

SLOVENSKI STANDARD

SIST EN 3155-078:2019

01-september-2019

Nadomešča:

SIST EN 3155-078:2015

Aeronavtika - Električni kontakti za uporabo v veznih elementih - 078. del: Kontakt velikosti 22 za EN 2997, električni, moški, tip A, nagubani, razred S - Standard za proizvod

Aerospace series - Electrical contacts used in elements of connection - Part 078: Contacts size 22 for EN 2997, electrical, male, type A, crimp, class S - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen - Teil 078: Elektrische Stiftkontakte (Größe 22, für EN 2997, Typ A, crimpbar, Klasse S - Produktnorm

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie 078 : Contacts électriques taille 22 pour EN 2997, mâles, type A, à sertir, classe S - Norme de produit

Ta slovenski standard je istoveten z: EN 3155-078:2019

ICS:

49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems
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EUROPEAN STANDARD

EN 3155-078

NORME EUROPÉENNE

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June 2019

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Supersedes EN 3155-078:2014

English Version

Aerospace series - Electrical contacts used in elements of connection - Part 078: Contacts size 22 for EN 2997, electrical, male, type A, crimp, class S - Product standard

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This European Standard was approved by CEN on 6 January 2019.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents		Page
European foreword		3
1	Scope.....	4
2	Normative references.....	4
3	Terms and definitions	5
4	Required characteristics	5
5	Designation	11
6	Marking.....	11
7	Technical specification	11

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European foreword

This document (EN 3155-078:2019) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

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

This document supersedes EN 3155-078:2014.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 3155-078:2019 (E)**1 Scope**

This European Standard specifies the required characteristics and tests applicable to male electrical contacts 078, type A, crimp, class S, used in elements of connection according to EN 3155-002.

It shall be used together with EN 3155-001.

The associated female contacts are defined in EN 3155-079.

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.

EN 2083, *Aerospace series — Copper or copper alloy conductors for electrical cables — Product standard*

EN 2591 (all parts), *Aerospace series — Elements of electrical and optical connection — Test methods*

EN 2997 (all parts), *Aerospace series — Connectors, electrical, circular, coupled by threaded ring, fire-resistant or non fire-resistant, operating temperatures – 65 °C to 175 °C continuous, 200 °C continuous, 260 °C peak*

EN 3155-001, *Aerospace series — Electrical contacts used in elements of connection — Part 001: Technical specification*

EN 3155-002, *Aerospace series — Electrical contacts used in elements of connection — Part 002: List and utilization of contacts*

EN 3155-079, *Aerospace series — Electrical contacts used in elements of connection — Part 079: Contacts size 22 for EN 2997, electrical, female, type A, crimp, class S — Product standard*

EN 4434, *Aerospace series — Copper or copper alloy lightweight conductors for electrical cables — Product standard (Normal and tight tolerances)*

ISO 8843, *Aircraft — Crimp-removable contacts for electrical connectors — Identification system* ¹⁾

SAE-AS22520, *Crimping tools, wire termination, general specification for* ²⁾

SAE-AS81969, *Installing and removal tools, connector electrical contact, general specification for* ²⁾

1) Published by: International Organization for Standardization (ISO), <http://www.iso.ch/>

2) Published by: National (US) Society of Automotive Engineers (SAE), <http://www.sae.org/>

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3155-001 apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Required characteristics

