



## BSI Standards Publication

# Connectors for electrical and electronic equipment - Product requirements

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Part 3-122: Detail specification for 8-way, shielded, free and fixed connectors for I/O and Gigabit Ethernet applications in harsh environments (IEC 61076-3-122:2017)

This is a preview of "BS EN 61076-3-122:20...". [Click here to purchase the full version from the ANSI store.](#)

## National foreword

This British Standard is the UK implementation of EN 61076-3-122:2017. It is identical to IEC 61076-3-122:2017. It supersedes PD IEC/PAS 61076-3-122:2015 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/48, Electromechanical components and mechanical structures for electronic equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Published by BSI Standards Limited 2017

ISBN 978 0 580 91559 8

ICS 31.240; 31.220.10

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2017.

### Amendments/corrigenda issued since publication

| Date | Text affected |
|------|---------------|
|------|---------------|

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## EUROPÄISCHE NORM

September 2017

ICS 31.220.10

English Version

Connectors for electrical and electronic equipment -  
Product requirements - Part 3-122: Detail specification for 8-way,  
shielded, free and fixed connectors for I/O and Gigabit Ethernet  
applications in harsh environments  
(IEC 61076-3-122:2017)

Connecteurs pour équipements électriques et électroniques -  
Exigences de produit - Partie 3-122 : Spécification particulière  
pour les fiches et les embases écrantées à 8 voies pour  
applications E/S et Gigabit dans les environnements sévères  
(IEC 61076-3-122:2017)

Steckverbinder für elektrische und elektronische  
Einrichtungen - Produktanforderungen -  
Teil 3-122: Bauartspezifikation für geschirmte freie und feste  
Steckverbinder, 8-polig, für I/O- und Gigabit-Anwendungen in  
rauen Umgebungen  
(IEC 61076-3-122:2017)

This European Standard was approved by CENELEC on 2017-06-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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## **European foreword**

The text of document 48B/2554/FDIS, future edition 1 of IEC 61076-3-122, prepared by SC 48B "Electrical connectors", of IEC/TC 48 "Electrical connectors and mechanical structures for electrical and electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61076-3-122:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-03-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-06-26

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## **Endorsement notice**

The text of the International Standard IEC 61076-3-122:2017 was approved by CENELEC as a European Standard without any modification.

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(normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

| <u>Publication</u> | <u>Year</u> | <u>Title</u>   | <u>EN/HD</u>  | <u>Year</u> |
|--------------------|-------------|--|---------------|-------------|
| IEC 60050-581      | -           | International Electrotechnical Vocabulary (IEV) - Part 581: Electromechanical components for electronic equipment  | -             | -           |
| IEC 60068-1        | -           | Environmental testing - Part 1: General and guidance   | EN 60068-1    | -           |
| IEC 60068-2-38     | -           | Environmental testing - Part 2-38: Tests - Test Z/AD: Composite temperature/humidity cyclic test   | EN 60068-2-38 | -           |
| IEC 60512-1        | -           | Connectors for electronic equipment - Tests and measurements - Part 1: General   | EN 60512-1    | -           |
| IEC 60512-1-1      | -           | Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination   | EN 60512-1-1  | -           |
| IEC 60512-1-2      | -           | Connectors for electronic equipment - Tests and measurements - Part 1-2: General examination - Test 1b: Examination of dimension and mass  | EN 60512-1-2  | -           |
| IEC 60512-2-1      | -           | Connectors for electronic equipment - Tests and measurements - Part 2-1: Electrical continuity and contact resistance tests - Test 2a: Contact resistance - Millivolt level method | EN 60512-2-1  | -           |
| IEC 60512-3-1      | -           | Connectors for electronic equipment - Tests and measurements - Part 3-1: Insulation tests - Test 3a: Insulation resistance   | EN 60512-3-1  | -           |

