

PUBLICLY AVAILABLE SPECIFICATION

Connectors for electrical and electronic equipment – Product requirements –
Part 3-126: Rectangular connectors – Detail specification for 5 pole power
connectors for industrial environments with push-pull locking

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms and definitions	11
4 Technical information	12
4.1 Systems of levels.....	12
4.1.1 Performance levels	12
4.1.2 Compatibility levels, according to IEC 61076-1:2006.....	12
4.2 Classification into climatic categories.....	12
4.3 Clearance and creepage distances	12
4.4 Current-carrying capacity	12
4.5 Marking.....	12
5 Dimensional information	13
5.1 Common features.....	13
5.2 Reference system	13
5.3 Engagement (mating) information	13
5.3.1 Engaging (mating) direction	13
5.3.2 Perpendicular to the engaging (mating) direction	13
5.3.3 Inclination.....	13
5.4 Fixed connectors	14
5.4.1 Dimensions.....	14
5.4.2 Electrical terminations.....	16
5.5 Free connectors.....	16
5.5.1 Dimensions.....	16
5.5.2 Electrical terminations	18
5.6 Accessories	18
5.7 Mounting information for connectors	19
5.8 Gauges.....	19
5.8.1 Sizing gauges and retention force gauges	19
5.8.2 Mechanical function, engaging/separating/insertion/withdrawal force gauges	20
5.8.3 Probes.....	20
5.8.4 Contact resistance gauge	20
5.8.5 Test panel (for voltage proof test).....	20
5.8.6 Test panel (for EMC/crosstalk, etc.).....	20
6 Characteristics	20
6.1 General.....	20
6.2 Pin assignment and other definitions.....	21
6.3 Classification into climatic categories.....	21
6.4 Electrical characteristics	21
6.4.1 Creepage and clearance distances	21
6.4.2 Voltage proof.....	21
6.4.3 Current-carrying capacity.....	22
6.4.4 Contact and shield resistance.....	23
6.4.5 Insulation resistance.....	23

6.4.6	Impedance.....	24
6.4.7	Transmission characteristics.....	24
6.5	Mechanical characteristics.....	24
6.5.1	Mechanical operation.....	24
6.5.2	Effectiveness of connector coupling devices.....	24
6.5.3	Engaging and separating forces (or insertion and withdrawal forces).....	24
6.5.4	Contact retention in insert.....	24
6.5.5	Polarizing and coding method.....	25
6.6	Other characteristics.....	25
6.6.1	Vibration (method half-sine).....	25
6.6.2	Shock (method half-sine).....	26
6.6.3	Degree of protection provided by enclosures (IP-code).....	26
6.6.4	Screen and shielding properties.....	26
6.6.5	Static load test.....	26
6.7	Environmental aspects.....	26
6.7.1	Marking of insulation material (plastics).....	26
6.7.2	Design/use of material.....	26
7	Test schedule.....	26
7.1	General.....	26
7.1.1	Overview.....	26
7.1.2	Climatic category.....	27
7.1.3	Creepage and clearance distances.....	27
7.1.4	Arrangement for contact resistance measurement.....	27
7.1.5	Arrangement for dynamic stress tests.....	28
7.1.6	Arrangement for testing static load, axial.....	28
7.1.7	Wiring of specimens.....	28
7.2	Test schedules.....	29
7.2.1	Basic (minimum) test schedule (Table 11).....	29
7.2.2	Full test schedule.....	29
7.3	Test procedures and measuring methods.....	41
7.4	Pre-conditioning.....	41
7.5	Wiring and mounting of specimens.....	42
7.5.1	Wiring.....	42
7.5.2	Mounting.....	42
	Figure 1 – View showing mating direction.....	13
	Figure 2 – Fixed connector with male contacts.....	14
	Figure 3 – Free connector with female contacts.....	17
	Figure 4 – Mounting information – panel cut-out outline.....	19
	Figure 5 – Gauge dimensions.....	20
	Figure 6 – Connector de-rating curve.....	23
	Figure 7 – Stress test arrangement.....	25
	Figure 8 – Contact resistance arrangement.....	28
	Table 1 – Climatic category.....	12
	Table 2 – Dimensions of fixed connector.....	15
	Table 3 – Dimensions of free connector.....	18

