

STN	Konektory pre elektrické a elektronické zariadenia Požiadavky na výrobok Časť 3-119: Pravouhlé konektory Podrobná špecifikácia pre netienené, voľné i pevné 10-pólové konektory pripájané ťahom a tlakom pre priemyselné prostredie s frekvenciami do 100 MHz	STN EN IEC 61076-3-119 35 4621
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Connectors for electrical and electronic equipment - Product requirements - Part 3-119: Rectangular connectors - Detail specification for shielded and unshielded, free and fixed 10-way connectors with push-pull coupling for industrial environments for data transmission with frequencies up to 100 MHz

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/19

Obsahuje: EN IEC 61076-3-119:2018, IEC 61076-3-119:2017

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EUROPEAN STANDARD

EN IEC 61076-3-119

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March 2018

ICS 31.220.10

English Version

**Connectors for electrical and electronic equipment - Product requirements - Part 3-119: Rectangular connectors - Detail specification for shielded and unshielded, free and fixed 10-way connectors with push-pull coupling for industrial environments for data transmission with frequencies up to 100 MHz
(IEC 61076-3-119:2017)**

Connecteurs pour équipements électriques et électroniques
- Exigences de produit - Partie 3-119: Connecteurs rectangulaires - Spécification particulière pour les fiches et les embases écrantées et non écrantées à 10 voies avec couplage de type pousser-tirer dans des environnements industriels pour la transmission de données à des fréquences jusqu'à 100 MHz
(IEC 61076-3-119:2017)

Steckverbinder für elektronische Einrichtungen -
Produktanforderungen - Teil 3-119: Rechteckige Steckverbinder - Bauartspezifikation für geschirmte und ungeschirmte, freie und feste Steckverbinder, 10-polig, mit Push-pull-Verriegelung für industrielle Umgebungen für Datenübertragungen mit Frequenzen bis zu 100 MHz
(IEC 61076-3-119:2017)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 61076-3-119:2018 (E)**European foreword**

The text of document 48B/2602/FDIS, future edition 1 of IEC 61076-3-119, prepared by IEC/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 IEC 61076-3-119:2018.

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) 2018-10-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-01-12

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Endorsement notice

The text of the International Standard IEC 61076-3-119:2017 was approved by CENELEC as a European Standard without any modification.

Annex ZA (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 Where 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 - Part 581: Electromechanical components for electronic equipment	-	-
IEC 60068-1	-	Environmental testing -- Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-20	2008	Environmental testing -- Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads	EN 60068-2-20	2008
IEC 60352-2	-	Solderless connections -- Part 2: Crimped connections - General requirements, test methods and practical guidance	EN 60352-2	-
IEC 60352-5	-	Solderless connections -- Part 5: Press-in connections - General requirements, test methods and practical guidance	EN 60352-5	-
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	-
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 60512-5-1	-	Connectors for electronic equipment - Tests and measurements -- Part 5-1: Current-carrying capacity tests - Test 5a: Temperature rise	EN 60512-5-1	-

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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 60512-11-1	-	Electromechanical components for electronic equipment - Basic testing procedures and measuring methods -- Part 11: Climatic tests -- Section 1: Test 11a - Climatic sequence	EN 60512-11-1	-
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 60512-11-12	-	Connectors for electronic equipment - Tests and measurements -- Part 11-12: Climatic tests - Test 11m: Damp heat, cyclic	EN 60512-11-12	-
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 60512-13-5	-	Connectors for electronic equipment - Tests and measurements -- Part 13-5: Mechanical operating tests - Test 13e: Polarizing and keying method	EN 60512-13-5	-
IEC 60512-15-1	-	Connectors for electronic equipment - Tests and measurements -- Part 15-1: Connector tests (mechanical) - Test 15a: Contact retention in insert	EN 60512-15-1	-
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 60512-15-7	-	Connectors for electronic equipment - Tests and measurements -- Part 15-7: Connector tests (mechanical) - Test 15g: Robustness of protective cover attachment	EN 60512-15-7	-