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|------------------|---|--|-----------------|---|
| IEC 60512-4-1    | - | Connectors for electronic equipment - Tests and measurements - Part 4-1: Voltage stress tests - Test 4a: Voltage proof   | EN 60512-4-1    | - |
| IEC 60512-5-2    | - | Connectors for electronic equipment - Tests and measurements - Part 5-2: Current-carrying capacity tests - Test 5b: Current-temperature derating   | EN 60512-5-2    | - |
| IEC 60512-6-3    | - | Connectors for electronic equipment - Tests and measurements - Part 6-3: Dynamic stress tests - Test 6c: Shock   | EN 60512-6-3    | - |
| IEC 60512-6-4    | - | Connectors for electronic equipment - Tests and measurements - Part 6-4: Dynamic stress tests - Test 6d: Vibration (sinusoidal)  | EN 60512-6-4    | - |
| IEC 60512-9-1    | - | Connectors for electronic equipment - Tests and measurements - Part 9-1: Endurance tests - Test 9a: Mechanical operation   | EN 60512-9-1    | - |
| IEC 60512-11-3   | - | Connectors for electronic equipment - Tests and measurements - Part 11-3: Climatic tests - Test 11c: Damp heat, steady state   | EN 60512-11-3   | - |
| IEC 60512-11-4   | - | Connectors for electronic equipment - Tests and measurements - Part 11-4: Climatic tests - Test 11d: Rapid change of temperature   | EN 60512-11-4   | - |
| IEC 60512-11-7   | - | Connectors for electronic equipment - Tests and measurements - Part 11- 7: Climatic tests - Test 11g: Flowing mixed gas corrosion test   | EN 60512-11-7   | - |
| IEC 60512-11-9   | - | Connectors for electronic equipment - Tests and measurements - Part 11-9: Climatic tests - Test 11i: Dry heat  | EN 60512-11-9   | - |
| IEC 60512-11-10  | - | Connectors for electronic equipment - Tests and measurements - Part 11-10: Climatic tests - Test 11j: Cold   | EN 60512-11-10  | - |
| IEC 60512-13-2   | - | Connectors for electronic equipment - Tests and measurements - Part 13-2: Mechanical operating tests - Test 13b: Insertion and withdrawal forces   | EN 60512-13-2   | - |
| IEC 60512-15-6   | - | Connectors for electronic equipment - Tests and measurements - Part 15-6: Connector tests (mechanical) - Test 15f: Effectiveness of connector coupling devices   | EN 60512-15-6   | - |
| IEC 60512-26-100 | - | Connectors for electronic equipment - Tests and measurements - Part 26-100: Measurement setup, test and reference arrangements and measurements for connectors according to IEC 60603-7 - Tests 26a to 26g | EN 60512-26-100 | - |

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|             |      |  |            |      |
|-------------|------|--|------------|------|
| IEC 61076-1 | 2006 | Connectors for electronic equipment -<br>Product requirements - Part 1: Generic<br>specification                               | EN 61076-1 | 2006 |
| IEC 61076-3 | -    | Connectors for electronic equipment -<br>Product requirements - Part 3:<br>Rectangular connectors - Sectional<br>specification | EN 61076-3 | -    |

