ICS 31.220.10 SLOVENSKÁ TECHNICKÁ NORMA September 2020

STN	**Konektory pre elektronické zariadenia Požiadavky na výrobok Časť 8-102: Výkonové konektory Detailná špecifikácia pre 2P alebo 3P konektory plus 2P signálne tienené a uzatvorené konektory s plastovým krytom pre menovitý prúd 150 A**	**STN EN IEC 61076-8-102** 35 4621

Connectors for electrical and electronic equipment - Product requirements - Part 8-102: Power connectors - Detail specification for 2-pole or 3-pole power plus 2-pole signal shielded and sealed connectors with plastic housing for rated current of 150 A

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. 08/20

Obsahuje: EN IEC 61076-8-102:2020, IEC 61076-8-102:2020

131356

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61076-8-102

May 2020

ICS 31.220.10

English Version

Connectors for electrical and electronic equipment - Product requirements - Part 8-102: Power connectors - Detail specification for 2-pole or 3-pole power plus 2-pole signal shielded and sealed connectors with plastic housing for rated current of 150 A (IEC 61076-8-102:2020)

Connecteurs pour équipements électriques et électroniques - Exigences de produit - Partie 8-102: Connecteurs électriques - Spécification particulière pour connecteurs blindés étanches à 2 pôles ou 3 pôles pour la transmission de puissance et à 2 pôles pour la transmission de données avec boîtier plastique pour courant assigné de 150 A (IEC 61076-8-102:2020)

Steckverbinder für elektronische Einrichtungen - Produktanforderungen - Teil 8-102: Leistungssteckverbinder - Bauartspezifikation für gasdichte geschirmte Steckverbinder mit Kunststoffgehäuse mit 2P/3P Leistung plus 2P Signal für 150 A Bemessungsstrom (IEC 61076-8-102:2020)

This European Standard was approved by CENELEC on 2020-05-21. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 61076-8-102:2020 E

European foreword

The text of document 48B/2785/FDIS, future edition 1 of IEC 61076-8-102, 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 IEC 61076-8-102:2020.

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) 2021-02-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-21

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

Endorsement notice

The text of the International Standard IEC 61076-8-102:2020 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.

Publication	Year	Title	EN/HD	Year
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 60228	2004	Conductors of insulated cables	EN 60228 + corrigendum	2005 2005-05
IEC 60352-1	-	Solderless connections - Part 1: Wrapped connections - General requirements, test methods and practical guidance	EN 60352-1	-
IEC 60352-2	-	Solderless connections - Part 2: Crimped connections - General requirements, test methods and practical guidance	EN 60352-2	-
IEC 60352-3	-	Solderless connections - Part 3: Accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance	-	-
IEC 60352-4	-	Solderless connections - Part 4: Non-accessible insulation displacement (ID) 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	-	-

EN IEC 61076-8-102:2020 (E)

Publication	Year	Title	EN/HD	Year
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 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 60512-2-2	-	Connectors for electronic equipment - Tests and measurements - Part 2-2: Electrical continuity and contact resistance tests - Test 2b: Contact resistance - Specified test current method	EN 60512-2-2	-
IEC 60512-2-5	-	Connectors for electronic equipment - Tests and measurements - Part 2-5: Electrical continuity and contact resistance tests - Test 2e: Contact disturbance	EN 60512-2-5	-
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	EN 60512-2-6	-
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	-
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	-

Publication	Year	Title	EN/HD	Year
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 60512-7-1	-	Connectors for electronic equipment - Tests and measurements - Part 7-1: Impact tests (free connectors) - Test 7a: Free fall (repeated)	EN 60512-7-1	-
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 60512-9-2	-	Connectors for electronic equipment - Tests and measurements - Part 9-2: Endurance tests - Test 9b: Electrical load and temperature	EN 60512-9-2	-
IEC 60512-11-1	-	Connectors for electrical and electronic equipment - Tests and measurements - Part 11-1: Climatic tests - Test 11a - Climatic sequence	EN IEC 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 60512-11-6	-	Connectors for electronic equipment - Tests and measurements - Part 11-6: Climatic tests - Test 11f: Corrosion, salt mist	EN 60512-11-6	-
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 60512-11-11	-	Connectors for electronic equipment - Tests and measurements - Part 11-11: Climatic tests - Test 11k: Low air pressure	EN 60512-11-11	-
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	-

EN IEC 61076-8-102:2020 (E)

Publication	Year	Title	EN/HD	Year
IEC 60512-13-1	-	Connectors for electronic equipment - Tests and measurements - Part 13-1: Mechanical operation tests - Test 13a: Engaging and separating forces	EN 60512-13-1	-
IEC 60512-13-5	-	Connectors for electronic equipment - Tests and measurements - Part 13-5: Mechanical operation 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 60512-16-5	-	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 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corrigendum	1991 1993-05
IEC 60695-2-11	2014	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products (GWEPT)	EN 60695-2-11	2014
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)	EN 60999-1	-
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)	EN 60999-2	-
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

Publication	Year	Title	EN/HD	Year
IEC 62430	-	Environmentally conscious design (ECD) - Principles, requirements and guidance	EN IEC 62430	-
IEC Guide 109	-	Environmental aspects - Inclusion in electrotechnical product standards	-	-
ISO 1302	2002	Geometrical Product Specifications (GPS) - Indication of surface texture in technical product documentation	EN ISO 1302	2002
ISO 6508-1	2015	Metallic materials - Rockwell hardness test - Part 1: Test method	-	-
ISO 11469	2016	Plastics - Generic identification and marking of plastics products	EN ISO 11469	2016