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IEC 60512-16-5	-	Connectors for electronic equipment - Tests and measurements -- Part 16-5: Mechanical tests on contacts and terminations - Test 16e: Gauge retention force (resilient contacts)	EN 60512-16-5	-
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	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
-	-		+ corrigendum May	1993
+ A1	1999		+ A1	2000
+ A2	2013		+ A2	2013
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 61984	2008	Connectors - Safety requirements and tests	EN 61984	2009
IEC 62197-1	2006	Connectors for electronic equipment - Quality assessment requirements -- Part 1: Generic specification	EN 62197-1	2006
IEC 62430	2009	Environmentally conscious design for electrical and electronic products	EN 62430	2009
IEC Guide 109	-	Environmental aspects - Inclusion in electrotechnical product standards	-	-
ISO 128	series	Technical drawings_ - General principles of presentation_ - Part_1: Introduction and index	-	-
ISO 1101	2017	Geometrical product specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out	EN ISO 1101	2017
ISO 1302	2002	Geometrical Product Specifications (GPS) - Indication of surface texture in technical product documentation	EN ISO 1302	2002
ISO 11469	2016	Plastics - Generic identification and marking of plastics products	EN ISO 11469	2016



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INTERNATIONAL STANDARD

**Connectors for electrical and electronic equipment – Product requirements –
Part 3-119: Rectangular connectors – Detail specification for shielded and
unshielded, free and fixed 10-way connectors with push-pull coupling for
industrial environments for data transmission with frequencies
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IEC 61076-3-119

Edition 1.0 2017-12

INTERNATIONAL STANDARD

**Connectors for electrical and electronic equipment – Product requirements –
Part 3-119: Rectangular connectors – Detail specification for shielded and
unshielded, free and fixed 10-way connectors with push-pull coupling for
industrial environments for data transmission with frequencies
up to 100 MHz**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –
PRODUCT REQUIREMENTS –****Part 3-119: Rectangular connectors – Detail specification for shielded and unshielded, free and fixed 10-way connectors with push-pull coupling for industrial environments for data transmission with frequencies up to 100 MHz**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61076-3-119 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 61076-3-119 published in 2013. This edition constitutes a technical revision.

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

FDIS	Report on voting
48B/2602/FDIS	48B/2617/RVD

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.

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 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.

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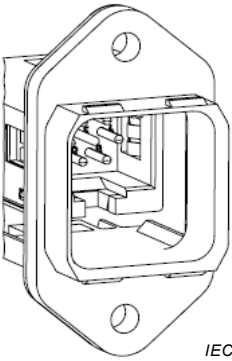
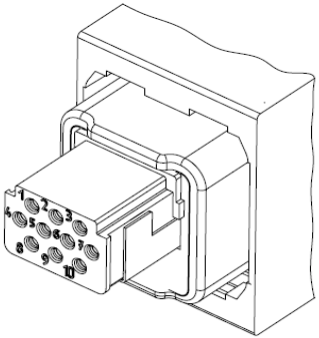
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IEC SC 48B – Connector specifications available from: IEC General secretariat or from the addresses shown on the inside cover.		IEC 61076-3-119 Ed. 1.0
ELECTRONIC COMPONENTS DETAIL SPECIFICATION in accordance with IEC 61076-1		
<p>Outline drawing</p>  <p style="text-align: right;"><i>IEC</i></p>	 <p style="text-align: right;"><i>IEC</i></p>	<p>10-way rectangular connector</p> <p>round contacts Ø 1 mm</p> <p>screw or crimp terminations, solder or printed board connections upon agreement between manufacturer and user</p> <p>shielded and unshielded, free and fixed</p> <p>for data transmission with frequencies up to 100 MHz</p> <p>with push-pull coupling</p>
		Fixed and free connectors, for industrial environments

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 3-119: Rectangular connectors – Detail specification for shielded and unshielded, free and fixed 10-way connectors with push-pull coupling for industrial environments for data transmission with frequencies up to 100 MHz

1 Scope

This part of IEC 61076-3 establishes specifications and test requirements for 10-way shielded and unshielded rectangular, free and fixed connectors, with push-pull coupling, for data transmission with frequencies up to 100 MHz and for use in industrial environments.

