



SLOVENSKI STANDARD
oSIST prEN 3155-071:2023

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Nadomešča:
SIST EN 3155-071:2019

Aeronavtika - Električni kontakti za uporabo v veznih elementih - 071. del:
Kontakti, električni, ženski, tip A, nagubani, razred S - Standard za proizvod

Aerospace series - Electrical contacts used in elements of connection - Part 071:
Contacts, electrical, female, type A, crimp, class S - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen -
Teil 071: Elektrische Buchsenkontakte, Typ A, crimpbar, Klasse S - Produktnorm

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

Ta slovenski standard je istoveten z: prEN 3155-071

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 071: Contacts, electrical, female, type A, crimp, class S - Product standard

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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

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European foreword

This document (prEN 3155-071:2023) 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 3155-071:2019.

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prEN 3155-071:2023 (E)**1 Scope**

This document specifies the required characteristics, tests and tooling applicable to female electrical contacts 071, type A, crimp, class S used in elements of connection according to EN 3155-002.

It is intended to be used together with EN 3155-001.

The associated male contacts are specified in EN 3155-008 and EN 3155-070.

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 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 3155-008, *Aerospace series — Electrical contacts used in elements of connection — Part 008: Contacts, electrical, male, type A, crimp, class S — Product standard*

EN 3155-070, *Aerospace series — Electrical contacts used in elements of connection — Part 070: Contacts, electrical, male, type A, crimp, class S — Product standard*

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

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 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 $-65\text{ }^{\circ}\text{C}$ to $200\text{ }^{\circ}\text{C}$.

4.2 Dimensions and mass

Shall be according to Figure 1, Figure 2 and Table 1.

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

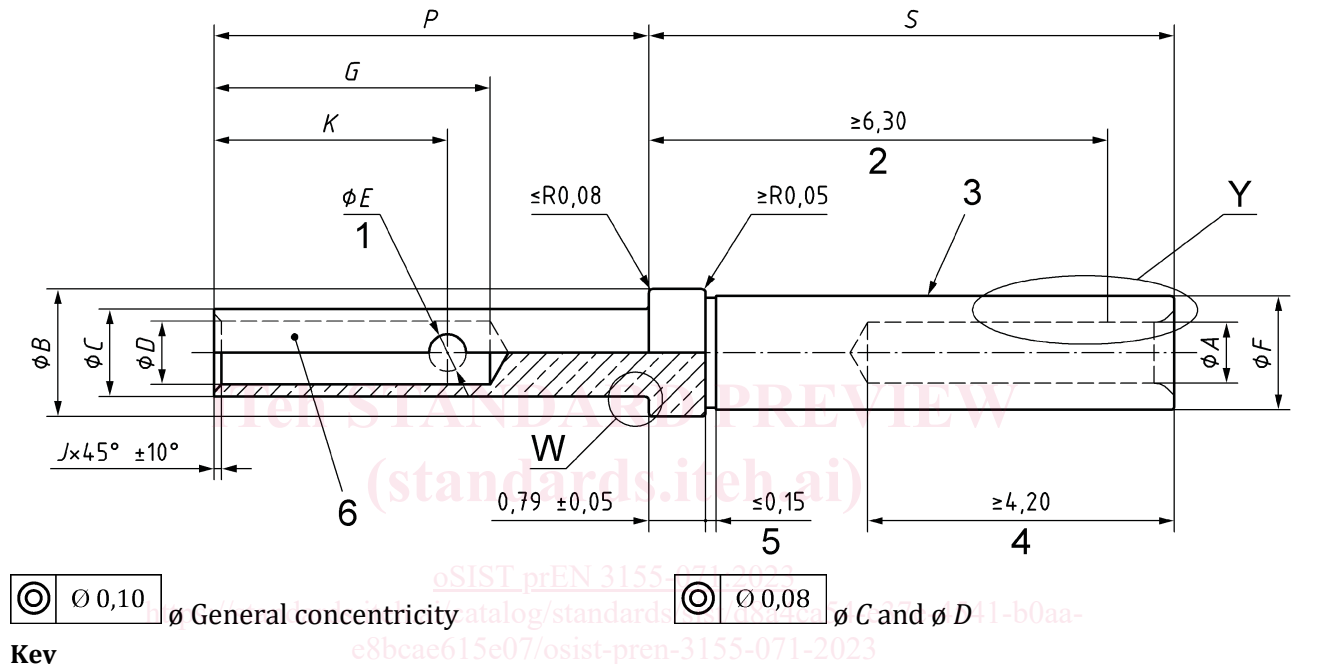
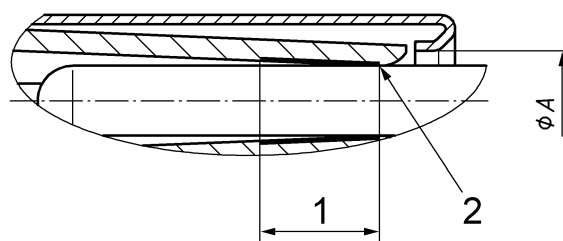
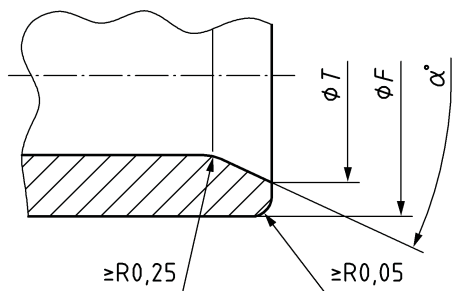
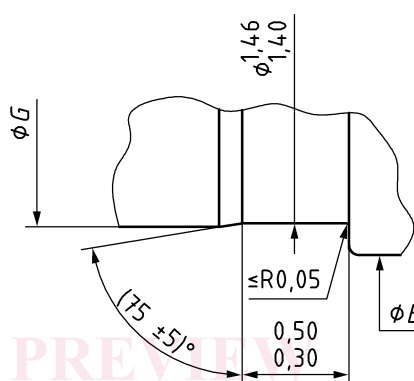
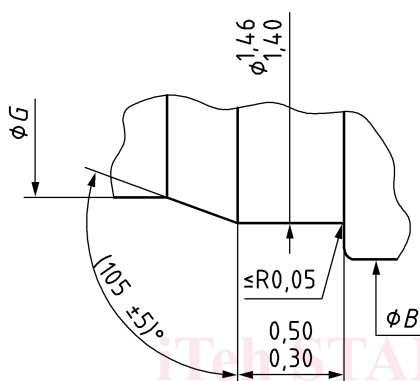


