IEC 61076-2-116

Edition 1.0 2022-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Connectors for electrical and electronic equipment – Product requirements – Part 2-116: Detail specification for circular connectors size 15 with up to 3+PE power contacts and auxiliary contacts, with bayonet-locking

Connecteurs pour équipements électriques et électroniques – Exigences de produit – Partie 2-116: Spécification particulière pour les connecteurs circulaires de taille 15 avec jusqu'à 3+PE contacts de puissance et contacts auxiliaires, avec verrouillage à baïonnette



IEC 61076-2-116:2022-12(en-fr)



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CONTENTS

FOREWORD 5
INTRODUCTION 7
1 Scope 8
2 Normative references 8
3 Terms and definitions 10
4 Technical information 10
4.1 Recommended method of termination 10
4.2 Electrical ratings and characteristics 11
4.3 Current-carrying capacity 11
4.4 Systems of levels – Compatibility levels, according to IEC 61076-1 11
4.5 Classification into climatic categories 11
4.6 Marking 11
4.7 Safety aspects 11
5 Dimensional information 12
5.1 General 12
5.2 Survey of styles and variants 12
5.2.1 General 12
5.2.2 Fixed connectors 12
5.2.3 Free connectors 15
5.2.4 Interface dimensions 21
5.3 Engagement (mating) information 28
5.4 Gauges – Sizing gauges and retention force gauges 29
6 Characteristics 30
6.1 General 30
6.2 Contact assignment and other definitions 30
6.3 Classification into climatic category 30
6.4 Electrical characteristics 31
6.4.1 Rated voltage – Rated impulse voltage – Pollution degree 31
6.4.2 Voltage proof 31
6.4.3 Creepage and clearance distances 31
6.4.4 Current-carrying capacity 32
6.4.5 Contact resistance 32
6.4.6 Insulation resistance 32
6.5 Mechanical characteristics 32
6.5.1 Mechanical operation 32
6.5.2 Insertion and withdrawal forces 33
6.5.3 Polarizing method 33
6.6 Other characteristics 33
6.6.1 Vibration (sinusoidal) 33
6.6.2 Shock 34
6.6.3 Degree of protection provided by enclosures (IP code) 34
6.6.4 Screen and shielding properties 34
6.7 Environmental aspects – Marking of insulation material (plastics) 34
7 Test schedules 34
7.1 General 34
7.1.1 Overview 34

7.1.2 Climatic category 34
7.1.3 Creepage and clearance distances 34
7.1.4 Arrangement for contact resistance measurements 35
7.1.5 Arrangement for dynamic stress tests (vibration and shock) 35
7.2 Basic (minimum) test schedule 36
7.3 Full test schedule 36
7.3.1 General 36
7.3.2 Test group P – Preliminary 37
7.3.3 Test group AP – Dynamic/ Climatic 37
7.3.4 Test group BP – Mechanical endurance 40
7.3.5 Test group CP – Electrical load 41
7.3.6 Test group DP – Chemical resistivity 42
7.3.7 Test group EP – Connection method tests 42
Annex A (informative) Orientation of cable outlet in relation to coding 43

Figure 1 – Fixed connector, male contacts, with a square flange front mounting 13
Figure 2 – Fixed connector, male contacts, single hole mounting 13
Figure 3 – Fixed connector, male contacts, single hole mounting, circular mounting orientation 14
Figure 4 – Fixed connector, female contacts, with a square flange front mounting 14
Figure 5 – Fixed connector, female contacts, single hole mounting 15
Figure 6 – Fixed connector, female contacts, single hole mounting, circular mounting orientation 15
Figure 7 – Rewireable connector, male contacts, straight version 16
Figure 8 – Rewireable connector, male contacts, right angled version 17
Figure 9 – Non-rewirable connector, male contacts, straight version 17
Figure 10 – Non-rewirable connector, male contacts, right-angled version 18
Figure 11 – Rewireable connector, female contacts, straight version 19
Figure 12 – Rewireable connector, female contacts, right angled version 19
Figure 13 – Non-rewirable connector, female contacts, straight version 20
Figure 14 – Non-rewirable connector, female contacts, right-angled version 21
Figure 15 – Type 1 – Male side 22
Figure 16 – Type 2 – Male side 24
Figure 17 – Type 3 – Male side 26
Figure 18 – Engagement (mating) information 28
Figure 19 – Gauge dimensions 30
Figure 20 – Contact resistance arrangement 35
Figure 21 – Dynamic stress test arrangement 36
Figure A.1 – Orientation of cable outlet in relation to the coding – Free male connectors according to Table 9 43

