

<b>STN</b>	<b>Konektory pre elektrické a elektronické zariadenia</b> <b>Požiadavky na výrobok</b> <b>Časť 2-115: Podrobná špecifikácia 12-pólových tienených konektorov s menovitým prúdom 2 A a kovovým puzdrom IP65/IP67 s push-pull zámkom</b>	<b>STN</b> <b>EN IEC</b> <b>61076-2-115</b>  35 4621
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Connectors for electrical and electronic equipment - Product requirements - Part 2-115: Circular connectors - Detail specification for 12-pole shielded connectors with 2 A rated current and IP65/IP67 metal housing with push-pull locking

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. 08/23

Obsahuje: EN IEC 61076-2-115:2023, IEC 61076-2-115:2023

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EUROPEAN STANDARD

**EN IEC 61076-2-115**

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**Connectors for electrical and electronic equipment - Product requirements - Part 2-115: Circular connectors - Detail specification for 12-pole shielded connectors with 2 A rated current and IP65/IP67 metal housing with push-pull locking (IEC 61076-2-115:2023)**

Connecteurs pour équipements électriques et électroniques  
- Exigences de produit - Partie 2-115: Connecteurs  
circulaires - Spécification particulière relative aux  
connecteurs blindés à 12 pôles avec un courant assigné de  
2 A et un boîtier métallique IP65/IP67 équipé d'un  
mécanisme de verrouillage de type pousser-tirer  
(IEC 61076-2-115:2023)

Steckverbinder für elektrische und elektronische  
Einrichtungen - Produktanforderungen - Teil 2-115:  
Rundsteckverbinder - Einzelspezifikation für 12-polige  
Steckverbinder mit 2 A Nennstrom und Push-Pull-  
Verriegelung IP65/IP67 Metallgehäuse  
(IEC 61076-2-115:2023)

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**EN IEC 61076-2-115:2023 (E)****European foreword**

The text of document 48B/2948/CDV, future edition 1 of IEC 61076-2-115, 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 61076-2-115:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-03-27 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2026-06-27 document have to be withdrawn

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## 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.cencenelec.eu](http://www.cencenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-581	-	International Electrotechnical Vocabulary - Part 581: Electromechanical components for electronic equipment	-	-
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60068-2-60	-	Environmental testing - Part 2-60: Tests - Test Ke: Flowing mixed gas corrosion test	EN 60068-2-60	-
IEC 60228	-	Conductors of insulated cables	EN 60228	-
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	EN IEC 60352-3	-
IEC 60352-4	-	Solderless connections - Part 4: Non-accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance	EN IEC 60352-4	-
IEC 60352-5	-	Solderless connections - Part 5: Press-in connections - General requirements, test methods and practical guidance	EN IEC 60352-5	-
IEC 60352-6	-	Solderless connections - Part 6: Insulation piercing connections - General requirements, test methods and practical guidance	EN IEC 60352-6	-
IEC 60352-7	-	Solderless connections - Part 7: Spring clamp connections - General requirements, test methods and practical guidance	EN IEC 60352-7	-
IEC 60512-1	-	Connectors for electrical and electronic equipment - Tests and measurements - Part 1: Generic specification	EN IEC 60512-1	-

**EN IEC 61076-2-115:2023 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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 60512-5-2	-	Connectors for electronic equipment - Tests and measurements - Part 5-2: Current-carrying capacity tests - Test 5b: Current-temperature derating	EN 60512-5-2	-
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	-

**EN IEC 61076-2-115:2023 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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 60512-11-7	-	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 60512-11-11	-	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	-
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 60512-20-3	-	Connectors for electronic equipment - Tests and measurements - Part 20-3: Fire hazard tests - Test 20c: Flammability, glow-wire	EN 60512-20-3	-

**EN IEC 61076-2-115:2023 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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 60664-1	2020	Insulation coordination for equipment within low-voltage supply systems - Part 1: Principles, requirements and tests	EN IEC 60664-1	2020
IEC 60695-2-11	2021	Fire hazard testing - Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end products (GWEPT)	EN IEC 60695-2-11	2021
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 <sup>2</sup> up to 35 mm <sup>2</sup> (included)	EN 60999-1	-
IEC 61076-1	2006	Connectors for electronic equipment - Product requirements - Part 1: Generic specification	EN 61076-1	2006
+ A1	2019		+ A1	2019
IEC 61076-2	-	Connectors for electronic equipment - Product requirements - Part 2: Sectional specification for circular connectors	EN 61076-2	-
IEC 61984	2008	Connectors - Safety requirements and tests	EN 61984	2009
IEC 62430	2019	Environmentally conscious design (ECD) - Principles, requirements and guidance	EN IEC 62430	2019
IEC Guide 109	-	Environmental aspects - Inclusion in electrotechnical product standards	-	-
ISO 6508-1	-	Metallic materials - Rockwell hardness test - Part 1: Test method	EN ISO 6508-1	-
ISO 11469	-	Plastics - Generic identification and marking of plastics products	EN ISO 11469	-
ISO 21920-1	2021	Geometrical product specifications (GPS) - Surface texture: Profile - Part 1: Indication of surface texture	EN ISO 21920-1	2022







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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Connectors for electrical and electronic equipment – Product requirements – Part 2-115: Circular connectors – Detail specification for 12-pole shielded connectors with 2 A rated current and IP65/IP67 metal housing with push-pull locking**