This document specifies free and fixed connectors with round contacts, suitable for screw or crimp terminations. Other terminations techniques, such as solder or printed board connections are upon agreement between manufacturer and user. The free and fixed connectors have a push-pull locking mechanism for IP65 and IP67 protection according to IEC 60529.

Connectors according this document are without breaking capacity COC according to 3.9 of IEC 61984:2008, therefore they are not intended to be engaged or disengaged in normal use when live or under load, if not otherwise specified by the manufacturer.

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 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60352-2, *Solderless connections – Part 2: Crimped 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 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 60512-5-1, *Connectors for electronic equipment – Tests and measurements – Part 5-1: Current-carrying capacity tests – Test 5a: Temperature rise*

IEC 60512-6-3, *Connectors for electronic equipment – Tests and measurements – Part 6-3: Dynamic stress tests – Test 6c: Shock*

IEC 60512-6-4, *Connectors for electronic equipment – Tests and measurements – Part 6-4: Dynamic stress tests – Test 6d: Vibration (sinusoidal)*

IEC 60512-9-1, *Connectors for electronic equipment – Tests and measurements – Part 9-1: Endurance tests – Test 9a: Mechanical operation*

IEC 60512-11-1, *Electromechanical components for electronic equipment – Basic testing procedures and measuring methods – Part 11: Climatic tests – Section 1: Test 11a – Climatic sequence*

IEC 60512-11-3, *Connectors for electronic equipment – Tests and measurements – Part 11-3: Climatic tests – Test 11c: Damp heat, steady state*

IEC 60512-11-4, *Connectors for electronic equipment – Tests and measurements – Part 11-4: Climatic tests – Test 11d: Rapid change of temperature*

IEC 60512-11-7, *Connectors for electronic equipment – Tests and measurements – Part 11-7: Climatic tests – Test 11g: Flowing mixed gas corrosion test*

IEC 60512-11-9, *Connectors for electronic equipment – Tests and measurements – Part 11-9: Climatic tests – Test 11i: Dry heat*

IEC 60512-11-10, *Connectors for electronic equipment – Tests and measurements – Part 11-10: Climatic tests – Test 11j: Cold*

IEC 60512-11-12, *Connectors for electronic equipment – Tests and measurements – Part 11-12: Climatic tests – Test 11m: Damp heat, cyclic*

IEC 60512-13-2, *Connectors for electronic equipment – Tests and measurements – Part 13-2: Mechanical operation tests – Test 13b: Insertion and withdrawal forces*

IEC 60512-13-5, *Connectors for electronic equipment – Tests and measurements – Part 13-5: Mechanical operation tests – Test 13e: Polarizing and keying method*

IEC 60512-15-1, *Connectors for electronic equipment – Tests and measurements – Part 15-1: Connector tests (mechanical) – Test 15a: Contact retention in insert*

IEC 60512-15-6, *Connectors for electronic equipment – Tests and measurements – Part 15-6: Connector tests (mechanical) – Test 15f: Effectiveness of connector coupling devices*

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IEC 60512-15-7, *Connectors for electronic equipment – Tests and measurements – Part 15-7: Connector tests (mechanical) – Test 15g: Robustness of protective cover attachment*

IEC 60512-16-5, *Connectors for electronic equipment – Tests and measurements – Part 16-5: Mechanical tests on contacts and terminations – Test 16e: Gauge retention force (resilient contacts)*

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koniec náhľadu – text ďalej pokračuje v platenej verzii STN