Figure 1 — Connector contact

Optional shape but specified dimensions shall be respected



Detail Y



Detail W for 2222 version

Detail W for 2220 version

Key

- 1 female active area: see EN 3155-001 for definition
- 2 first point of electrical contact (point at which a square ended minimum gauge pin of the same basic diameter as the mating contact first engages female contact spring member); (see EN 3155-001 for active area definition)

Figure 2 — Connector contact

Table 1 — Connector contact

Size		ϕA	ϕB	ϕC	ϕD	ϕE	ϕF	G	J	K	P	S	ϕT	α	Mass
Contact	Barrel	min.					max.						min.	°	g
															max.
22	22	0,78	1,80 1,75	1,22 1,17	0,90 0,85	0,56 0,46	1,57	3,99 3,58	0,13 0,08	3,28 3,10	6,02 5,87	7,34 7,09	1,19	50 44	0,13
22	20	0,78	1,80 1,75	1,50 1,45	1,12 1,09	0,56 0,46	1,57	3,99 3,58	0,11 0,05	3,28 3,10	6,02 5,87	7,34 7,09	1,19	50 44	0,13

4.3 Marking by colour code

Shall be according to Table 2.

Table 2 — Marking by colour code

Size		Colour identification bands according to ISO 8843	
		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

Shall be according to 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 AS 22520, see Table 4.

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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	—	M22520/2-06	2	M22520/7-06	1
		002	24		—		3		2
		004	22		—		4		3
22	20	002	24	Not applicable	—	M22520/2-06	2	M22520/7-06	1
		004	22		—		4		3
		006	20		—		6		4

^a AWG = Closest American Wire Gauge.

4.6.2 Insertion/Extraction tools

Conform to SAE AS 81969.

Shall be according to Table 5.

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 EN 3155-071 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

Shall be according to Table 6.