**Connecteurs pour équipements électriques et électroniques – Exigences de produit – Partie 2-115: Connecteurs circulaires – Spécification particulière relative aux connecteurs blindés à 12 pôles avec un courant assigné de 2 A et un boîtier métallique IP65/IP67 équipé d'un mécanisme de verrouillage de type pousser-tirer**



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Edition 1.0 2023-05

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Connectors for electrical and electronic equipment – Product requirements – Part 2-115: Circular connectors – Detail specification for 12-pole shielded connectors with 2 A rated current and IP65/IP67 metal housing with push-pull locking**

**Connecteurs pour équipements électriques et électroniques – Exigences de produit – Partie 2-115: Connecteurs circulaires – Spécification particulière relative aux connecteurs blindés à 12 pôles avec un courant assigné de 2 A et un boîtier métallique IP65/IP67 équipé d'un mécanisme de verrouillage de type pousser-tirer**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT –  
PRODUCT REQUIREMENTS –****Part 2-115: Circular connectors – Detail specification for 12-pole  
shielded connectors with 2 A rated current and IP65/IP67  
metal housing with push-pull locking**

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IEC 61076-2-115 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment. It is an International Standard.

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

Draft	Report on voting
48B/2948/CDV	48B/2989/RVC

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.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

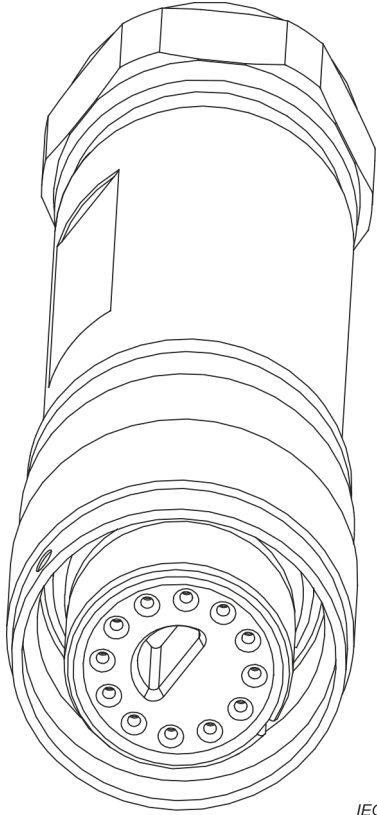
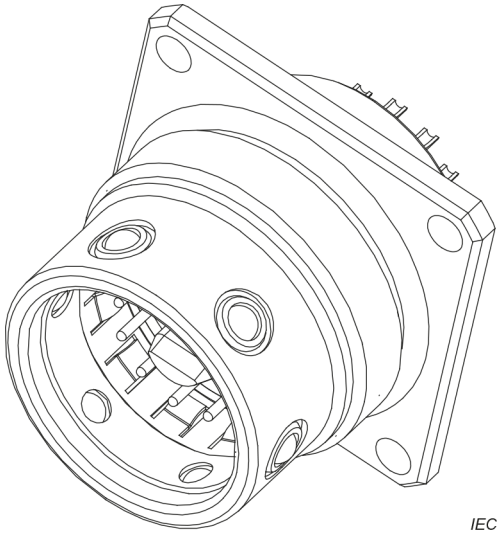
A list of all parts of IEC 61076 series, under the general title *Connectors for electrical and electronic equipment – Product requirements*, can be found on the IEC website.

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 document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](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.



The International Electrotechnical Commission IEC SC 48B—Electrical connectors		IEC 61076-2-115 Ed.1
Detail specification in accordance with IEC 61076-2		
Free connector	 <p style="text-align: right;">IEC</p>	<p>For rated current of 2 A; 12-pole; Female contacts; Push-pull locking; 360° shielding.</p>
Fixed connector	 <p style="text-align: right;">IEC</p>	<p>For rated current of 2 A; 12-pole; Male contacts; Push-pull locking; 360° shielding.</p>

# CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

## Part 2-115: Circular connectors – Detail specification for 12-pole shielded connectors with 2 A rated current and IP65/IP67 metal housing with push-pull locking

### 1 Scope

This part of IEC 61076-2 describes free and fixed 12P shielded circular connectors with 2 A rated current, rated voltage up to and including 50 V AC/DC, IP65/IP67 metal housing with push-pull locking (hereinafter referred to as a connectors) for use in electrical and electronic equipment. It includes overall dimensions, interface dimensions, technical characteristics, performance requirements and test methods.

### 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 60228, *Conductors of insulated cables*

IEC 60352-2, *Solderless connections – Part 2: Crimped connections – General requirements, test methods and practical guidance*

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*

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, *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 60512-2-2, *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 60512-5-2, *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 60512-11-7, *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 60512-11-11, *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 60512-20-3, *Connectors for electronic equipment – Tests and measurements – Part 20-3: Fire hazard tests - Test 20c: Flammability, glow-wire*

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

IEC 60529:1989/AMD1:1999

IEC 60529:1989/AMD2:2013

IEC 60664-1:2020, *Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests*

IEC 60695-2-11:2021, *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<sup>2</sup> up to 35 mm<sup>2</sup> (included)*

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

IEC 61076-1:2006/AMD1:2019

IEC 61076-2, *Connectors for electronic equipment – Product requirements – Part 2: Sectional specification for circular connectors*

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

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IEC 62430:2019, *Environmentally conscious design (ECD) – Principles, requirements and guidance*

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

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

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*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**