

CECC



1 Edition
Issue
Ausgabe

CECC 22121

Information about the System can be obtained from:



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Stresemannallee 21
D-6000 Frankfurt/Main 70
Telefon (0611) 6 30 82 83
Telex 04-12871

or from the National Authorized Institutions
of the Member Countries listed
who can supply copies of:

1 The Basic Rules and Rules of
Procedure of the CECC

2 CECC and National Specifications
for the System

3 CECC 00 200: Qualified Products List (QPL)
(biannual issues January and July,
with three-monthly amendments)

4 CECC 00 300: CECC Publications and their
related national documents (biannual)

Belgium

Comité Electrotechnique Belge
Galerie Ravenstein 3
B-1000 Brussels

Denmark

Dansk Elektroteknisk Komite
Strandgade 36 set
DK-1401 Copenhagen K

France

Union Technique de l'Electricité
Participation française au CECC
12 Place des Etats-Unis
F-75783 Paris Cedex 16

Germany

Deutsche Elektrotechnische Kommission
im DIN und VDE
Stresemannallee 21
D-6000 Frankfurt/Main 70

Ireland

Electrotechnical Council of Ireland
The Industrial Research Centre
Ballymun Road
Dublin 9

Italy

Comitato Elettrotecnico Italiano
Viale Monza 259
I-20126 Milan

Netherlands

Nederlands Elektrotechnisch Comité
Polakweg 5
NL-2280 HV Rijswijk (ZH)

Norway

Norsk Elektroteknisk Komite
PO Box 7099
Homansbyen
N-Oslo 3

Sweden

Svenska Elektriska Kommissionen
Box 5177
S-10244 Stockholm

Switzerland

Comité Electrotechnique Suisse
Seefeldstrasse 301
CH-8008 Zürich

United Kingdom

British Electrotechnical Committee
British Standards Institution
2 Park Street
London W1A 2BS

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 recognised Mark, or Certificate, of Conformity. The components produced under the System are thereby accepted by all member countries without further testing.

This document has been formally approved by the CECC, and has been prepared for those member countries taking part in the System who wish to issue national harmonized specifications for RADIO FREQUENCY COAXIAL CONNECTORS AND ACCESSORIES. It should be read in conjunction with document CECC 00 100: Basic Rules (1974).

At the date of printing of this document the member countries of the CECC are Belgium, Denmark, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom, and copies of it can be obtained from the addressees shown on the inside cover.

PREFACE

This blank detail specification was prepared by CECC Working Group 22: RF Connectors.

