SLOVENSKI STANDARD
SIST EN 122170:1999

01-julij-1999

Sectional Specification: Radio frequency coaxial connectors - Series SSMB

Sectional Specification: Radio frequency coaxial connectors - Series SSMB

Rahmenspezifikation: Hochfrequenz-Koaxial-Steckverbinder - Serie SSMB

Spécification intermédiaire: Connecteurs coaxiaux pour fréquence radioélectrique - Série SSMB

Ta slovenski standard je istoveten z: **EN 122170:1993**

ICS:

33.120.30	Radiofrekvenčni konektorji (RF)	R.F. connectors

SIST EN 122170:1999 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 122 170

July 1993

UDC

Supersedes CECC 22 170 Issue 2 : 1992

Descriptors: Quality, electronic components, connectors

English version

Sectional Specification:

Radio Frequency Coaxial Connectors. Series SSMB

Spécification intermédiaire:
Connecteurs coaxiaux pour fréquence radioélectrique.
Série SSMB

Rahmenspezifikation:
Hochfrequenz-Koaxial-Steckverbinder.
Serie SSMB

This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 28 June 1993. CENELEC members are bound to comply with 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 General Secretariat of the CECC or to any CENELEC 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 CENELEC member into its own language and notified to the CECC General Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. The membership of the CECC is identical, with the exception of the national electrotechnical committees of Greece, Iceland and Luxembourg.

CECC

CENELEC Electronic Components Committee

Comité des Composants Electroniques du CENELEC

CENELEC- Komitee für Bauelemente der Elektronik

General Secretariat: Gartenstr. 179, D-60596 Frankfurt am Main

FOREWORD

The CENELEC Electronic Components Committee (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

The object of the System is to facilitate international trade by the harmonization of the specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate, of Conformity. The components produced under the System are thereby acceptable in all member countries without further testing.

This European Standard was prepared by CECC WG 22, 'RF Connectors'.

The text of the draft based on document CECC 22 170 Issue 2 : 1992 was submitted to the formal vote for conversion to a European Standard; together with the voting report, circulated as document CECC(Secretariat)3369 it was approved by CECC as EN 122 170 on 28 June 1993.

The following dates were fixed:

-	latest date of announcement of the EN at national level	(doa)	**1993-11-08**
-	latest date of publication of an identical national standard*	(dop)	**1994-05-08**
-	latest date of withdrawal of conflicting national standards*	(dow)	**1995-05-08**

* National Standard (excluding National implementation of IECQ Specifications)

CONTENTS

FOREWORD

The CENELEC Electronic Components Committe (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

The object of the System is to facilitate international trade by the harmonization of the specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate, of Conformity. The components produced under the System are thereby acceptable in all member countries without further testing.

This specification has been formally approved by the CECC, and has been prepared for those countries taking part in the System who wish to issue national harmonized specifications for RADIO FREQUENCY COAXIAL CONNECTORS AND ACCESSORIES SERIES SSMB. It should be read in conjunction with the current regulations for the CECC System.

At the date of printing of this specification, the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom, and copies of it can be obtained from the addresses shown on the blue fly sheet.

PREFACE

This sectional specification (SS) was prepared by CECC WG 22: "R.F. Connectors".

It is based, wherever possible, on the Publications of the International Electrotechnical Commission.

This SS and its associated blank detail specifications (BDS) are specific to Series SSMB radio frequency connectors and their related accessories.

