SLOVENSKI STANDARD
SIST EN 4652-001:2015

01-september-2015

Aeronavtika - Konektorji, koaksialni, radiofrekvenčni - 001. del: Tehnična specifikacija

Aerospace series - Connectors, coaxial, radio frequency - Part 001: Technical specification

Luft- und Raumfahrt - Hochfrequenz Steckverbinder, koaxial - Teil 001: Technische Lieferbedingungen

Série aérospatiale - Connecteurs coaxiaux pour radio fréquences - Partie 001 : Spécification technique

Ta slovenski standard je istoveten z: **EN 4652-001:2015**

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49.060	Letalska in vesoljska električna oprema in sistemi	Aerospace electric equipment and systems

SIST EN 4652-001:2015 **en,fr,de**

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English Version

Aerospace series - Connectors, coaxial, radio frequency - Part 001: Technical specification

Série aérospatiale - Connecteurs coaxiaux pour radio fréquences - Partie 001: Spécification technique

Luft- und Raumfahrt - Koaxiale Hochfrequenz-Steckverbinder - Teil 001: Technische Lieferbedingungen

This European Standard was approved by CEN on 14 February 2015.

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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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Foreword

This document (EN 4652-001:2015) 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of an identical text or by endorsement, at the latest by November 2015, and conflicting national standards shall be withdrawn at the latest by November 2015.

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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.

1 Scope

This European Standard specifies the required characteristics, test methods, qualification and acceptance conditions of coaxial, radio frequency connectors used with flexible radio frequency cables in accordance with EN 4604-001 and semi-rigid coaxial cables.

This family of connectors is derived from MIL-PRF-39012. Front face dimensions are identical and products are fully intermateable.

Cables usable with present specification are listed in TR 6058.

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

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

EN 4604-001, *Aerospace series - Cable, electrical, for signal transmission - Part 001: Technical specification*

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

MIL-HDBK-454, *General Guidelines for Electronic Equipment* [2)]

MIL-PRF-39012, *Connectors, coaxial, radio frequency — General specification for* [2)]

TR 6058, *Aerospace series — Cable code identification list* [3)]

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 2591-100 apply.

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1) All parts quoted in this European Standard.

2) Published by: DoD National (US) Mil. Department of Defense. http://www.defenselink.mil/

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

4 Description

4.1 Types of connectors

The characteristics of types of coaxial radio frequency connectors are defined in this European Standard.

— Type 1: BNC interface, 50 Ω impedance, bayonet coupling.

— Type 2: TNC interface, 50 Ω impedance, screw-on coupling.

— Type 3: N interface, 50 Ω impedance, screw-on coupling.

— Type 4: C interface, 50 Ω impedance, bayonet coupling.

— Type 5: HN interface, 50 Ω impedance, screw-on coupling

— Type 6: SMA interface, 50 Ω impedance, screw-on coupling

4.2 Models of connectors

Models of connectors are defined in this European Standard.

— Model code 0: straight plug.

— Model code 1: right angle plug.

— Model code 2: square flange receptacle.

— Model code 3: bulkhead receptacle.

— Model code 4: adaptor.

4.3 Technologies of assembly

Cable and connector assemblies are defined in this European Standard.

— Code 0: solder type.

— Code 1: clamp type.

— Code 2: crimp type.

4.3.1 Solder technology

The core and the braid of the cable are soldered to the connector.

4.3.2 Clamp technology

The core of the cable is plugged into the centre contact.

A clamp nut fixes the braid of the cable onto the body of the connector (see product standard).

4.3.3 Crimp technology

The core of the cable is crimped (or soldered see product standard) into the centre contact.

A ferrule crimps the braid of the cable onto the body of the connector (see product standard).

4.4 Permissible cables

The permissible coaxial cables shall be specified in the product standard.

Their cable codes are given by TR 6058.

4.5 Materials and surface treatments

See product standard.

5 Definition and mass

5.1 Dimensions and masses

The general dimensions and masses of the straight plug, right angle plug, square flange receptacle, bulkhead receptacle and adaptor are given in the product standard.

