



SLOVENSKI STANDARD

oSIST prEN 3155-075:2023

01-september-2023

**Aeronavtika - Električni kontakti za uporabo v veznih elementih - 075. del:
Kontakti, električni, quadrax, velikost 8, ženski, tip E, nagubani, razred R -
Standard za proizvod**

Aerospace series - Electrical contacts used in elements of connection - Part 075:
Contacts, electrical, quadrax, size 8, female, type E, crimp, class R - Product standard

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen -
Teil 075: Elektrische quadraxiale Buchsenkontakte, Größe 8, Typ E, crimpbar, Klasse R
- Produktnorm

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie
075: Contacts électriques, quadrax, taille 8, femelles, type E, à sertir, classe R - Norme
de produit

Ta slovenski standard je istoveten z: prEN 3155-075

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

DRAFT
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ICS 49.060

Will supersede EN 3155-075:2022

English Version

Aerospace series - Electrical contacts used in elements of connection - Part 075: Contacts, electrical, quadrax, size 8, female, type E, crimp, class R - Product standard

Série aérospatiale - Contacts électriques utilisés dans les organes de connexion - Partie 075: Contacts électriques, quadrax, taille 8, femelles, type E, à sertir, classe R - Norme de produit

Luft- und Raumfahrt - Elektrische Kontakte zur Verwendung in Verbindungselementen - Teil 075: Elektrische quadraxiale Buchsenkontakte, Größe 8, Typ E, crimpbar, Klasse R - 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.

This draft European Standard was established by CEN 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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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.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

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European foreword

This document (prEN 3155-075:2023) 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 3155-075:2022.

prEN 3155-075:2023 includes the following significant technical changes with respect to EN 3155-075:2022:

- normative references updated;
- alternative design and view for female contact authorizing hood on front area side introduced;
- test sequence updated to ensure performance measurements of insertion loss (EN 2591-222) and impedance characteristic (EN 2591-223) tests;
- document editorially revised.

[oSIST prEN 3155-075:2023](https://standards.iteh.ai/catalog/standards/sist/5c79e61f-1a72-4179-ac0f-63b541d95dea/osist-pren-3155-075-2023)
<https://standards.iteh.ai/catalog/standards/sist/5c79e61f-1a72-4179-ac0f-63b541d95dea/osist-pren-3155-075-2023>

prEN 3155-075:2023 (E)**1 Scope**

This document specifies the required characteristics, tests and tooling applicable to female electrical quadrax contacts, shielded, size 8, type E characteristic impedance 100 Ω , crimp, class R, used in elements of connection according to EN 3155-002.

It is used together with EN 3155-001.

The associated male contacts are specified in EN 3155-074.

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 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 3375-008, *Aerospace series - Cable, electrical, for digital data transmission - Part 008: Single braid - Star Quad 100 ohms - Type KD - Product standard*

EN 3375-011, *Aerospace series - Cable, electrical, for digital data transmission - Part 011: Single braid - Star Quad 100 ohms - Lightweight - Type KL - Product standard*

EN 3375-012, *Aerospace series - Cable, electrical, for digital data transmission - Part 012: Single braid - Star Quad 100 ohms - 260 °C - Type KH - Product standard*

EN 3645-001, *Aerospace series - Connectors, electrical, circular, scoop-proof, triple start threaded coupling, operating temperature 175 °C or 200 °C continuous - Part 001: Technical specification*

EN 3909, *Aerospace series - Test fluids and test methods for electrical and optical components and sub-assemblies*

SAE AS22520, *Crimping Tools, Wire Termination, General Specification For*¹

SAE AS81969/14A, *Installing and Removal Tools, Connector Electrical Contact, Type III, Class 2, Composition B*¹

3 Terms and definitions

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

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

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

¹ Published by: SAE International (US) Society of Automotive Engineers, <https://www.sae.org/>.