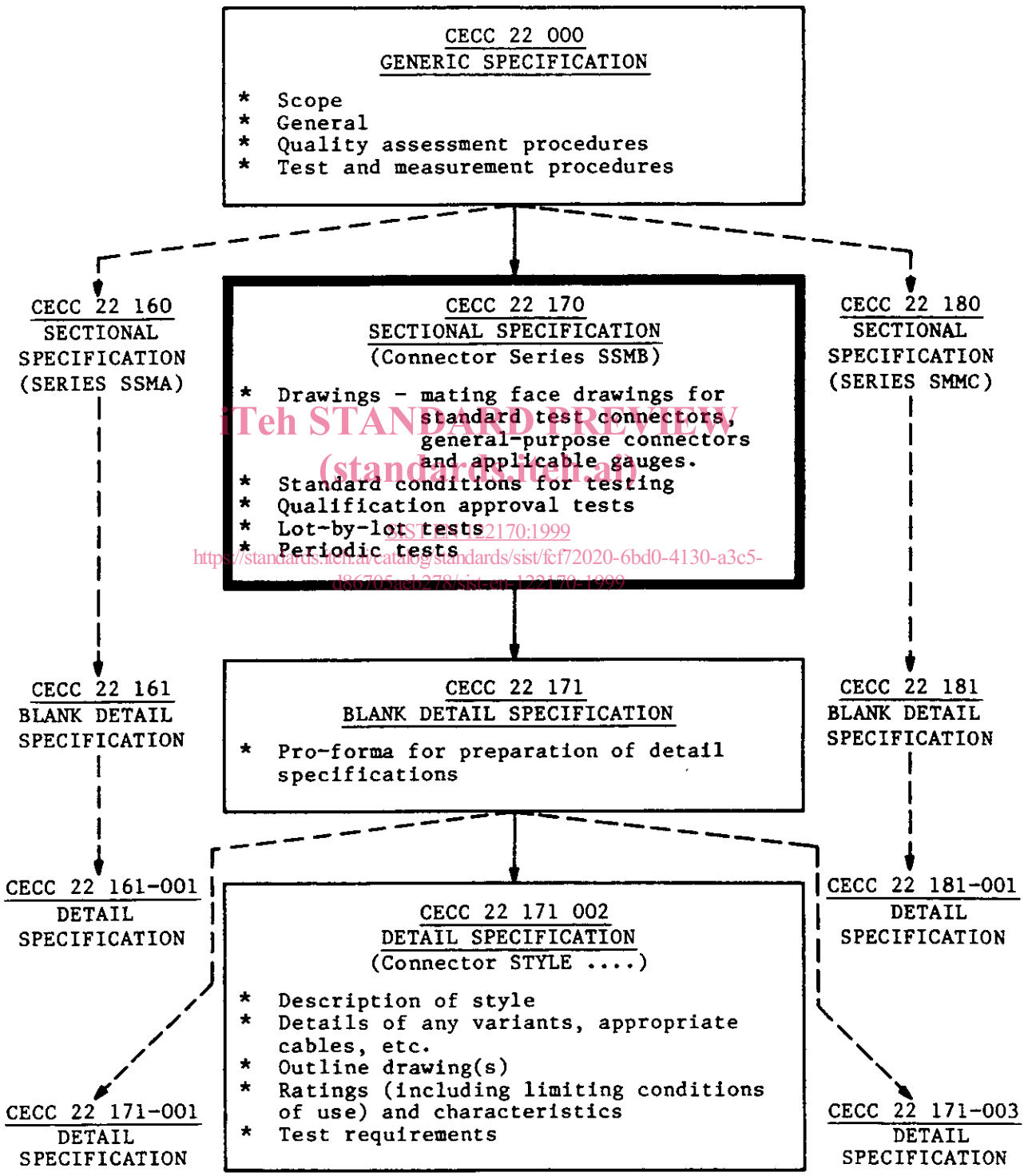
The text of this specification was circulated to the CECC for voting in the documents listed below and was ratified by the President of the CECC for printing as a CECC Specification.

Documents	Dates of Voting	Reports on the Voting
CECC(Secretariat)1264	March 1983	CECC(Secretariat)1376
CECC(Secretariat)2615	November 1990	CECC(Secretariat)2711

Series SSMB connectors are normally used for low-power applications, in conjunction with flexible coaxial cables having a dielectric diameter of 0,86 mm to 1,6 mm. The connectors are usable up to a frequency of at least 3 GHz, and may be used at higher frequencies if a reflection factor greater than 0,15 can be tolerated for straight connectors and 0,24 for right-angle styles.