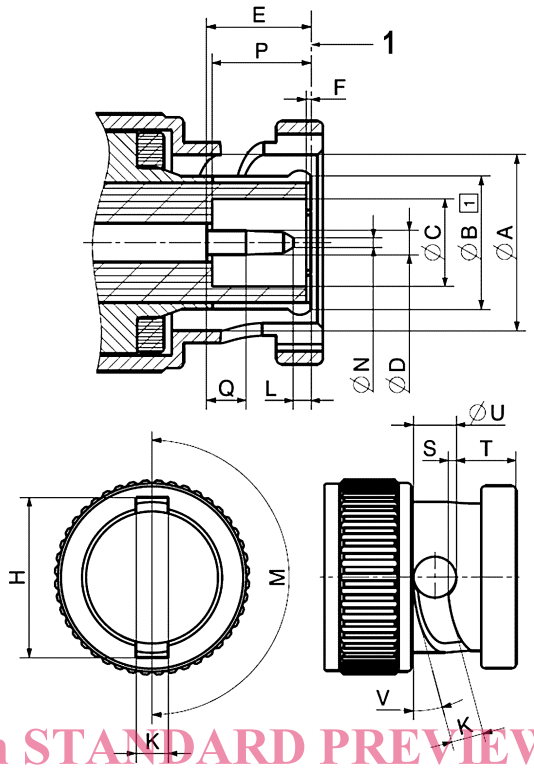
5.2 Interface dimensions

5.2.1 Type 1 connectors BNC interface

5.2.1.1 Plug, 50 Ω

See Figure 1 and Table 1.

Dimensions in millimetres



Key

1 REF. Plane

Figure 1 — BNC plug interface

Table 1 — BNC plug dimensions

Dimensions in millimetres

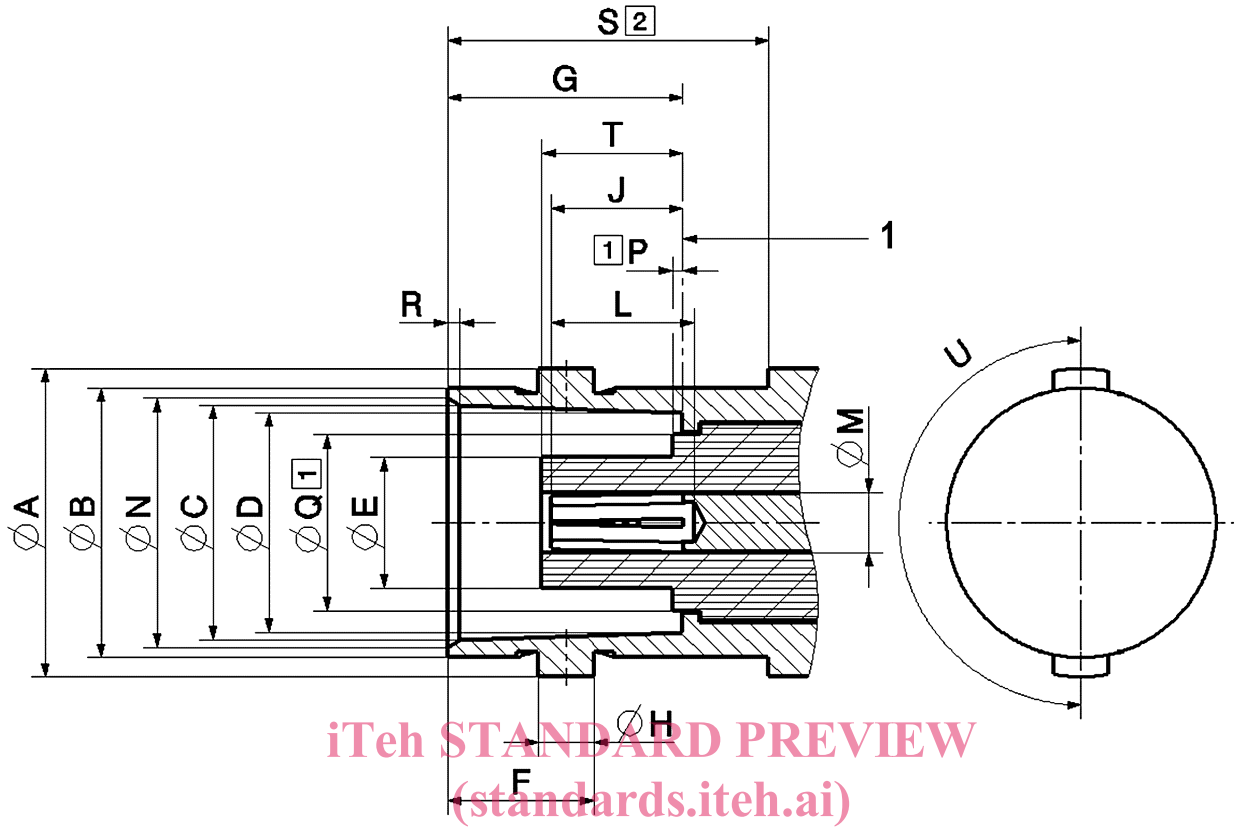
	Ø *A*	Ø *B*	Ø *C*	Ø *D*	*E*	*F*	*H*	*K*	*L*	*M*	Ø *N*	*P*	*Q*	*S*	*T*	Ø *U*	*V*
min.	9,78	–	4,83	1,32	5,33	0,15	11,76	2,31	0,08	179°	–	5,28	1,98	0,46	4,57	3,15	14,5°
max.	9,91	8,31	–	1,37	5,84	–	12,01	2,46	–	181°	0,64	5,79	–	0,56	4,67	–	15,5°