4 Required characteristics

4.1 Specific characteristics

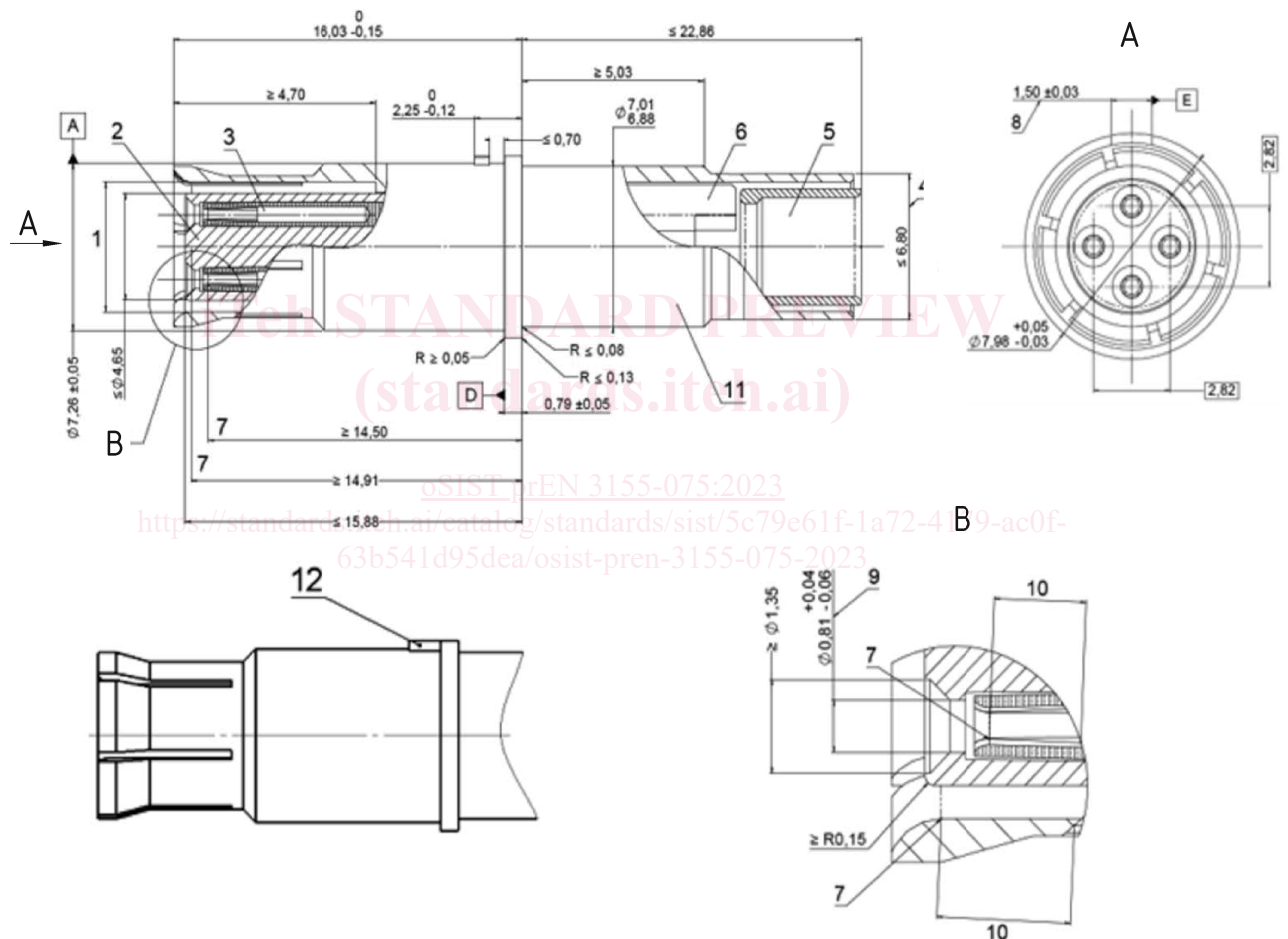
These type E contacts are contacts with screening features and specified high frequency characteristics, class R corresponding to an operating temperature range from $-65\text{ }^{\circ}\text{C}$ to $150\text{ }^{\circ}\text{C}$.

4.2 Dimensions and mass

Dimensions shall be in accordance with Figure 1, Figure 2 and Table 1.

Contact mass: 6 g max.

Dimensions and tolerances in millimetres



Key

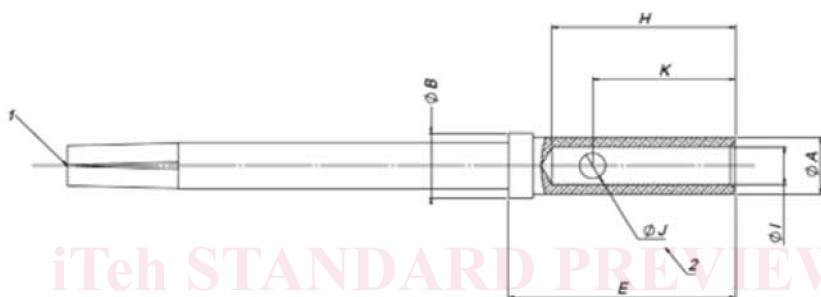
- 1 mates with 5,51/5,56 male contact diameter
- 2 front insulator
- 3 inner contacts (4)
- 4 after crimping
- 5 shield ferrule (see detail A)
- 6 rear insulator

prEN 3155-075:2023 (E)

- 7 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 the female contact spring member)
- 8 orientation key aligned with shoulder diameter
- 9 insulator opening $\text{⊕} \text{⌀}0,4 \text{ (M)} \text{ (A)} \text{ (E)} \text{ (D)}$
- 10 position of the first point and the maximum length of electrical contact (Point at which a square ended minimum gauge pin of the same basic diameter as the mating contact first engages the female contact spring member)
(See EN 3155-001 for active area definition)
- 11 manufacturer identification area
- 12 orientation key alternative design

Figure 1 — Dimensions

Dimensions and tolerances in millimetres



Key

- 1 compatible with a contact $\text{⌀} 0,622$ to $\text{⌀} 0,648$ (size 24)
- 2 one side only

Figure 2 — Configuration, dimensions and tolerances of socket contact size 24

Table 1 — Dimensions and tolerances of socket contact size 24

$\text{⌀} A$	$\text{⌀} B$	E	H	$\text{⌀} I$	$\text{⌀} J$	K
1,24	1,47	5,03	3,58	0,85	0,52	3,1
1,32	1,51	5,13	3,99	0,90	0,62	3,3

4.3 Marking

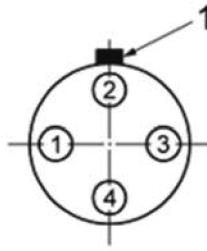
4.3.1 Marking

Marking shall be applied on the contact body. This marking shall include:

- the date of manufacture (year-week);
- the manufacturer’s name or trademark.

