



SLOVENSKI STANDARD
oSIST prEN 3155-070:2023
01-april-2023

Aeronavtika - Električni kontakti za uporabo v veznih elementih - 070. del:
Kontakti, električni, moški, tip A, nagubani, razred S - Standard za proizvod

Aerospace series - Electrical contacts used in elements of connection - Part 070:
Contacts, electrical, male, type A, crimp, class S - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen -
Teil 070: Elektrische Stiftkontakte, Typ A, crimpbar, Klasse S - Produktnorm

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie
070 : Contacts électriques, mâles, type A, à sertir, classe S - Norme de produit

Ta slovenski standard je istoveten z: prEN 3155-070

ICS:

49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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English Version

Aerospace series - Electrical contacts used in elements of connection - Part 070: Contacts, electrical, male, type A, crimp, class S - Product standard

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Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen - Teil 070: Elektrische Stiftkontakte, Typ A, crimpbar, Klasse S - Produktnorm

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
European foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	4
4	Required characteristics	5
4.1	Specific characteristics	5
4.2	Dimensions and mass	5
4.3	Marking by colour code	6
4.4	Material, surface treatment	6
4.5	Permissible cables	6
4.6	Tooling	7
4.6.1	Crimping tools	7
4.6.2	Insertion/Extraction tools	7
4.7	Cable stripping	8
4.8	Tests	8
4.9	Gauges	11
5	Designation	11
6	Marking	12
7	Technical specification	12
Bibliography		13

European foreword

This document (prEN 3155-070:2023) 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 document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 3155-070:2019.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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prEN 3155-070:2023 (E)**1 Scope**

This document specifies the required characteristics, tests and tooling applicable to male electrical contacts 070, type A, crimp, class S, used in elements of connection according to EN 3155-002.

It is used together with EN 3155-001.

The associated female contacts are specified in EN 3155-003, EN 3155-009 and EN 3155-071.

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 and copper alloys conductors for electrical cables - Product standard*

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

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

EN 4165 (all parts), *Aerospace series — Connectors, electrical, rectangular, modular — Operating temperature 175 °C continuous*

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

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

SAE AS 22520, *Crimping Tools, Wire Termination, General Specification For*²

SAE AS 81969,² *Installing and Removal Tools, Connector Electrical Contact, General Specification for*

