

SLOVENSKI STANDARD

SIST EN 4652-110:2015

01-november-2015

Aeronavtika - Konektorji, koaksialni, radiofrekvenčni - 110. del: Tip 1, vmesnik BNC (bajonetni) - Izvedba z objemno matico - Ravni vtič - Standard za proizvod

Aerospace series - Connectors, coaxial, radio frequency - Part 110: Type 1, BNC interface - Clamp nut assembly version - Straight plug - Product standard

Luft- und Raumfahrt - Hochfrequenz Steckverbinder, koaxial - Teil 110: Typ 1, BNC - Klemmverbindung - Gerader Kabelverbinder - Produktnorm

Série aérospatiale - Connecteurs coaxiaux pour radio fréquences - Partie 110: Type 1, interface BNC - Version à presse étoupe - Fiche droite - Norme de produit

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Ta slovenski standard je istoveten z: EN 4652-110:2015

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

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EUROPEAN STANDARD

EN 4652-110

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2015

ICS 49.060

English Version

Aerospace series - Connectors, coaxial, radio frequency - Part 110: Type 1, BNC interface - Clamp nut assembly version - Straight plug - Product standard

Série aérospatiale - Connecteurs coaxiaux pour radio
fréquences - Partie 110: Type 1, interface BNC -
Version à presse étoupe - Fiche droite - Norme de
produit

Luft- und Raumfahrt - Koaxiale Hochfrequenz-
Steckverbinder - Teil 110: Typ 1 BNC-Schnittstelle -
Anschluss mit Konusringverschraubung - Gerader,
freier Steckverbinder - Produktnorm

This European Standard was approved by CEN on 7 February 2015.

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.

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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

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European foreword

This document (EN 4652-110:2015) 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 March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 4652-110:2015 (E)**1 Scope**

This European Standard specifies the characteristics of bayonet coupling (BNC interface) coaxial straight plugs – 50 ohms. The cable to connector assembly is a clamp 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 2591 ¹⁾, *Aerospace series — Elements of electrical and optical connection — Test methods*

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

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

EN 4652-112, *Aerospace series — Connectors, coaxial, radio frequency — Part 112: Type 1, BNC interface — Clamp nut assembly version — Square flange receptacle — Product standard*

EN 4652-113, *Aerospace series — Connectors, coaxial, radio frequency — Part 113: Type 1, BNC interface — Clamp nut assembly version — Bulkhead 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⁾ 2015

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4652-001 apply.

4 Required characteristics

- The connection technology shall comply to required tests described in Clause 5;
- Interface shall comply to EN 4652-001;
- Water ingress resistance is required in unmated condition for cable group A.

1) All parts quoted in this European Standard.

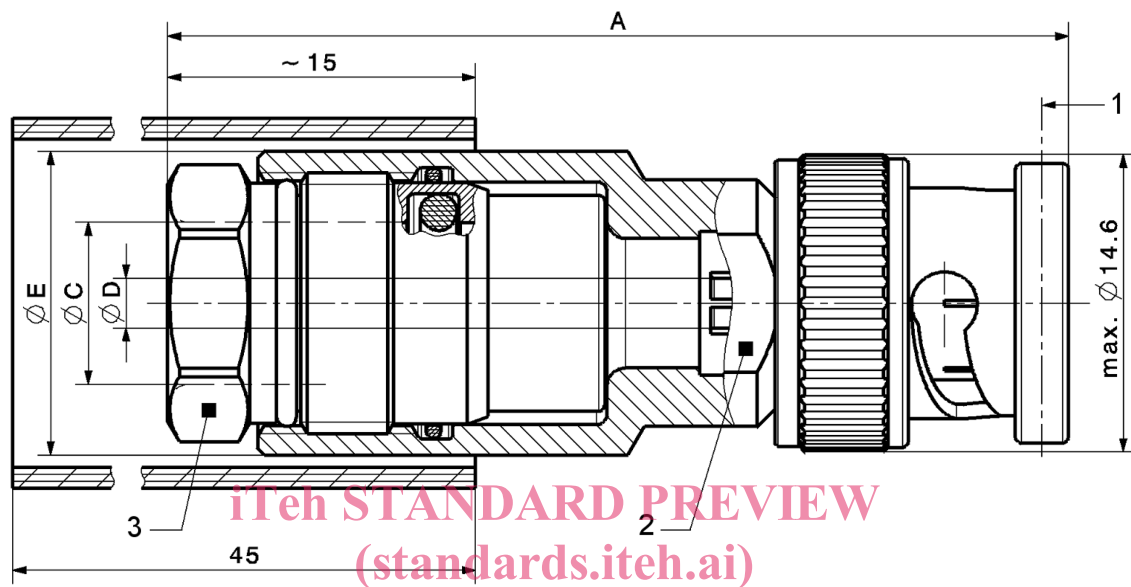
2) Published as ASD-STAN Technical Report at the date of publication of this European Standard.
<http://www.asd-stan.org/>

4.1 Configuration, dimension and mass

Mass without heat shrink tubing.

See Figure 1 and Table 1.

Dimensions in millimetres



Key

- 1 Marking
- 2 Flat 10
- 3 HEX. F

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Figure 1 — BNC straight plug

Marking: see Clause 9.

Table 1 — BNC straight plug dimensions and mass

Cable group	<i>A</i> max.	Ø <i>C</i> (cable jacket) max.	Ø <i>D</i> (cable conductor)	Ø <i>E</i> max.	HEX. <i>F</i>	Mass g max.
A	44,5	7,8	2,3	15	12	32,5
B	36,8	5,55	1,4	13	8	21,5

EN 4652-110:2015 (E)**4.2 Materials and finish**

Centre contact	: Copper alloy gold plated over nickel undercoat
Insulators	: PTFE
Seals	: Silicone rubber or silicone fluoride
Body	: Copper alloy, nickel plated
Heat shrink tube	: Polyolefin

Coupling nut, rear screw materials and other parts shall have mechanical and electrical characteristics consistent with the requirements of this product standard.

4.3 Temperature

Operating temperature shall be between – 65 °C and 165 °C.

4.4 Electrical characteristics

Impedance	: 50 Ω
Maximum operating frequency	: 4 GHz
VSWR	: 1,15 up to 4 GHz
Insertion loss	: $0,1\sqrt{f}$ dB max., f in GHz
Contact resistance (initial centre contact)	: 1,5 mΩ max.
Insulation resistance	: 5 000 MΩ min.
Withstand voltage	: 1 500 Veff (at sea level)

4.5 General characteristics

Force to engage or disengage	
— Longitudinal force	: 13 N
— Torque	: 0,28 Nm max.
Service life	: 500 cycles
Retention of centre contact	: 27 N min.
Retention of cable	: see Table 2.

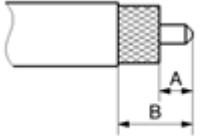
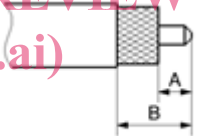
Table 2 — Retention of cable

Cable group	Retention of cable
	N min.
A	180
B	180

4.6 Admissible cables, tools and stripping lengths

See Table 3 to Table 5.

Table 3 — Stripping lengths

Cable group	Cable code (see TR 6058)	Stripping lengths mm
A	KW	
B	KX	

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Table 4 — Stripping lengths cable group A

A		B	
min. mm	max. mm	min. mm	max. mm
4,6	5,4	8,6	9,4

Table 5 — Stripping lengths cable group B

A		B	
min. mm	max. mm	min. mm	max. mm
3,6	4,4	7,6	8,4

For stripping see EN 2812.