

Connectors for electronic equipment -
Product requirements -
Part 3-120: Rectangular connectors -
Detail specification for rewirable power connectors
with snap locking for rated voltage of 250 V d.c.
and rated current of 30 A
(IEC 61076-3-120:2016)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61076-3-120:2016 sisaldab Euroopa standardi EN 61076-3-120:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 61076-3-120:2016 consists of the English text of the European standard EN 61076-3-120:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.12.2016.	Date of Availability of the European standard is 23.12.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 31.220.10

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

ICS 31.220.10

English Version

Connectors for electronic equipment - Product requirements -
Part 3-120: Rectangular connectors - Detail specification for
rewirable power connectors with snap locking for rated voltage of
250 V d.c. and rated current of 30 A
(IEC 61076-3-120:2016)

Connecteurs pour équipements électroniques - Exigences
de produit - Partie 3-120: Connecteurs rectangulaires -
Spécification particulière pour connecteurs de puissance
démontables à encliquetage pour une tension continue
assignée de 250 V et un courant assigné de 30 A
(IEC 61076-3-120:2016)

Steckverbinder für elektronische Einrichtungen -
Produktanforderungen - Teil 3-120: Rechteckige
Steckverbinder - Bauartspezifikation für
wiederanschließbare Leistungssteckverbinder mit
Rastverriegelung für 250 V Bemessungsgleichspannung
und einen Bemessungsstrom von 30 A
(IEC 61076-3-120:2016)

This European Standard was approved by CENELEC on 2016-09-29. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

European foreword

The text of document 48B/2498/FDIS, future edition 1 of IEC 61076-3-120, 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 61076-3-120:2016.

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) 2017-06-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-09-29

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61076-3-120:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60352-7	NOTE	Harmonized as EN 60352-7.
IEC 60512-1-100	NOTE	Harmonized as EN 60512-1-100.
IEC 60999-2:2003	NOTE	Harmonized as EN 60999-2:2003 (not modified).
ISO 11469:2000	NOTE	Harmonized as EN ISO 11469:2000 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-581	2008	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 60228	2004	Conductors of insulated cables	EN 60228	2005
-	-		+ corr. May	2005
IEC 60352	series	Solderless connections	EN 60352	series
IEC 60512	series	Connectors for electronic equipment - Tests and measurements	EN 60512	series
IEC 60512-1-2	2002	Connectors for electronic equipment - Tests and measurements - Part 1-2: General examination - Test 1b: Examination of dimension and mass	EN 60512-1-2	2002
IEC 60999-1	1999	Connecting devices - Electrical copper conductors - Safety requirements for screw-type and screwless-type clamping units - Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm ² up to 35 mm ² (included)	EN 60999-1	2000
IEC 61076-1	2006	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	2006
IEC 61076-3	2008	Connectors for electronic equipment - Product requirements - Part 3: Rectangular connectors - Sectional specification	EN 61076-3	2008

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61984	2008	Connectors - Safety requirements and tests	EN 61984	2009
IEC 62430	-	Environmentally conscious design for electrical and electronic products	EN 62430	-
IEC Guide 109	-	Environmental aspects - Inclusion in electrotechnical product standards	-	-

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references.....	8
3 Terms and definitions	9
4 Technical information.....	9
4.1 Ratings and characteristics	9
4.2 Performance levels	9
4.3 Compatibility levels	9
4.4 Classification into climatic categories	9
4.5 Clearance and creepage distances	9
4.6 Current-carrying capacity	10
4.7 Marking.....	10
5 Dimensional information	10
5.1 General.....	10
5.2 Isometric view and common features (see Figure 1 and Figure 2).....	10
5.3 Fixed connectors (see Figure 3 and Table 2)	11
5.3.1 Dimensions.....	11
5.3.2 Terminations.....	12
5.4 Free connectors (see Figure 4 and Table 3).....	13
5.4.1 Dimensions.....	13
5.4.2 Terminations.....	14
5.5 Accessories	14
5.6 Mounting information.....	14
5.7 Gauges.....	14
5.7.1 Sizing gauges and retention force gauges (see Figure 5 and Table 4)	14
6 Characteristics	15
6.1 Classification into climatic categories	15
6.2 Electrical characteristics.....	15
6.2.1 Clearance and creepage distance.....	15
6.2.2 Voltage proof	15
6.2.3 Contact resistance	15
6.2.4 Insulation resistance	16
6.2.5 Temperature rise.....	16
6.3 Mechanical characteristics	16
6.3.1 Mechanical operation	16
6.3.2 Insertion and withdrawal forces	16
6.3.3 Contact retention in insert	16
6.3.4 Polarizing and coding method.....	17
6.3.5 Effectiveness of connector coupling devices	17
6.3.6 Conductor secureness.....	17
6.4 Dynamic stress test.....	17
6.4.1 Vibration (sine)	17
6.4.2 Shock	17
6.5 Climatic test.....	18
6.5.1 Damp heat steady state.....	18

6.5.2	Rapid change of temperature	18
6.5.3	Salt spray	18
6.5.4	Dry heat.....	18
6.6	Environmental aspects	18
6.6.1	Marking of insulation material (plastic).....	18
6.6.2	Design/use of material	18
7	Test schedule	19
7.1	General.....	19
7.2	Test schedules.....	19
7.2.1	Basic (minimum) test schedule	19
7.2.2	Full test schedule.....	19
7.3	Test procedures and measurement methods.....	24
7.4	Pre-conditioning.....	24
7.5	Wiring and mounting of test specimens.....	24
7.5.1	Wiring.....	24
7.5.2	Mounting.....	24
	Bibliography	25
	Figure 1 – Isometric view of free connector	10
	Figure 2 – Isometric view of fixed connector	10
	Figure 3 – Fixed connector.....	11
	Figure 4 – Free connector	13
	Figure 5 – Gauge.....	15
	Table 1 – Climatic categories	9
	Table 2 – Dimensions of the fixed connector	12
	Table 3 – Dimensions of the free connector.....	14
	Table 4 – Gauge dimensions.....	15
	Table 5 – Conductor secureness test	17
	Table 6 – Number of test specimens	19
	Table 7 – Test group P	19
	Table 8 – Test group AP	20
	Table 9 – Test group BP	21
	Table 10 – Test group CP	22
	Table 11 – Test group DP	22
	Table 12 – Test group EP	23
	Table 13 – Test group JP	23
	Table 14 – Test group KP	24

INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning connectors given in this specification.

The IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to give free licences with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with the IEC.

Information may be obtained from:

Sichuan Huafeng Enterprise Group Co., Ltd.

Product and Market Planning Department

No.36 Yuejin Road, Mianyang, Sichuan, China

Telephone: 0086-816-231 1322

FAX: 0086-816-233 2716

Email: pangbin@huafeng796.com

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC shall not be held responsible for identifying any or all such patent rights.

ISO (www.iso.org/patents) and IEC (<http://patents.iec.ch>) maintain on-line data bases of patents relevant to their standards. Users are encouraged to consult the data bases for the most up to date information concerning patents.

Preview generated by EVS