4.1 Specific characteristics

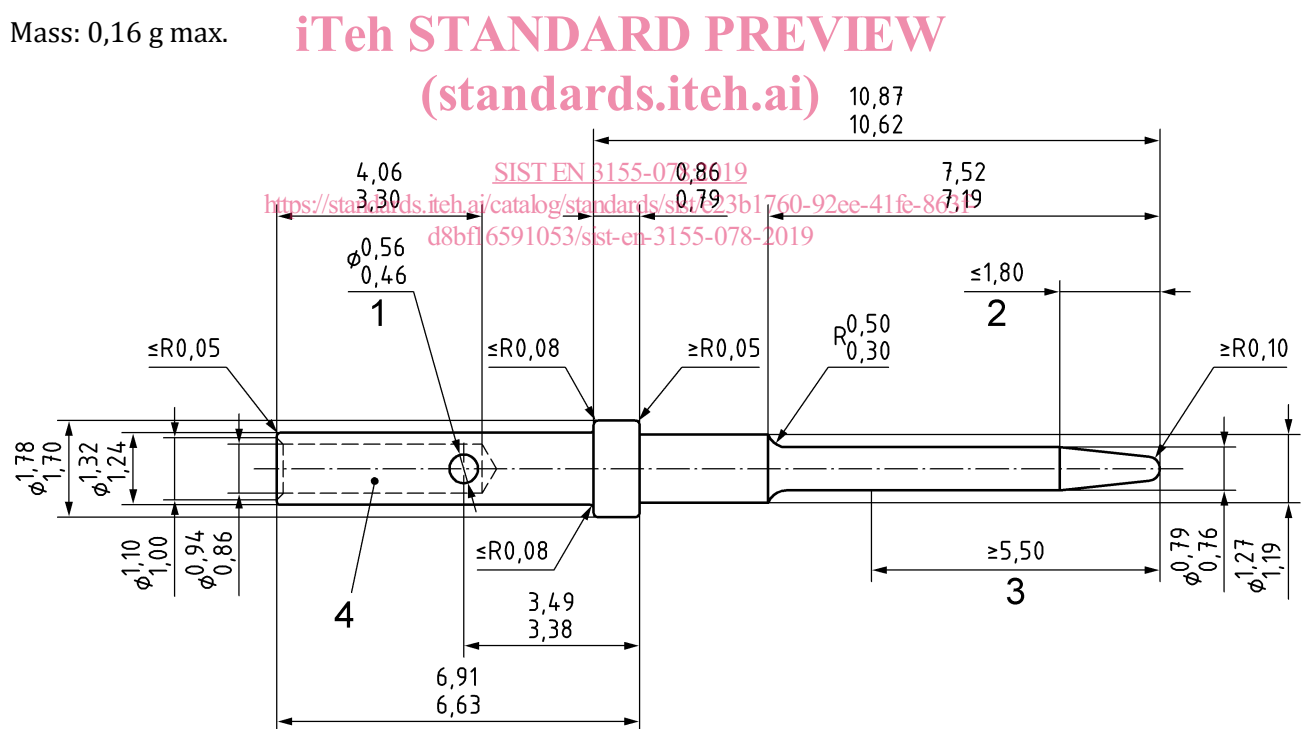
Type A contacts are for general application and class S corresponds to an operating temperature range from -65 °C to 200 °C .

4.2 Dimensions and mass

See Figure 1.

Dimensions and tolerances are given in millimetres and apply after surface treatment.

Mass: 0,16 g max.



Key

- 1 One side only
- 2 Electrical engagement point
- 3 See EN 3155-001 for length of selective protection "LSP" definition
- 4 Colour bands, see Table 1.

Figure 1 — Connector contact

EN 3155-078:2019 (E)

4.3 Marking by colour code

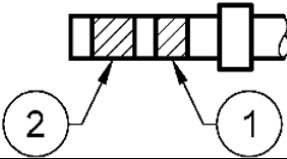
See Table 1.

Table 1 — Marking by colour code

Size		Colour identification bands according to ISO 8843	
Contact	Barrel	① Band 1	② Band 2 ^a
22	22	Green	Green

As an alternative, when the two band colours are the same, only one band of 2 mm width nominal can be applied.

^a The width of the band 2 shall be twice the width of the band 1.



4.4 Material, surface treatment

- Body material: copper alloy.
- Surface treatment: gold on an appropriate undercoat, thickness of protection see EN 3155-001, selective protection permitted.

4.5 Permissible cables

See Table 2.

Table 2 — Permissible cables

Size		Size of conductors			Rated test current A
Contact	Barrel	ASD code	Section mm ²	AWG ^a	
22	22	004	0,40	22	5
		002	0,25	24	3
		001	0,15	26	2

^a AWG = Closest American Wire Gauge.

4.6 Tooling

4.6.1 Crimping tools

Conform to SAE-AS22520, see Table 3.

The qualification selector numbers used for crimping copper or copper alloy conductors in cables EN 2083 or EN 4434 are indicated in Table 3.

It is the responsibility of the user if the parameters in Table 3 are changed for service use.

Table 3 — Crimping tools

Contact		Cable size		Tool M22520/2-01	
Contact size	Barrel size	ASD code	AWG ^a	Positioner	Selector number
22	22	001	26	M22520/2-23	3
		002	24		3
		004	22		5

^a AWG = Closest American Wire Gauge.

4.6.2 Insertion/Extraction tools

Conform to SAE-AS81969.

See Table 4.

Table 4 — Insertion/Extraction tools

Size		Insertion tools	Extraction tools
Contact	Barrel		
22	22	M81969/1-01 or M81969/14-01	M81969/1-01 or M81969/14-01

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4.7 Cable stripping

See Table 5.

Table 5 — Cable stripping

Size		Stripped length of cable mm ± 0,5
Contact	Barrel	
22	22	4,5

4.8 Tests

Contacts shall be fitted in connector EN2997SC1221AX and EN2997SA1221BX with heat shrinkable boot (or equivalent) and lacing tapes (see Figure 2) for tests in accordance EN 3155-001.