Document numbering for r.f. connector specifications follows 2.2 of CECC 00 700: Section IV, in order to permit the issue of more than nine sectional specifications. The approved numbering system applicable to r.f. connector specifications is illustrated in the diagram below.

CECC SPECIFICATION SYSTEM
FOR R.F. CONNECTORS



NOTE: A detail specification is a 'completed' blank detail specification

SECTION 1 - SCOPE

This sectional specification (SS) provides information and rules for the preparation of detail specifications (DS) for miniature snap-on coaxial connectors Series SSMB.

It prescribes mating-face dimensions for general purpose connectors, dimensional details for standard test connectors, Grade 0, together with gauging information and the mandatory tests, selected from CECC 22 000, applicable to all DSs relating to Series SSMB connectors.

This specification indicates the recommended performance characteristics to be considered when writing a DS, and covers test schedules and inspection requirements for Assessment Levels H, M and U.

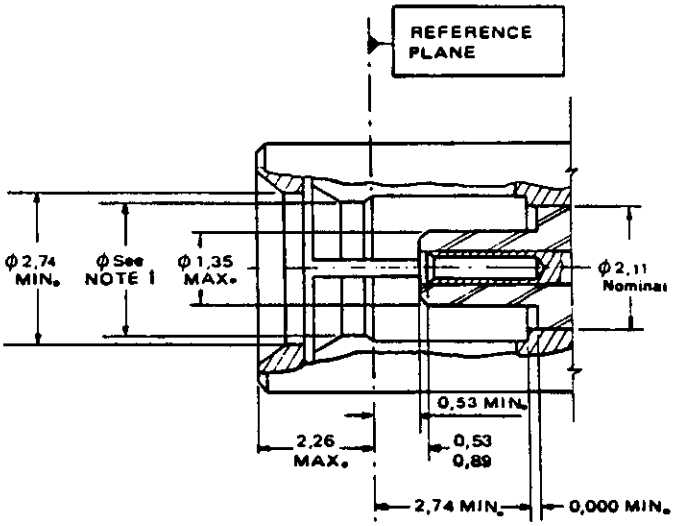
SECTION 2 - MATING FACE AND GAUGE INFORMATION

2.1 Dimensions - general purpose connectors

All undimensioned pictorial configurations are for reference purposes only.

Inch dimensions are original dimensions

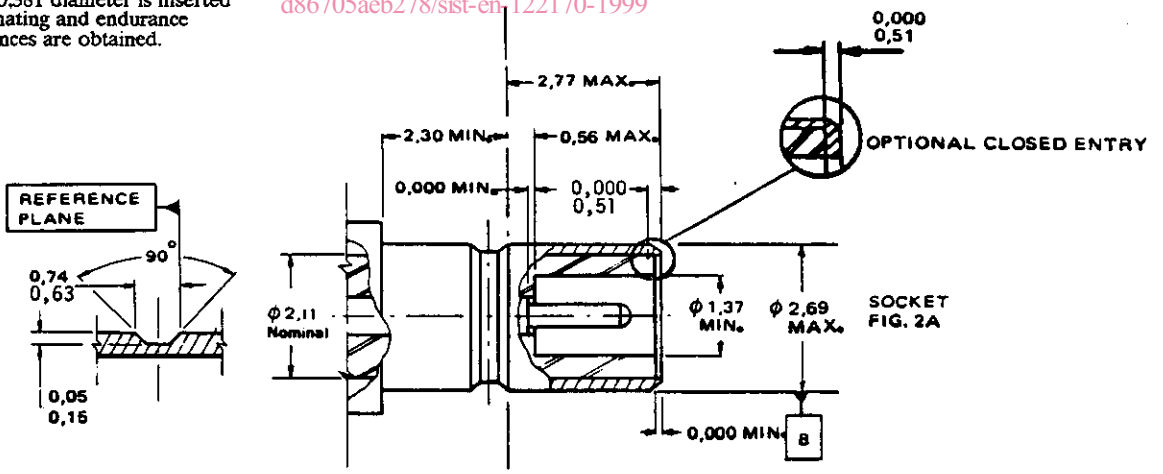
mm	Inches
0,05	.002
0,15	.006
0,2	.008
0,25	.010
0,35	.014
0,356	.0140
0,38	.015
0,381	.0150
0,51	.020
0,53	.021
0,56	.022
0,63	.025
0,74	.029
0,89	.035
1,35	.053
1,37	.054
1,78	.070
2,11	.083
2,26	.089
2,30	.091
2,44	.096
2,46	.097
2,69	.106
2,74	.108
2,77	.109