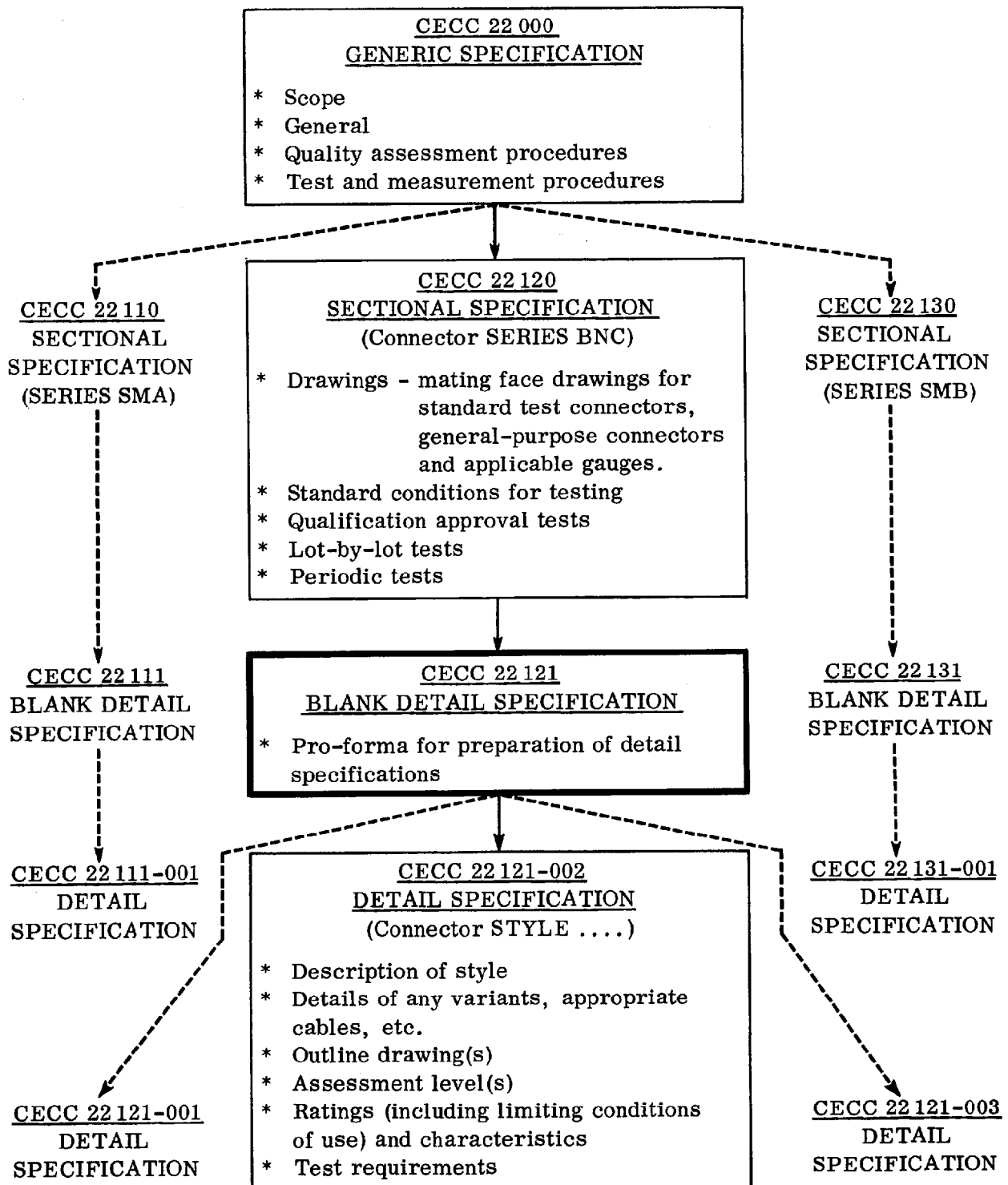
In accordance with the requirements of document CECC 00 100, it is based, wherever possible, on the Recommendations of the International Electrotechnical Commission and in particular on IEC Publication 169-8: 1978: Radio-frequency connectors, Part 8: R. F. coaxial connectors with inner diameter of outer conductor 6,5 mm (0.256 in) with bayonet lock - Characteristic impedance 50 ohms (Type BNC).

The text of this blank detail specification was originally circulated to the CECC for voting in document CECC(Secretariat)692 in February 1978; it was formally ratified by the CECC for printing as a CECC Specification.

This blank detail specification and its associated sectional specification are specific to a sub-family (Series BNC) of radio frequency connectors and their related accessories; they should be read in conjunction with document CECC 22 000, Generic Specification: Radio Frequency Coaxial Connectors.

Document numbering for r.f. connector specifications differs from that prescribed by Section 3 of CECC 00 400, in order to permit the issue of more than nine sectional specifications. The approved numbering system applicable to r.f. connector specifications is illustrated by the following diagram.

**CECC SPECIFICATION SYSTEM
for R. F. Connectors**



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

PREPARATION OF DETAIL SPECIFICATIONS

Spaces are provided in the format of this blank detail specification for certain essential information to be entered. The spaces are identified by numbers between square brackets and these numbers correspond to the following particulars which shall always be given.

Identification of the harmonized detail specification

- [1] The name(s) of the National Standards Organization under whose authority the detail specification is drafted
- [2] The CECC symbol and the number allotted to the national detail specification by the CECC General Secretariat
- [3] The number and issue number of the national generic specification and sectional specification
- [4] The national number of the detail specification, date of issue and any further information required by the national system.