Table 4 – Mounting dimensions	19
Table 5 – Gauge dimensions.....	20
Table 6 – Ratings of connectors.....	21
Table 7 – Rated impulse voltage – Pollution degree.....	22
Table 8 – Voltage proof.....	22
Table 9 – Number of mechanical operations	24
Table 10 – Total insertion force.....	25
Table 11 – Basic tests	29
Table 12 – Number of test specimens and contacts	30
Table 13 – Test group P	31
Table 14 –Test group AP	32
Table 15 – Test group BP	35
Table 16 – Test group CP	36
Table 17 –Test group DP	37
Table 18 – Test group EP	38
Table 19 – Test group FP	39
Table 20 – Test group GP	40
Table 21 – Test group JP	41
Table 22 – Test group KP	41

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 3-126: Rectangular connectors – Detail specification for 5 pole power connectors for industrial environments with push-pull locking

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The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document

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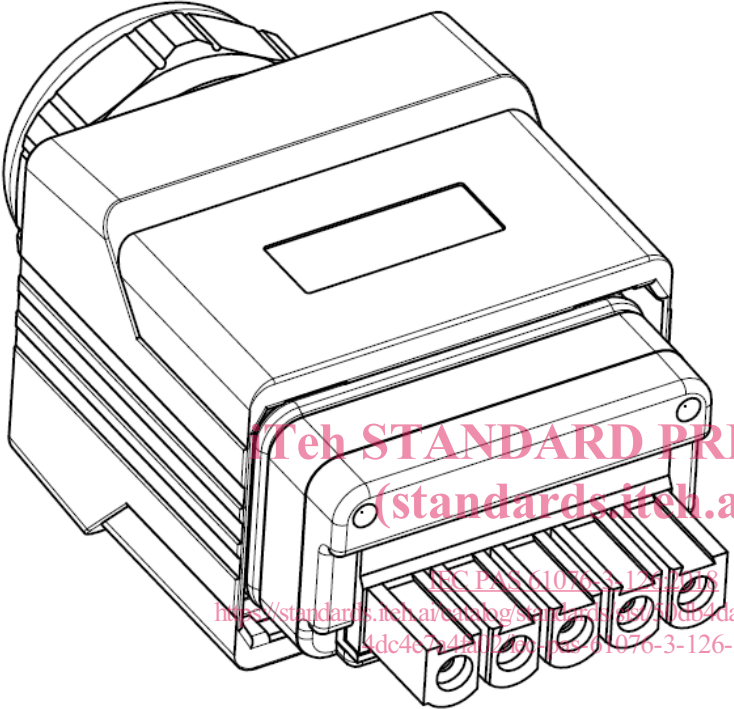
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INTRODUCTION

<p>IEC SC 48B – Electrical connectors Specification available from: IEC General secretariat or from the addresses shown on the inside cover.</p>	<p>IEC 61076-3-126 Ed.1</p>
<p>ELECTRONIC COMPONENTS DETAIL SPECIFICATION in accordance with IEC 61076-1</p>	
	<p>Rectangular connectors Detail specification for power connectors for industrial environments with push-pull locking Male and female connectors Male and female contacts Rewirable – Non-rewirable</p>
	<p>Free cable connectors Straight and right angle connectors Fixed connectors Flange mounting Single hole mounting</p>

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 3-126: Rectangular connectors – Detail specification for 5 pole power connectors for industrial environments with push-pull locking

1 Scope

This document covers rectangular IP65/IP67 connectors with 5 poles for electric power supply up to 16 A. These connectors consist of fixed and free connectors, either rewirable or non-rewirable (for both portions). It uses the general function principles of the push-pull connector housing system described in IEC 61076-3-117 with IP65/IP67 degree of protection according to IEC 60529 for harsh applications.