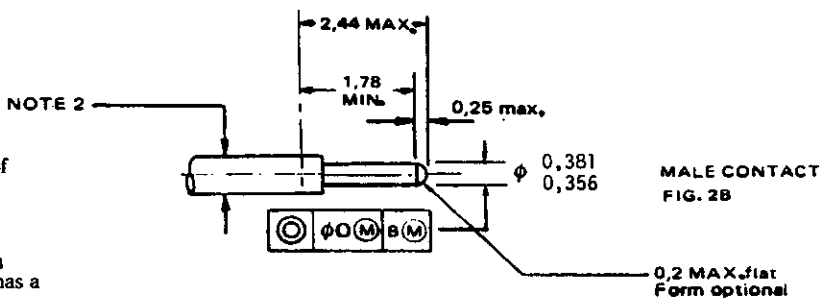
PLUG
FIG. 1A

FEMALE RESILIENT CONTACT
FIG. 1B

Resilient contact may be closed or open entry, method of resilience optional, provided that when a pin of 0,356/0,381 diameter is inserted VSWR, mating and endurance performances are obtained.



Groove detail



MALE CONTACT
FIG. 2B

Note 1: The form and end dimension of outer contact detent must meet electrical and mechanical requirements.

Note 2: The indicated diameters chosen on the assumption that PTFE has a dielectric constant of 2,02 to give required impedance of 50 Ω.

2.2 Gauges for general purpose connectors

Inch dimensions are original dimensions. All undimensioned pictorial configurations are for reference purposes only.

2.2.1 Gauge for female centre contact

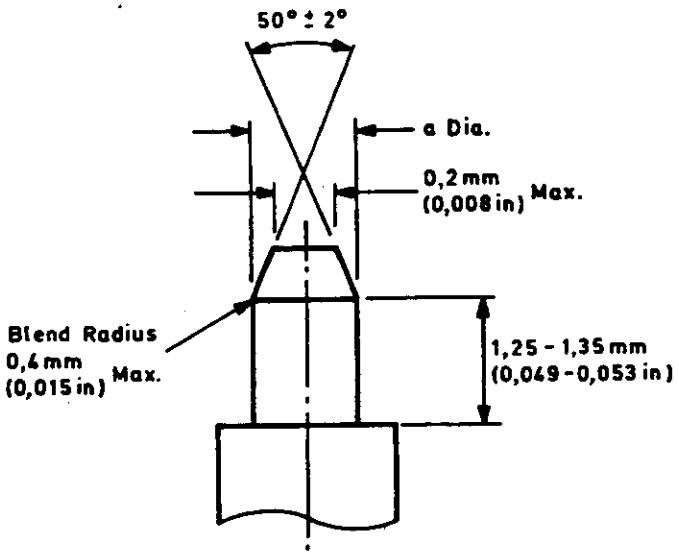


Fig. 3. Gauge pin for centre contact of socket connector (for dimension 'a' see below)

Gauge A - maximum material for sizing purposes					Gauge B - minimum material - for measurement of gauge retention force Mass (weight) of gauge: 16 ± 1 g			
	mm		in		mm		in	
Ref.	min.	max.	min.	max.	min.	max.	min.	max.
a Ø	0,381	0,384	0,015	0,0151	0,353	0,356	0,0139	0,014
Material: Steel, polished surface roughness Ra = 0,4 µm (16 µin) max.								