NOTE Slotted and flared to meet electrical and mechanical performance.

5.2.1.2 Receptacle, 50 Ω

See Figure 2 and Table 2.

Dimensions in millimetres



Key

1 REF. Plane

Figure 2 — BNC receptacle interface

Table 2 — BNC receptacle dimensions

Dimensions in millimetres

	Ø *A*	Ø *B*	Ø *C*	Ø *D*	Ø *E*	*F*	*G*	Ø *H*	*J*	*L*	Ø *M*	Ø *N*	*P*	Ø *Q*	*R*	*S*	*T*	*U*
min.	10,97	9,60	8,31	8,10	–	5,18	8,31	1,91	4,72	4,95	2,06	8,79	–	–	0,38	10,52	4,78	179°
max.	11,07	9,70	8,46	8,15	4,72	5,28	8,51	2,06	5,23	–	2,21	9,04	0,15	6,5	0,76	–	5,28	181°

NOTE 1 *Q* dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension *P*.

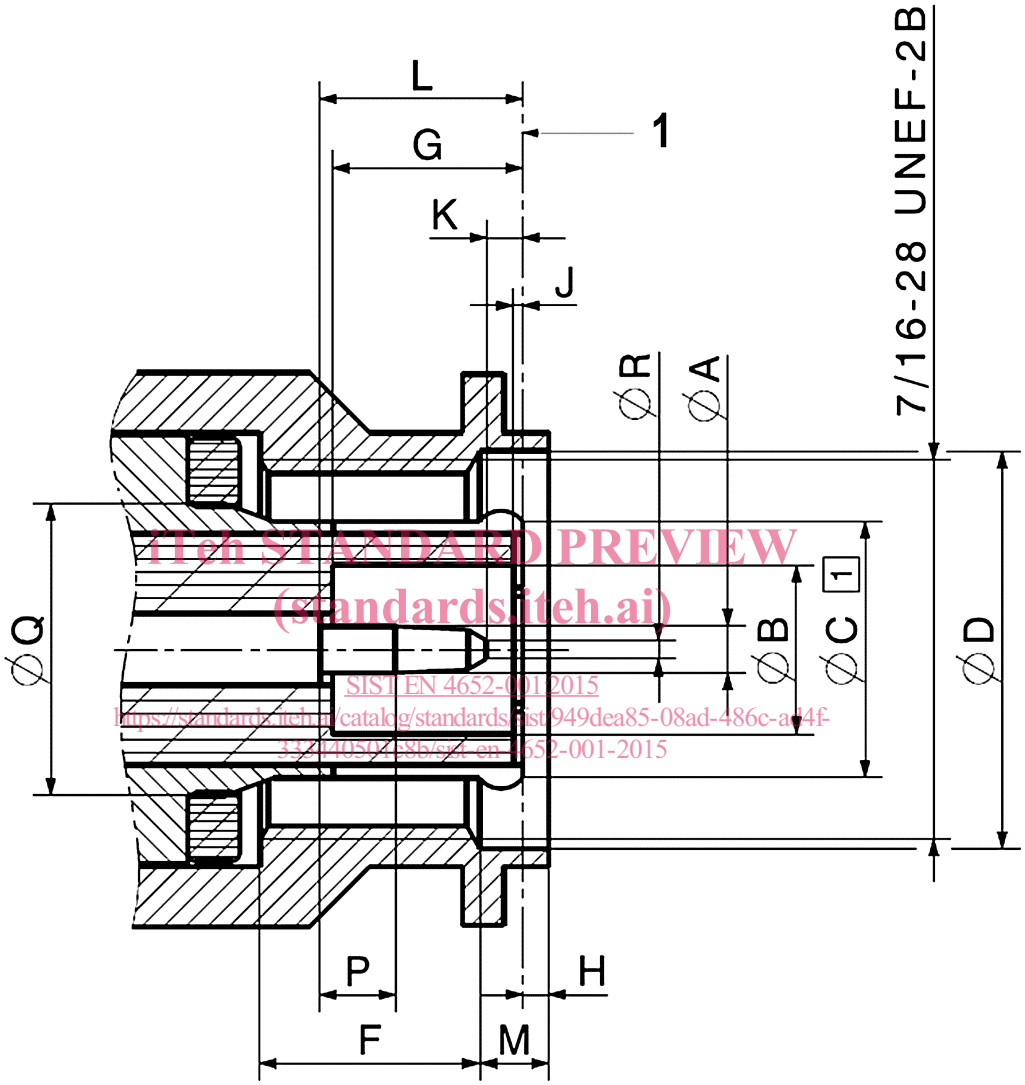
NOTE 2 Clearance for mating connector coupling nut.