IEC 61076-8-102

Edition 1.0 2020-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Connectors for electrical and electronic equipment – Product requirements – Part 8-102: Power connectors – Detail specification for 2-pole or 3-pole power plus 2-pole signal shielded and sealed connectors with plastic housing for rated current of 150 A

Connecteurs pour équipements électriques et électroniques – Exigences de produit – Partie 8-102: Connecteurs électriques – Spécification particulière pour connecteurs blindés étanches à 2 pôles ou 3 pôles pour la transmission de puissance et à 2 pôles pour la transmission de données avec boîtier plastique pour courant assigné de 150 A

IEC 61076-8-102 :2020-04(en-fr)

IEC 61076-8-102

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 8-102: Power connectors – Detail specification for 2-pole or 3-pole power plus 2-pole signal shielded and sealed connectors with plastic housing for rated current of 150 A

FOREWORD

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International Standard IEC 61076-8-102 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

The text of this standard is based on the following documents:

FDIS	Report on voting
48B/2785/FDIS	48B/2800/RVD

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

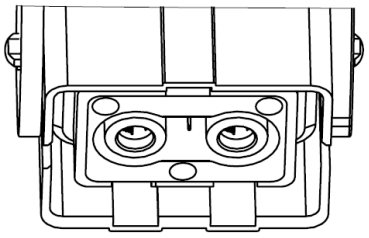
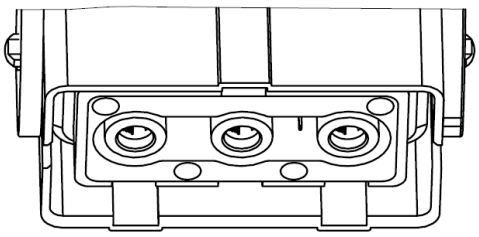
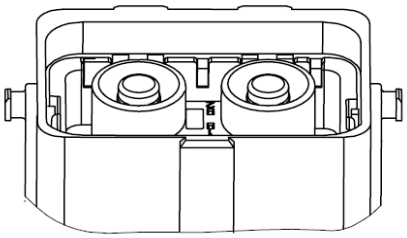
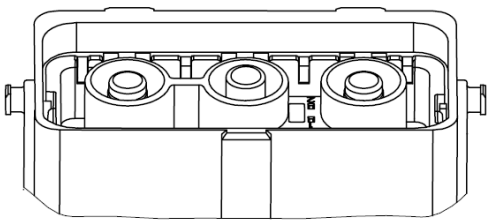
This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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

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

The International Electrotechnical Commission **IEC SC 48B — Electrical connectors**		**IEC 61076-8-102 Ed. 1**
Detail specification in accordance with IEC 61076-1		
Free connector	 2-pole 150 A free connector  3-pole 150 A free connector	For rated current of 150 A d.c.; 2-pole; Female contacts for power; First break last make male contacts for signal; Straight insertion and withdrawal; 360° shielding; Four codings. For rated current of 150 A a.c.; 3-pole; Female contacts for power; First break last make male signal contacts; Straight insertion and withdrawal; 360° shielding; Four codings.
Fixed connector	 2-pole 150 A fixed connector  3-pole 150 A fixed connector	For rated current of 150 A d.c.; 2-pole; Female contacts for signal; Male contacts for power; Straight insertion and withdrawal; 360°shielding; Four codings. For rated current of 150 A a.c.; 3-pole; Female contacts for signal; Male contacts for power; Straight insertion and withdrawal; 360°shielding; Four codings.

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 8-102: Power connectors – Detail specification for 2-pole or 3-pole power plus 2-pole signal shielded and sealed connectors with plastic housing for rated current of 150 A

1 Scope

This part of IEC 61076 describes 2-pole or 3-pole power plus 2-pole signal shielded and sealed connectors with plastic housing (hereinafter referred to as a connector) for electrical and electronic equipment, including overall dimensions, interface dimensions, technical characteristics, performance requirements and test methods.

This document is applicable to electrical connectors with sealing and shielding requirements meeting this document, with a rated voltage up to and including 750 V a.c. or 1 000 V d.c., and a current rating of 150 A, for applications in the field of electrical and electronic equipment.

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 (IEV) – Part 581: Electromechanical components for electronic equipment*

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

IEC 60228:2004, *Conductors of insulated cables*

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 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 – Test 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*

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 60512-7-1, *Connectors for electronic equipment – Tests and measurements – Part 7-1: Impact tests (free connectors) – Test 7a: Free fall (repeated)*

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 60512-11-3, *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 60512-11-6*, Connectors for electronic equipment – Tests and measurements – Part 11-6: Climatic tests – Test 11f: Corrosion, salt mist*

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 60512-11-11*, Connectors for electronic equipment – Tests and measurements – Part 11-11: Climatic tests – Test 11k: Low air pressure*

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

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

IEC 60512-13-5*, 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*

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

IEC 60695-2-11:2014*, Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products (GWEPT)*

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 mm^2 up to 35 mm^2 (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 mm^2 up to 300 mm^2 (included)*

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

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

IEC 62430, *Environmentally conscious design (ECD) – Principles, requirements and guidance*

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

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

ISO 6508-1:2015, *Metallic materials – Rockwell hardness test – Part 1: Test method*

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