Test procedure (see 4.5.1 of CECC 22 000).

Gauge A shall be inserted once only into the female centre contact. This is a sizing operation.

After this, gauge B shall be inserted into the female centre contact. The contact shall support the mass of the gauge in a vertical downward attitude.

Note (for information only):

Gauge A is used for qualification approval tests only. The minimum diameter of gauge A corresponds to the maximum diameter of a male contact pin.

2.2.2 Gauge for outer contact of plug

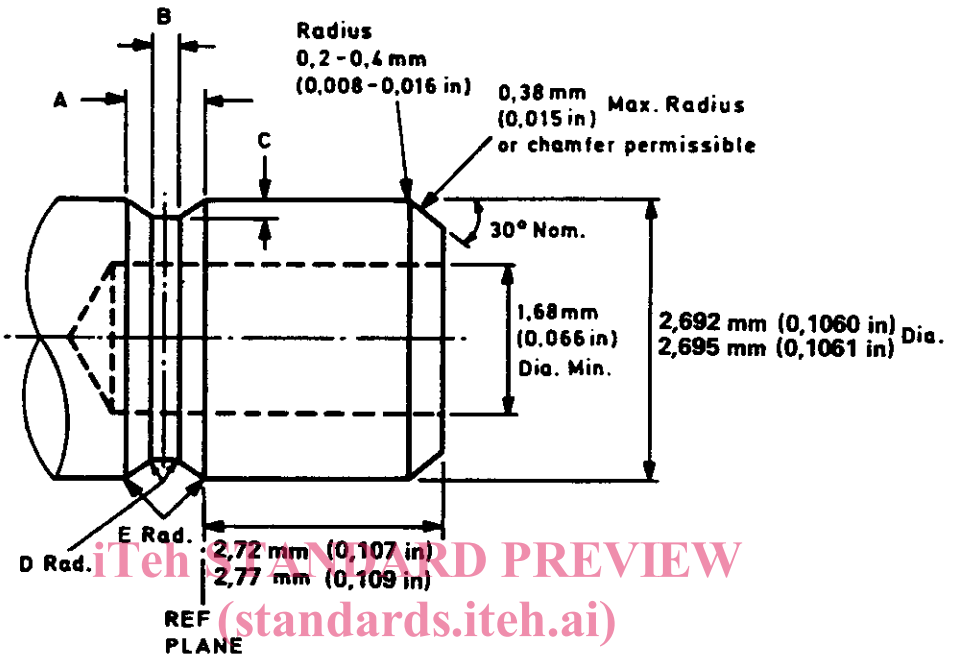


Fig. 4. Outer contact sizing and retention forces gauges A and B (for dimensions, see table below).

Gauge A - Maximum gauge - for sizing purposes					Gauge B - Minimum gauge - for measurement of gauge retention force for outer conductor. Weight (mass) of gauge: 460 g ± 20 g			
Ref.	mm		in		mm		in	
	min.	max.	min.	max.	min.	max.	min.	max.
A	0,74	0,75	0,029	0,0295	0,58	0,64	0,023	0,025
B	0,48	0,51	0,019	0,02	0,43	0,46	0,017	0,018
C	0,14	0,15	0,0055	0,0059	0,075	0,125	0,003	0,0049
D		0,08		0,003		0,08		0,003
E	0,08	0,18	0,003	0,007	0,08	0,18	0,003	0,007
Material: Steel, polished surface roughness Ra = 0,4 µm (16 µin max).								

Test requirements (see 4.5.1 of CECC 22 00).

Gauge A shall be inserted once only into the outer contact of the plug, and then removed. This is a sizing operation.