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## CONTENTS

|   |    |
|---|----|
| FOREWORD.....   | 4  |
| 1 Scope.....  | 7  |
| 2 Normative references .....  | 7  |
| 3 Terms and definitions .....                                       | 8  |
| 4 Mating information.....   | 9  |
| 4.1 General.....  | 9  |
| 4.2 Contacts – mating conditions .....                              | 9  |
| 4.3 Fixed connector Type I .....                                    | 10 |
| 4.4 Free connector Type I.....                                      | 12 |
| 4.5 Fixed connector Type II .....                                   | 14 |
| 4.6 Free connector Type II.....                                     | 16 |
| 5 Characteristics .....   | 17 |
| 5.1 General.....  | 17 |
| 5.2 Pin and pair grouping assignment .....                          | 17 |
| 5.3 Classification into climatic category .....                     | 18 |
| 5.4 Electrical characteristics .....                                | 19 |
| 5.4.1 Voltage proof.....  | 19 |
| 5.4.2 Voltage rating .....  | 19 |
| 5.4.3 Current-temperature derating.....                             | 19 |
| 5.4.4 Initial insulation resistance .....                           | 20 |
| 5.5 Mechanical characteristics .....                                | 20 |
| 5.5.1 Mechanical operation.....                                     | 20 |
| 5.5.2 Insertion and withdrawal forces .....                         | 20 |
| 5.6 Transmission performance .....                                  | 20 |
| 5.6.1 General .....   | 20 |
| 5.6.2 Insertion loss .....  | 21 |
| 5.6.3 Return loss .....   | 21 |
| 5.6.4 Near end cross talk.....                                      | 21 |
| 5.6.5 Far end cross talk.....                                       | 21 |
| 5.6.6 Transverse conversion loss .....                              | 21 |
| 5.6.7 Transfer conversion transfer loss.....                        | 21 |
| 5.6.8 Transfer impedance.....                                       | 21 |
| 6 Tests and test schedule.....                                      | 22 |
| 6.1 General.....  | 22 |
| 6.2 Arrangement for contact resistance test (Figure 8).....         | 22 |
| 6.3 Arrangement for vibration test (test phase DP3) (Figure 9)..... | 23 |
| 6.4 Test procedures and measuring methods.....                      | 23 |
| 6.5 Preconditioning.....  | 24 |
| 6.6 Test schedules.....   | 24 |
| 6.6.1 General .....   | 24 |
| 6.6.2 Basic (minimum) test schedule .....                           | 24 |
| 6.6.3 Full test schedule .....                                      | 24 |
| 7 Mounting of specimens .....                                       | 31 |

Figure 1 – Contact interface dimensions with a free (male) connector (right side) mated with a fixed (female) connector (left side) ..... 9

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|   |    |
|---|----|
| Figure 2 – Fixed female connector Type I .....  | 10 |
| Figure 3 – Free male connector Type I.....  | 12 |
| Figure 4 – Fixed (female) connector Type II.....  | 14 |
| Figure 5 – Free (male) connector Type II.....   | 16 |
| Figure 6 – Fixed connector pin and pair grouping assignment for Type I (left, with coding edges on one short side) and Type II (right, with coding edges on one long side), front view of connector ..... | 18 |
| Figure 7 – Connector de-rating curve .....  | 20 |
| Figure 8 – Arrangement for contact resistance test .....  | 22 |
| Figure 9 – Arrangement for vibration test .....   | 23 |
| <br>  |    |
| Table 1 – Dimensions for Figure 1 .....   | 9  |
| Table 2 – Dimensions for Figure 2 .....   | 11 |
| Table 3 – Dimensions for Figure 3 .....   | 13 |
| Table 4 – Dimensions for Figure 4 .....   | 15 |
| Table 5 – Dimensions for Figure 5 .....   | 17 |
| Table 6 – Pin assignment for 10/100 Mb Ethernet.....  | 18 |
| Table 7 – Pin assignment for 1 Gb Ethernet.....   | 18 |
| Table 8 – Climatic category.....  | 19 |
| Table 9 – Test group P .....  | 25 |
| Table 10 – Test group AP .....  | 25 |
| Table 11 – Test group BP .....  | 27 |
| Table 12 – Test group CP .....  | 28 |
| Table 13 – Test group DP .....  | 29 |
| Table 14 – Test group EP .....  | 30 |
| Table 15 – Test group FP .....  | 31 |

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

#### Part 3-122: Detail specification for 8-way, shielded, free and fixed connectors for I/O and Gigabit Ethernet applications in harsh environments

#### FOREWORD

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International Standard IEC 61076-3-122 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

This first edition cancels and replaces IEC PAS 61076-3-122 published in 2015. This edition constitutes a technical revision.

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

|               |                  |
|---------------|------------------|
| FDIS          | Report on voting |
| 48B/2554/FDIS | 48B/2563/RVD     |

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Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61076 series, published under the general title *Connectors for electronic equipment – Product requirements*, can be found on the IEC website.

