

SLOVENSKI STANDARD

SIST EN 4652-420:2018

01-februar-2018

Aeronavtika - Konektorji, koaksialni, radiofrekvenčni - 420. del: Tip 4, vmesnik C - Izvedba s stisljivimi priključki - Ravni vtič - Standard za proizvod

Aerospace series - Connectors, coaxial, radio frequency - Part 420: Type 4, C interface - Crimp assembly version - Straight plug - Product standard

Luft- und Raumfahrt - Koaxiale Hochfrequenz-Steckverbinder - Teil 420: Typ 4 C-Anschluss, Krimpausführung, freier Steckverbinder, gerade - Produktnorm

Série aérospatiale - Connecteurs coaxiaux pour radio fréquences - Partie 420 : Type 4, interface C - Version à sertir - Fiche droite - Norme de produit

<https://standards.iteh.ai/catalog/standards/sist/fa3c8db4-c8fa-4fa0-99c1-c4a0804b3c69/sist-en-4652-420-2018>

Ta slovenski standard je istoveten z: EN 4652-420:2017

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 4652-420:2018

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 4652-420:2018

<https://standards.iteh.ai/catalog/standards/sist/fa3c8db4-c8fa-4fa0-99c1-c4a0804b3c69/sist-en-4652-420-2018>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4652-420

October 2017

ICS 49.060

English Version

**Aerospace series - Connectors, coaxial, radio frequency -
Part 420: Type 4, C interface - Crimp assembly version -
Straight plug - Product standard**

Série aérospatiale - Connecteurs coaxiaux pour radio
fréquences - Partie 420 : Type 4, interface C - Version à
sertir - Fiche droite - Norme de produit

Luft- und Raumfahrt - Koaxiale Hochfrequenz-
Steckverbinder - Teil 420: Typ 4, C-Schnittstelle -
Crimpverbindung - freier Steckverbinder, gerade -
Produktnorm

This European Standard was approved by CEN on 10 April 2017.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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

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

Contents

	Page
European foreword	3
1 Scope.....	4
2 Normative references.....	4
3 Required characteristics	4
4 Test methods	9
5 Qualification	12
6 Quality assurance	12
7 Designation (see EN 4652-001)	12
8 Marking	13
9 Packaging.....	13
10 Storage	13

iTech STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 4652-420:2018

<https://standards.iteh.ai/catalog/standards/sist/fa3c8db4-c8fa-4fa0-99c1-c4a0804b3c69/sist-en-4652-420-2018>

European foreword

This document (EN 4652-420:2017) 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 April 2018, and conflicting national standards shall be withdrawn at the latest by April 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 4652-420:2018

<https://standards.iteh.ai/catalog/standards/sist/fa3c8db4-c8fa-4fa0-99c1-c4a0804b3c69/sist-en-4652-420-2018>

1 Scope

This European Standard specifies the characteristics of screwed on coupling (C interface) coaxial straight plugs – 50 ohms. The cable to connector assembly is 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 connexion — Test methods*

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

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

EN 4652-002, *Aerospace series — Connectors, coaxial, radio frequency — Part 002: Specification of performances* ¹⁾

EN 9133, *Aerospace series — Quality Management Systems — Qualification Procedure for Aerospace Standard Products*

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 interface 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 mated conditions for all cable groups.
- Water ingress resistance is required in unmated conditions for cable group A.

* All parts quoted in this standard.

1) Published as ASD-STAN Prestandard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN) (www.asd-stan.org).

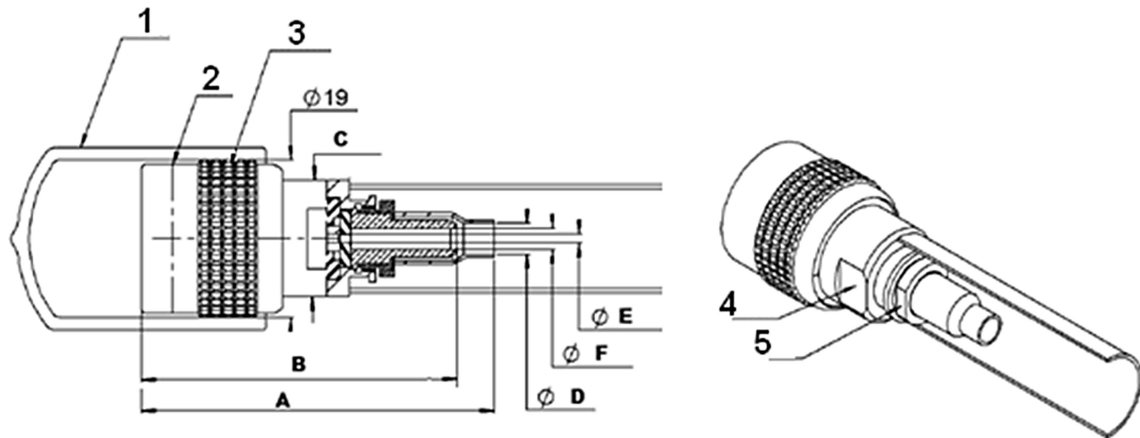
2) Published as ASD-STAN Technical Report at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN) (www.asd-stan.org).

3.1 Configuration, dimension and mass

Mass without heatshrink tubing.

See Figure 1 and Table 1.

Dimension in millimetres



Key

- 1 Protective cap
- 2 Marking axis
- 3 Diamond knurl
- 4 12/2 flats
- 5 8/2 flats

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 4652-420:2018](https://standards.iteh.ai/catalog/standards/sist/fa3c8db4-c8fa-4fa0-99c1-c4a0804b3c69/sist-en-4652-420-2018)

<https://standards.iteh.ai/catalog/standards/sist/fa3c8db4-c8fa-4fa0-99c1-c4a0804b3c69/sist-en-4652-420-2018>

Figure 1 — C straight plug

Marking: see Clause 8.

Table 1 — C straight plug dimensions and mass

Cable code (see TR 6058)	Cable group	<i>A</i> max.	<i>B</i> max.	$\varnothing C$	$\varnothing D$	$\varnothing E$	$\varnothing F$	Mass g
WZ	D	42,7	37,5	14,05	3,7	1,05	2,55	31,37
WD	E	50,3	40,6	14,05	8,4	2,5	6,3	41,29
WN	F	50,3	40,6	14,05	8,4	2,5	6,3	41,29

EN 4652-420:2017 (E)

3.2 Materials and finish

Central 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 and 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

The VSWR requirement is applicable for connector alone.

Insertion loss.....	$0,1\sqrt{f}$ (GHz) dB max. in Ghz
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 Nm

Force to engage or disengage.....: 0,27 Nm min.

Coupling proof torque.....: Not applicable: bayonet

Service life.....: 500 cycles

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

Retention of cable: see Table 3

Table 3 — Retention of cable

Cable code (see TR 6058)	Retention of cable N min.
WD, WN	400
WZ	110

3.6 Admissible cables, tools and stripping lengths

3.6.1 Admissible cables, tools

The connector shall accept the cables listed in Table 3 with associated tools.