Table 1 – Ratings of connectors 11
Table 2 – Styles of fixed connectors 12
Table 3 – Dimensions of style DM, Figure 1 13
Table 4 – Dimensions of style EM, Figure 2 13
Table 5 – Dimensions of style FM, Figure 3 14

Table 6 – Dimensions of style DF, Figure 4 14
Table 7 – Dimensions of style EF, Figure 5 15
Table 8 – Dimensions of style FF, Figure 6 15
Table 9 – Styles of free connectors 16
Table 10 – Dimensions of style JM, Figure 7 16
Table 11 – Dimensions of style KM, Figure 8 17
Table 12 – Dimensions of style LM, Figure 9 18
Table 13 – Dimensions of style MM, Figure 10 18
Table 14 – Dimensions of style JF, Figure 11 19
Table 15 – Dimensions of style KF, Figure 12 20
Table 16 – Dimensions of style LF, Figure 13 20
Table 17 – Dimensions of style MF, Figure 14 21
Table 18 – Dimensions for Figure 15 23
Table 19 – Dimensions for Figure 16 25
Table 20 – Dimensions for Figure 17 27
Table 21 – Connectors dimensions in mated and locked position 29
Table 22 – Gauges 30
Table 23 – Climatic category 30
Table 24 – Rated insulation voltage – Rated impulse voltage – Voltage proof 31
Table 25 – Voltage proof 31
Table 26 – Creepage and clearance distances 32
Table 27 – Number of mechanical operations 33
Table 28 – Insertion and withdrawal forces 33
Table 29 – Polarizing insertion forces 33
Table 30 – Number of test specimens 37
Table 31 – Test group P 37
Table 32 – Test group AP 38
Table 33 – Test group BP 40
Table 34 – Test group CP 41
Table 35 – Test group DP 42
Table 36 – Test group EP 42

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CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-116: Detail specification for circular connectors size 15 with up to 3+PE power contacts and auxiliary contacts, with bayonet-locking

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

Draft	Report on voting
48B/3000/FDIS	48B/3010/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.

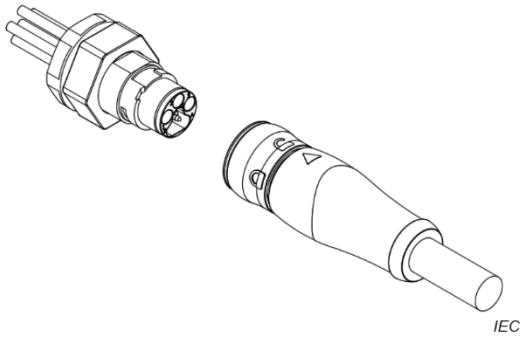
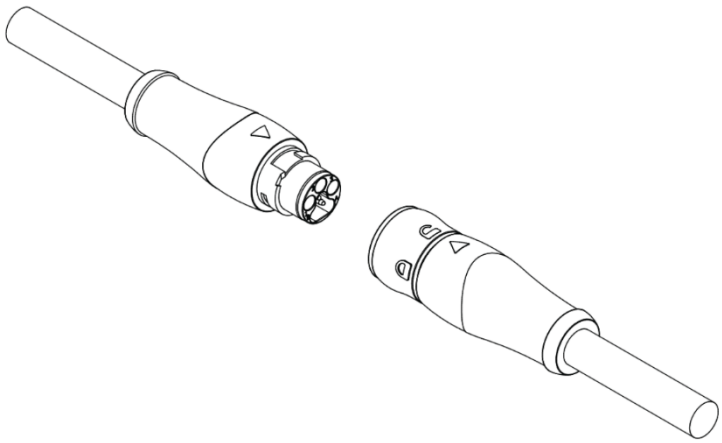
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INTRODUCTION