Male connectors have 5 square 1 mm electric contacts, with 16 A rated current. Connectors according to this document are without breaking capacity COC according to IEC 61984, 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 – Chapter 581: Electro-mechanical components for electronic equipment*

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

IEC 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

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*

IEC 60352-7, *Solderless connections – Part 7: Spring clamp connections – General requirements, test methods and practical guidance*

IEC 60352-8, *Solderless connections – Part 8: Compression mount 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 60512-2-2, *Connectors for electronic equipment – Tests and measurements – Part 2-2: Electrical continuity and contact resistance tests – Test 2b: Contact resistance – Specified test current method*

IEC 60512-2-5, *Connectors for electronic equipment – Tests and measurements – Part 2-5: Electrical continuity and contact resistance tests – Test 2e: Contact disturbance*

IEC 60512-2-6, *Connectors for electronic equipment – Tests and measurements – Part 2-6: Electrical continuity and contact resistance tests – Test 2f: Housing (shell) electrical continuity*

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

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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*

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

IEC 60512-6-1, *Connectors for electronic equipment – Tests and measurements – Part 6-1: Dynamic stress tests – Test 6a: Acceleration, steady state*

IEC 60512-6-2, *Connectors for electronic equipment – Tests and measurements – Part 6-2: Dynamic stress tests – Test 6b: Bump*

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 60512-6-5, *Electromechanical components for electronic equipment – Basic testing procedures and measuring methods – Part 6: Dynamic stress tests – Section 5: Test 6e: Random vibration*

IEC 60512-8-1, *Connectors for electronic equipment – Tests and measurements – Part 8-1: Static load tests (fixed connectors) – Test 8a: Static load, transverse*

IEC 60512-8-2, *Connectors for electronic equipment – Tests and measurements – Part 8-2: Static load tests (fixed connectors) – Test 8b: Static load, axial*

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

IEC 60512-9-2, *Connectors for electronic equipment – Tests and measurements – Part 9-2: Endurance tests – Test 9b: Electrical load and temperature*

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 60512-11-9, *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 60512-11-13, *Connectors for electronic equipment – Tests and measurements – Part 11-13: Climatic tests – Test 11n: Gas tightness, solderless wrapped connections*

IEC 60512-12-4, *Connectors for electronic equipment – Tests and measurements – Part 12-4: Soldering tests – Test 12d: Resistance to soldering heat, solder bath method*

IEC 60512-12-5, *Connectors for electronic equipment – Tests and measurements – Part 12-5: Soldering tests – Test 12e: Resistance to soldering heat, soldering iron method*

IEC 60512-13-1, *Connectors for electronic equipment – Tests and measurements – Part 13-1: Mechanical operation tests – Test 13a: Engaging and separating forces*

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 60512-14-7, *Electromechanical components for electronic equipment – Basic testing procedures and measuring methods – Part 14: Sealing tests – Section 7: Test 14g: Impacting water*

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

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

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

IEC 60512-17-3, *Connectors for electronic equipment – Tests and measurements – Part 17-3: Cable clamping tests – Test 17c: Cable clamp resistance to cable pull (tensile)*

IEC 60512-17-4, *Connectors for electronic equipment – Tests and measurements – Part 17-4: Cable clamping tests – Test 17d: Cable clamp resistance to cable torsion*

IEC 60512-19-3, *Electromechanical components for electronic equipment – Basic testing procedures and measuring methods – Part 19: Chemical resistance tests – Section 3: Test 19c - Fluid resistance*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60664-1:2007, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60998-2-1:2002, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units*

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 mm² up to 35 mm² (included)*

IEC 60999-2, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 2: Particular requirements for clamping units for conductors above 35 mm² up to 300 mm² (included)*

IEC 61076-1:2006, *Connectors for electronic equipment – Product requirements – Part 1: Generic specification*

IEC 61076-3:2008, *Connectors for electronic equipment – Product requirements – Part 3: Sectional specification for rectangular connectors*

IEC 61984:2008, *Connectors - Safety requirements and tests*

IEC 62430:2009, *Environmentally conscious design for electrical and electronic products*

IEC GUIDE 109, *Environmental aspects – Inclusion in electrotechnical product standards*

ISO 128-30:2001, *Technical drawings – General principles of presentation – Part 30: Basic conventions for views*

ISO 1302:2002, *Geometrical Product Specifications (GPS) – Indication of surface texture in technical product documentation*

ISO 11469:2016, *Plastics – Generic identification and marking of plastics products*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-581 as well as the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

IEC Electropedia: available at <http://www.electropedia.org/>