65/IP68 degree of protection when mated and locked, and IPXXB when unmated

1 Scope

This part of IEC 61076-8 describes free and fixed rectangular connectors with:

- 2P power plus 2P signal contacts;
- plastic housing with locking lever and four possible codings;
- 300 A rated current, 1 000 V DC rated voltage on the power section;
- 5 A rated current, 50 V DC rated voltage on the signal section;
- individual shielding around each power contact with relevant shielding termination;
- IP65/IP68 degree of protection when mated and locked and IPXXB on both plug and receptacle parts when unmated

hereinafter referred to as a connector, for use in electrical and electronic equipment, including overall dimensions, interface dimensions, technical characteristics, performance requirements and test methods.

Connectors according to this document are intended for use in class II equipment. Hence, they are not equipped with PE contact.

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 60050-581:2008, *International Electrotechnical Vocabulary – Part 581: Electromechanical components for electronic equipment*

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

IEC 60228:2004, *Conductors of insulated cables*

IEC 60352-1, *Solderless connections – Part 1: Wrapped connections – General requirements, test methods and practical guidance*

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

IEC 60352-3, *Solderless connections – Part 3: Solderless accessible insulation displacement connections – General requirements, test methods and practical guidance*

IEC 60352-4, *Solderless connections – Part 4: Solderless non-accessible insulation displacement 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*

- 227 IEC 60352-7, *Solderless connections – Part 7: Spring clamp connections – General*
228 *requirements, test methods and practical guidance*
- 229 IEC 60512-1-2, *Connectors for electronic equipment – Test and measurements – Part 1-2:*
230 *General examination – Test 1b: Examination of dimension and mass*
- 231 IEC 60512-2-1, *Connectors for electronic equipment – Tests and measurements – Part 2-1:*
232 *Electrical continuity and contact resistance tests – Test 2a: Contact resistance – Millivolt level*
233 *method*
- 234 IEC 60512-2-6, *Connectors for electronic equipment – Tests and measurements – Part 2-6:*
235 *Electrical continuity and contact resistance tests – Test 2f: Housing (shell) electrical continuity*
- 236 IEC 60512-3-1, *Connectors for electronic equipment – Tests and measurements – Part 3-1:*
237 *Insulation tests – Test 3a: Insulation resistance*
- 238 IEC 60512-4-1, *Connectors for electronic equipment – Tests and measurements – Part 4-1:*
239 *Voltage stress tests – Test 4a: Voltage proof*
- 240 IEC 60512-5-2, *Connectors for electronic equipment – Tests and measurements – Part 5-2:*
241 *Current-carrying capacity tests – Test 5b: Current-temperature derating*
- 242 IEC 60512-6-3, *Connectors for electronic equipment – Tests and measurements – Part 6-3:*
243 *Dynamic stress tests – Test 6c: Shock*
- 244 IEC 60512-6-4, *Connectors for electronic equipment – Tests and measurements – Part 6-4:*
245 *Dynamic stress tests – Test 6d: Vibration (sinusoidal)*
- 246 IEC 60512-7-1, *Connectors for electronic equipment – Tests and measurements – Part 7-1:*
247 *Impact tests (free connectors) – Test 7a: Free fall (repeated)*
- 248 IEC 60512-9-1, *Connectors for electronic equipment – Tests and measurements – Part 9-1:*
249 *Endurance tests – Test 9a: Mechanical operation*
- 250 IEC 60512-9-2, *Connectors for electronic equipment – Tests and measurements – Part 9-2:*
251 *Endurance tests – Test 9b: Electrical load and temperature*
- 252 IEC 60512-11-3, *Connectors for electronic equipment – Tests and measurements – Part 11-3:*
253 *Climatic tests – Test 11c: Damp heat, steady state*
- 254 IEC 60512-11-4, *Connectors for electronic equipment – Tests and measurements – Part 11-4:*
255 *Climatic tests – Test 11d: Rapid change of temperature*
- 256 IEC 60512-11-6, *Connectors for electronic equipment – Tests and measurements – Part 11-6:*
257 *Climatic tests – Test 11f: Corrosion, salt mist*
- 258 IEC 60512-11-9, *Connectors for electronic equipment – Tests and measurements – Part 11-9:*
259 *Climatic tests – Test 11i: Dry heat*
- 260 IEC 60512-11-10, *Connectors for electronic equipment – Tests and measurements – Part 11-*
261 *10: Climatic tests – Test 11j: Cold*
- 262 IEC 60512-11-11, *Connectors for electronic equipment – Tests and measurements – Part 11-*
263 *11: Climatic tests – Test 11k: Low air pressure*
- 264 IEC 60512-13-1, *Connectors for electronic equipment – Tests and measurements – Part 13-1:*
265 *Mechanical operation tests – Test 13a: Engaging and separating forces*
- 266 IEC 60512-13-5, *Connectors for electronic equipment – Tests and measurements – Part 13-5:*
267 *Mechanical operation tests – Test 13e: Polarizing and keying method*
- 268 IEC 60512-15-1, *Connectors for electronic equipment – Tests and measurements – Part 15-1:*
269 *Connector tests (mechanical) – Test 15a: Contact retention in insert*