SLOVENSKI STANDARD
SIST EN 4652-321:2018

01-februar-2018

Aeronavtika - Konektorji, koaksialni, radiofrekvenčni - 321. del: Tip 3, vmesnik N - Izvedba s stisljivimi priključki - Pravokotni vtič - Standard za proizvod

Aerospace series - Connectors, coaxial, radio frequency - Part 321: Type 3, N interface - Crimp assembly version - Right angle plug - Product standard

Luft- und Raumfahrt - Koaxiale Hochfrequenz-Steckverbinder - Teil 321: Typ 3, N-Schnittstelle - Krimpausführung, Freier - Steckverbinder 90° abgewinkelt- - Produktnorm

Série aérospatiale - Connecteurs coaxiaux pour radio fréquences - Partie 321 : Type 3, interface N - Version à sertir - Fiche coudée - Norme de produit

Ta slovenski standard je istoveten z: **EN 4652-321:2017**

ICS:

31.220.10	Vtiči in vtičnice, konektorji	Plug-and-socket devices. Connectors
49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 4652-321:2018 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4652-321

November 2017

ICS 49.060

English Version

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This European Standard was approved by CEN on 23 July 2017.

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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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 4652-321:2017 E

Contents

European foreword

This document (EN 4652-321:2017) 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of an identical text or by endorsement, at the latest by May 2018, and conflicting national standards shall be withdrawn at the latest by May 2018

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.

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.

1 Scope

This European Standard specifies the characteristics of screwed on coupling (N interface) coaxial right angle plugs – 50 ohms. The cable to connector assembly is a crimp technology.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2424, *Aerospace series — Marking of aerospace products*

EN 2591*, *Aerospace series — Elements of electrical and optical connection — Test methods* [1)]

EN 2812, *Aerospace series — Stripping of electric cables*

EN 4652-001, *Aerospace series — Connectors, coaxial, radio frequency — Part 001: Technical specification*

EN 4652-322, *Aerospace series — Connectors, coaxial, radio frequency — Part 322: Type 3, N interface — Crimp version — Square flange receptacle — Product standard*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

TR 6058, *Aerospace series — Cable code identification list* [2)]

3 Required characteristics

— The connection technology shall comply to all required tests described in Clause 4.

— All interfaces shall comply to EN 4652-001.

— Holes for lockwire shall exist in case of no self-locking device on the product.

— Water ingress resistance is required in unmated conditions for cable group A.

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* All parts quoted in this European Standard.

1) Published as ASD-STAN Prestandard at the date of publication of this European Standard. (www.asd-stan.org).

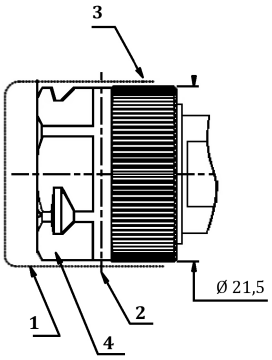
2) Published as ASD-STAN Technical Report at the date of publication of this European Standard. (www.asd-stan.org).

3.1 Configuration, dimension and mass

Mass without heatshrink tubing.

See Figure 1 and Table 1.