<table>
<tr><td>IEC SC 48B – Electrical connectors
Specification available from:
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or from the addresses shown on the inside cover.</td><td>IEC 61076-2-116 Ed. 1</td></tr>
<tr><td>DETAIL SPECIFICATION in accordance with IEC 61076-1</td><td></td></tr>
<tr><td rowspan="2">
IEC

IEC</td><td>Circular connectors for signal and power applications with bayonet-locking
Male and female connectors
Male and female contacts
Rewireable and non-rewireable</td></tr>
<tr><td>Free cable connectors
Straight and right-angle connectors
Fixed connectors
Flange mounting
Single hole mounting
With circular mounting orientation</td></tr>
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CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-116: Detail specification for circular connectors size 15 with up to 3+PE power contacts and auxiliary contacts, with bayonet-locking

1 Scope

This part of IEC 61076-2 specifies circular connectors size 15 with bayonet-locking, with up to 3 power contacts with rated insulation voltage up to 630 V AC/DC and rated current up to 20 A, plus PE, and up to 3 auxiliary contacts with rated insulation voltage up to 63 V AC/DC and rated current up to 10 A, that are typically used for industrial power supply and power applications, such as the feeding and control of 3-phase asynchronous motors. These connectors consist of both fixed and free connectors either rewireable or non-rewireable, with bayonet-locking. Male connectors have round contacts, either power or signal, Ø1,6 mm.

NOTE 1 Size 15 is the dimension of the inner contact carrier of the male connector interface (dimension AG in Table 18).

NOTE 2 Number of power and auxiliary contacts, voltage and current ratings vary according to the type of connector, see Table 1.

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) – Part 581: Electromechanical components for electronic equipment*

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

IEC 60068-2-60, *Environmental testing – Part 2-60: Tests – Test Ke: Flowing mixed gas corrosion test*

IEC 60352 (all parts), *Solderless connections*

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

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

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

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

IEC 60512-11-1, *Connectors for electrical and electronic equipment – Tests and measurements – Part 11-1: Climatic tests – Test 11a – Climatic sequence*

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 60512-16-1, *Connectors for electronic equipment – Tests and measurements – Part 16-1: Mechanical tests on contacts and terminations – Test 16a: Probe damage*

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 60512-19-3, *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 60529:1989/AMD1:1999
IEC 60529:1989/AMD2:2013

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

IEC 60999-1, *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 61076-1:2006, *Connectors for electronic equipment – Product requirements – Part 1: Generic specification*
IEC 61076-1:2006/AMD1:2019

IEC 61984, *Connectors – Safety requirements and tests*

IEC 62197-1, *Connectors for electronic equipment – Quality assessment requirements – Part 1: Generic specification*

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

ISO 21920-1: 2021, *Geometrical product specifications (GPS) – Surface texture: Profile – Part 1: Indication of surface texture*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-581, IEC 61076-1, IEC 60512-1, IEC 61984, 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/
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3.1
circular mounting orientation
circular mounting position of the connector in relation to the polarization of the mating interface

Note 1 to entry: Where the free connector has an angled cable entry (as opposed to a straight cable entry), the angle between the cable entry direction and the polarization keyway should be specified.

4 Technical information

4.1 Recommended method of termination

According to IEC 60352 series (solderless connections) and IEC 60999-1 (screw-type and screwless-type connections).