4.3.2 Pin location identification

See Figure 3. (Not printed on product).

**Key**

1 angular positioning key

Figure 3 — Front face view

4.4 Material, surface treatment**4.4.1 Material**

Body: Copper alloy.

4.4.2 Protective coating

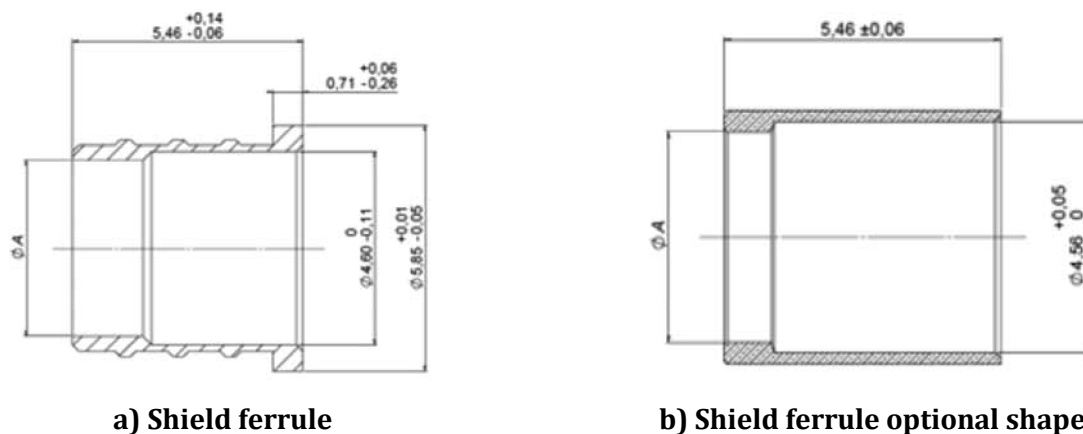
Gold and appropriate undercoat, thickness of protection according to EN 3155-001, selective protection permitted.

4.4.3 Dielectric

PTFE Fluoropolymer or equivalent.

4.5 Permissible cables

The cables shall be in accordance with Figure 4 and Table 2.



a) Shield ferrule

b) Shield ferrule optional shape

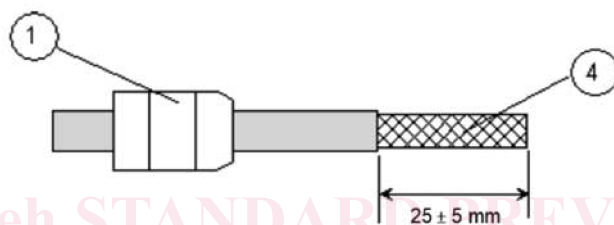
Figure 4 — Cable Ferrule

Table 2 — Ferrule dimensions

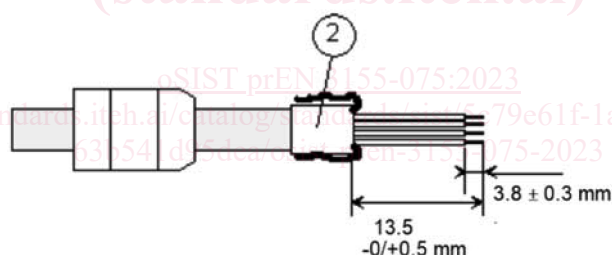
$\varnothing A$	Cable style
4,18 4,12	EN 3375-008 (KD)
	EN 3375-011 (KL) ^a
	EN 3375-012 (KH)
^a Additional shrinkable sleeve may be needed for KL cable if its diameter is lower or equal to 4,10 mm.	

4.6 Wiring

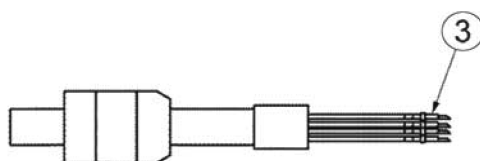
Preparation of the cable and crimping sequence are given in Figure 5 for information only.



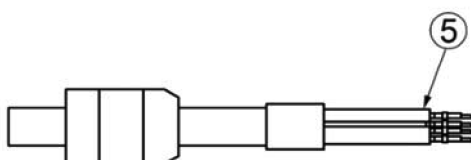
a) Strip external layer of the cable.



b) Pull back the braid on/in the ferrule (2) (optional). Strip each element of the quadrax cable.



c) Crimp the inner contacts (3) with tools on Table 3.



d) Install the spacer (5) and respect the circular location of each individual contact.