Dimensions in millimetres

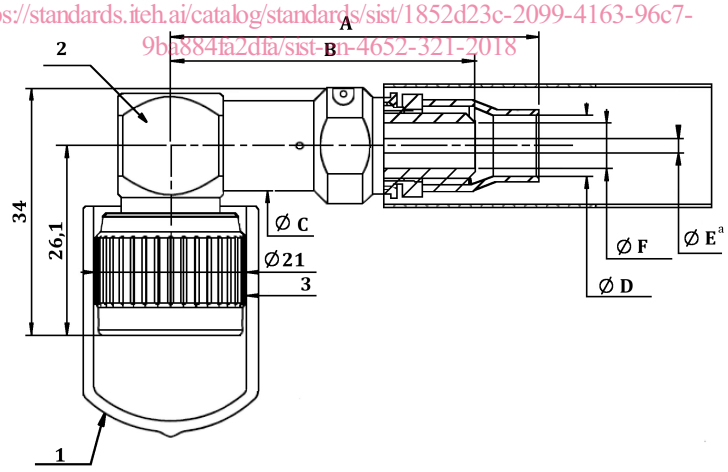


Key

1 Prospective cap
2 Marking axis
3 Straight knurl
4 Hex 18,9/Flat

Figure 1 — Nut type G

Dimensions in millimetres

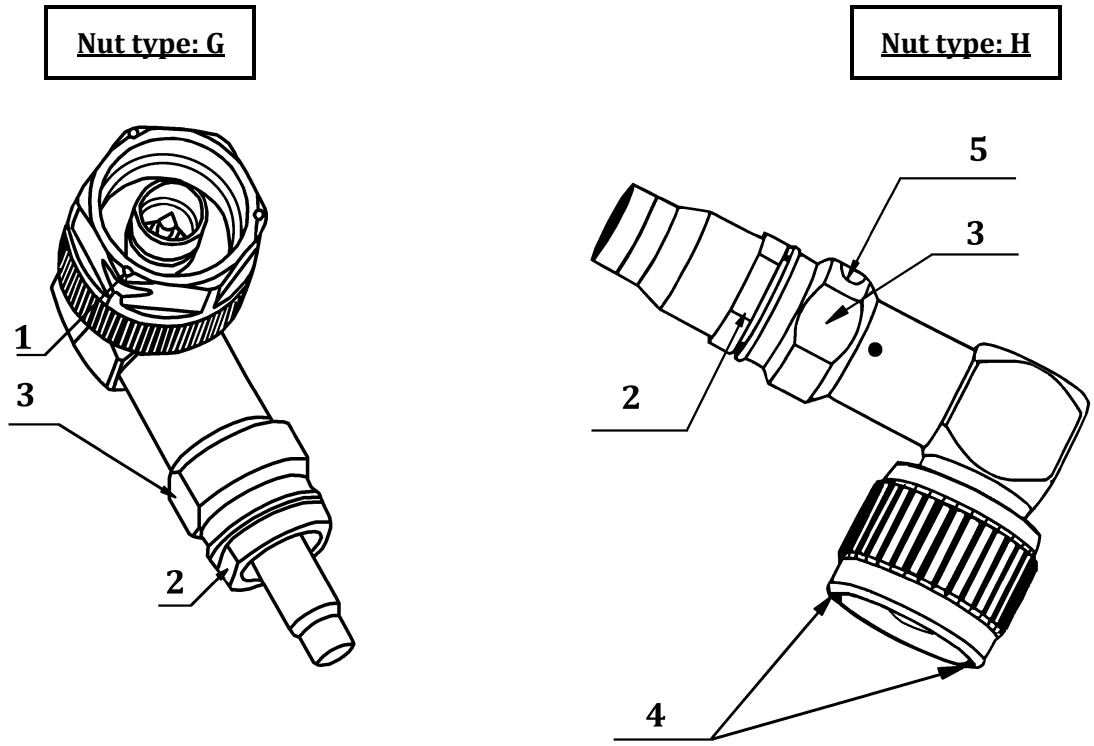


Key

1 Prospective cap
2 14,3 Flats
3 Straight knurl
a Center contact

Figure 2 — Nut type H and connector dimensions

Dimensions in millimetres



Key

1 3 holes diameter 1° to 120°
2 Hex 12/2 flats
3 Hex 14/2 flats
4 2 holes diameter 0,75
5 1 hole diameter 0,8

Marking: see Clause 8.

Figure 3 — Type G and H over view

Table 1 — N right angle plug dimensions and mass

Cable code (see TR 6058)	**Cable group**	**Nut type**	*A* max.	*B* max.	*ØC*	*ØD*	*ØE*	*ØF*	**Mass** g
WM	C	G	47,9	37,5	12,4	4,2	1,15	3	41,68
WD	E	H	50,5	41,5	12,4	8,4	2,5	6,3	69,12
WN	F	H	50,5	41,5	12,4	8,4	2,5	6,3	69,12

3.2 Materials and finish

Center contact (front active part)..... : Copper alloy gold plated over nickel undercoat
Ferrule (if existing)..... : Copper alloy over nickel undercoat
Insulators..... : PTFE
Sealings..... : Silicone rubber or silicon fluoride
Heat shrink tube ..... : Polyolefin, 135 °C min

Body of connector, coupling nut, rear screw materials of these parts shall have mechanical and electrical characteristics consistent with the required use.

3.3 Temperature

Operating temperature shall be between – 65 °C to 165 °C (only connectors).

3.4 Electrical characteristics

Impedance ..... : 50 Ω

Maximum operating frequency ..... : 6 GHz

VSWR ..... : See Table 2.

Table 2 — Electrical characteristics

Frequency (MHz)	**VSWR** max.
3 000	1,10
6 000	1,15

Insertion loss ..... : See Table 3.

Contact resistance (initial central contact) ..... : 1,5 mΩ max.

Insulation resistance ..... : 5 000 MΩ min.

Withstand voltage ..... : 1 500 Veff (at sea level)

3.5 General characteristics

Tightening torque of coupling nut ..... : 3,7 m.N

Coupling proof torque ..... : T = 1,3 m.N for nut H; T = 1,6 m.N for nut G

Service life ..... : 500 cycles

Retention of centre contact ..... : 27 N min.

Retention of cable ..... : See Table 3.

Table 3 — General characteristics

Cable code (see TR 6058)	**Insertion loss**	**Retention of cable**
WD, WN	$0{,}07\sqrt{f}$ (GHz) dB max.	400 N min.
WM	$0{,}1\sqrt{f}$ (GHz) dB max.	140 N min.