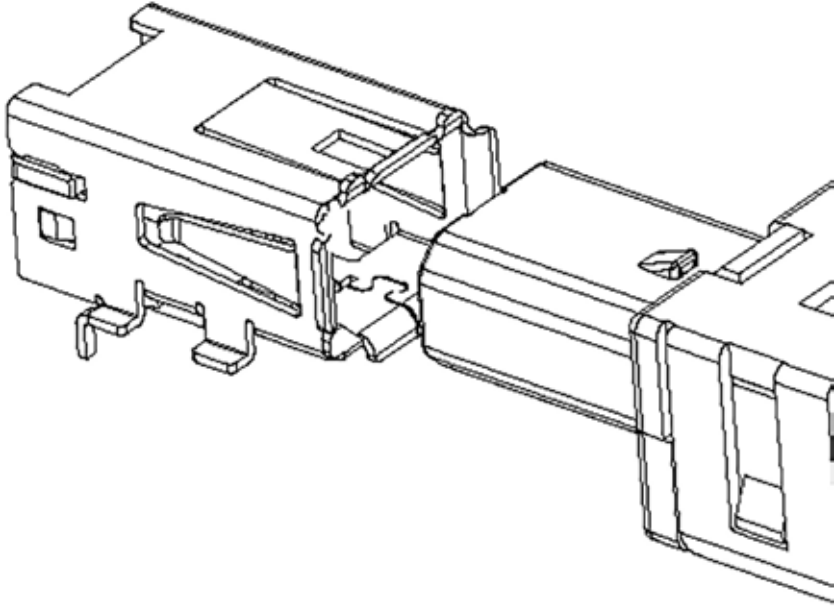
The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

A bilingual version of this publication may be issued at a later date.

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|  |  |
|--|--|
|  | IEC 61076-3-122:2017   |
| Subcommittee 48B: Electrical connectors  |  |
|  <p style="text-align: right; margin-right: 20px;"><i>IEC</i></p>              | Detail specification for 8-way, shielded, free and fixed connectors for I/O and Gigabit Ethernet applications in harsh environments  |
| <p>NOTE The above view shows a Type I connector pair, with coding edges on a short side; for Type II connectors the coding edges are located on a long side.</p> | Fixed connectors are mounted on printed circuit board by means of soldering or press-in, the free connector is attached to wires by means of soldering, crimping, IDC or other termination technology. |

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## CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

### Part 3-122: Detail specification for 8-way, shielded, free and fixed connectors for I/O and Gigabit Ethernet applications in harsh environments

#### 1 Scope

This part of IEC 61076 covers 8-way, shielded, free and fixed rectangular connectors for I/O and Gigabit Ethernet applications, suitable for use in harsh environments, and is intended to specify the common dimensions, mechanical, electrical and environmental characteristics and tests for this family of connectors.

#### 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, *International Electrotechnical Vocabulary (IEV) – Chapter 581: Electromechanical components for electronic equipment*

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

IEC 60068-2-38, *Environmental testing – Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test*

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

IEC 60512-1-1, *Connectors for electronic equipment – Tests and measurements – Part 1-1: General examination – Test 1a: Visual examination*

IEC 60512-1-2, *Connectors for electronic equipment – Tests and measurements – Part 1-2: General examination – Test 1b: Examination of dimension and mass*

IEC 60512-2-1, *Connectors for electronic equipment – Tests and measurements – Part 2-1: Electrical continuity and contact resistance tests – Test 2a: Contact resistance – Millivolt level method*

IEC 60512-3-1, *Connectors for electronic equipment – Tests and measurements – Part 3-1: Insulation tests – Test 3a: Insulation resistance*

IEC 60512-4-1, *Connectors for electronic equipment – Tests and measurements – Part 4-1: Voltage stress tests – Test 4a: Voltage proof*

IEC 60512-5-2, *Connectors for electronic equipment – Tests and measurements – Part 5-2: Current-carrying capacity tests – Test 5b: Current-temperature derating*