5.2.2 Type 2 connectors TNC interface

5.2.2.1 Plug, 50 Ω, style A

See Figures 3a and Table 3a.

Dimensions in millimetres



Key

1 REF. Plane

Figure 3a — TNC plug style A interface

Table 3a — TNC plug style A dimensions

Dimensions in millimetres

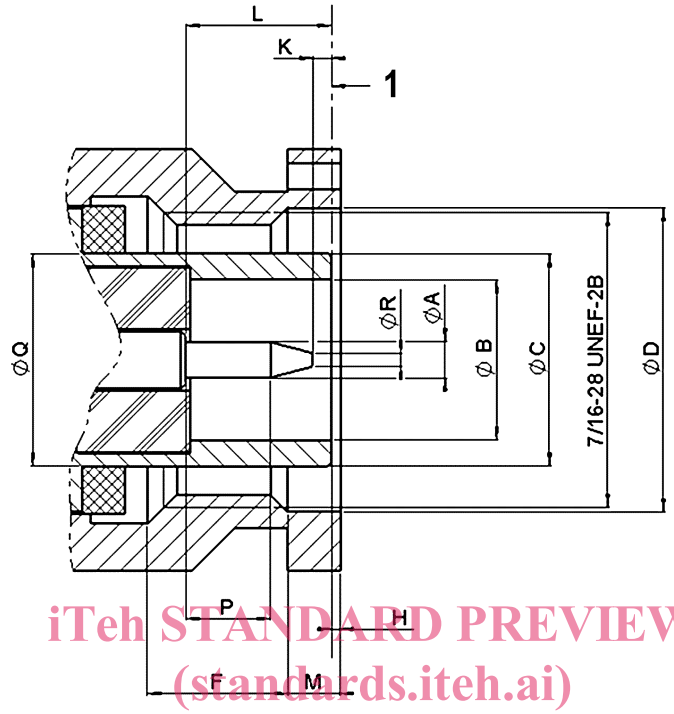
	Ø *A*	Ø *B*	Ø *C*	Ø *D*	*F*	*G*	*H*	*J*	*K*	*L*	*M*	*P*	Ø *Q*	Ø *R*
min.	1,32	4,83	–	11,18	3,96	5,28	–	0,15	0,08	5,33	1,60	1,98	–	–
max.	1,37	–	8,31	–	–	5,79	1,98	–	1,02	5,84	–	–	8,18	0,64

NOTE Flared to meet electrical and mechanical performance.

5.2.2.2 Plug, 50 Ω, style B

See Figure 3b and Table 3b.

Dimensions in millimetres



Key

1 REF. Plane

Figure 3b — TNC plug style B interface

Table 3b — TNC plug style B dimensions

Dimensions in millimetres

	Ø *A*	Ø *B*	Ø *C*	Ø *D*	*F*	*G*	*H*	*K*	*L*	*M*	*P*	Ø *R*
min.	1,32	6,05	–	11,18	3,96	5,28	–	0,08	5,33	1,60	1,98	–
max.	1,37	6,15	8,09	–	–	5,79	1,98	1,02	5,84	–	–	0,64