3 Terms and definitions

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

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

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

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

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

4 Required characteristics

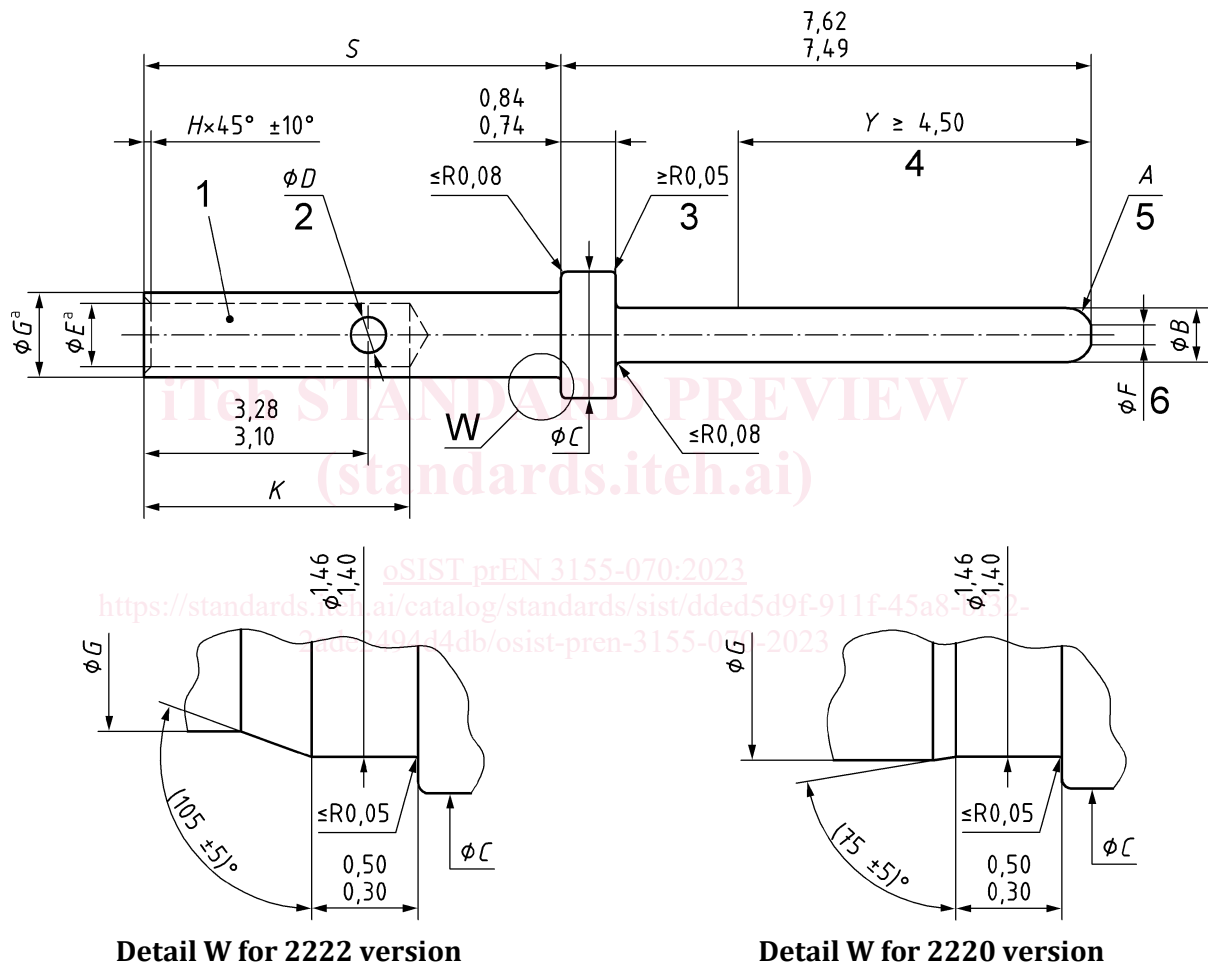
4.1 Specific characteristics

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 and Table 1.

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



Key

- 1 Colour bands, see Table 2.
- 2 One side only
- 3 Break or radius leading edge
- 4 See EN 3155-001 for length of selective protection "LSP" definition.
- 5 Radius
- 6 Flat

^a

	$\emptyset 0,08$	$\emptyset E$	$\emptyset G$
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Figure 1 — Connector contact

Table 1 — Connector contact

Size		A Radius	$\varnothing B$	$\varnothing C$	$\varnothing D$	$\varnothing E$	F max.	$\varnothing G$ Ref.	H	K	S	Mass g max.
Contact	Barrel											
22	22	0,51 0,25	0,774 0,749	1,80 1,75	0,56 0,46	0,90 0,85	0,28	1,22 1,17	0,13 0,08	3,99 3,58	6,02 5,87	0,10
22	20	0,51 0,25	0,774 0,749	1,80 1,75	0,56 0,46	1,12 1,09	0,28	1,50 1,45	0,11 0,05	3,99 3,58	6,02 5,87	0,10

4.3 Marking by colour code

See Table 2.

Table 2 — 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
22	20	Green	Red
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 3.

Table 3 — 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
22	20	006	0,60	20	5
		004	0,40	22	5
		002	0,25	24	3

^a AWG = Closest American Wire Gauge.

4.6 Tooling

4.6.1 Crimping tools

Conform to SAE AS22520, see Table 4.

The qualification selector numbers used for crimping copper or copper alloy conductors in cables EN 2083 and EN 4434 are indicated in Table 4.

It is the responsibility of the user if the parameters in Table 4 are changed for service use.

Table 4 — Crimping tools

Contact		Cable size		Tool M22520/1-01		Tool M22520/2-01		Tool M22520/7-01	
Contact size	Barrel size	ASD code	AWG ^a	Positioner	Selector number	Positioner	Selector number	Positioner	Selector number
22	22	001	26	Not applicable	—	M22520/2-09	2	M22520/7-07	1
		002	24		—		3		2
		004	22		—		4		3
22	20	002	24	Not applicable	—	M22520/2-09	2	M22520/7-07	1
		004	22		—		4		3
		006	20		—		6		4

^a AWG = Closest American Wire Gauge.

4.6.2 Insertion/Extraction tools

Conform to SAE AS81969.

See Table 5.

prEN 3155-070:2023 (E)

Table 5 — Insertion/Extraction tools

Size		Insertion tool	Extraction tool	
Contact	Barrel	Wired/unwired contact	Wired contact	Unwired contact
22	22	M81969/14-01 Green	M81969/14-01 White	M81969/30-10
22	20	M81969/14-02 Red or M81969/14-10 Red (see note)	M81969/14-02 White or M81969/14-10 Orange (see note)	M81969/30-05

NOTE For EN3155-070 contacts, M81969/14-02 is superseded by M81969/14-10. Although M81969/14-02 can still be purchased, it is advised to refer to M81969/14-10.

4.7 Cable stripping

See Table 6.

Table 6 — Cable stripping

Size		Stripped length of cable mm ±0,5
Contact	Barrel	
22	22	4
22	20	4

4.8 Tests

Contacts shall be fitted in EN 4165 modules for size 22 contacts, with mated rear accessories for tests in accordance with EN 3155-001.

Suitable tooling or connector will be used specifically for tests EN 2591-301 and EN 2591-305 to test at the maximum temperature of +200 °C.

Contact to be crimped on conductor as per EN 2083 or EN 4434, code D.

See Table 7 and Table 8.