Identification of component

- [5] Enter the following details:

Style: The style designation or model number of the connector.

Function: A short description of the connector style.
Example: 'Cable-connector socket, straight, fixed, single-hole front mounting'.

Special Features: Example: 'Fitted with both panel and barrier seals'.

Mass: The maximum mass in grams, rounded upwards to the nearest whole number. If several variants (having differing mass) are included, list the maximum mass of each variant separately.
- [6] Application summary shall list:
 - assessment level(s) covered by the detail specification
 - climatic category (or categories)
 - characteristic impedance
 - assessment level variation(s). Example: 'As Assessment Level U, but with 100% barrier seal test'.
- [7] Reference to the appropriate national or international document containing the outline drawing(s) showing the maximum envelope dimensions of the relevant body style and, in the case of a fixed style, the position of the reference plane relative to the mounting face and any dimensions necessary for mounting. The outline drawing and relevant panel piercing and mounting details shall be reproduced in the spaces provided. Variants requiring alternative outline dimensions shall be listed in tabular form.

- [8] Particulars of all variants covered by the detail specification. Where appropriate, the information shall include:
- cable types (or sizes) applicable to each variant
 - alternative plated or protective finishes
 - details of alternative mounting flanges having either tapped or plain mounting holes
 - details of alternative solder spills or solder buckets for microwave component-mounting styles.
- [9] Reference data listing the most important properties of the connector in accordance with the requirements of 3.1 of CECC 22 120. Deviations from the minimum requirements listed shall be clearly indicated. Non-applicable parameters shall be marked 'na'.
- [10] Supplementary information in accordance with the following requirements.
- marking (see 2.4, 2.5 and 2.5.1 of CECC 22 000)
 - ordering information (see 2.6 of CECC 22 000)
 - related documents (additional to those listed)
 - requirements for certified test records (see 3.5 of CECC 22 000)
 - structural similarity (see 3.2 and 3.4 of CECC 22 000)
- [11] The applicable tests for Quality Conformance Inspection and Qualification Approval shall be entered in the spaces provided, in accordance with the example given in 5.1 of CECC 22 120. The example shows the applicable tests and severities for Assessment Levels H and U. Assessment Levels intermediate between levels H and U, or of greater severity than level H, may be created by the introduction of further tests or tightened inspection levels as required. Level U represents the lowest Assessment Level permitted for r.f. connectors.

[9] PROPERTIES (Ratings & Characteristics - including limiting conditions of use)

TEST		CECC 22 120 PARA.	VALUE	REMARKS
ELECTRICAL				
Nominal Impedance	<u>Variant No./</u> <u>Designation</u>		50 Ω	<u>Measurement frequency</u> <u>range</u>
Reflection Factor	.....	4.4.1	.....	.....
				
				
				
+ Proof Voltage at sea level	.....	4.4.5	 kV	860 to 1060 mbar
				
				
				
+ Proof Voltage at 20 km altitude	.....	4.6.5	 V	44 mbar
				
				
				
+ Working Voltage at sea level	.....		..... V	860 to 1060 mbar
				
				
				
+ Working Voltage at 20 km altitude	.....		..... V	44 mbar
				
				
				
+ R.F. high potential withstanding voltage	.....	4.4.7	 kV	
				
				
				
Screening effectiveness	.....	4.4.8	Z _t	
				
				
				
Discharge Voltage (corona)	.....	4.4.9	 V	extinction voltage
				
				
				

+ Voltage values are r.m.s. values of a.c. at 50-60 Hz unless otherwise specified.

TEST	CECC 22 120 PARA.	VALUE	REMARKS
ELECTRICAL (continued)			
Centre contact resistance	4.4.2	$\leq \dots \text{m}\Omega$ $\leq \dots \text{m}\Omega$	Initial After conditioning
Outer conductor continuity	4.4.3	$\leq \dots \text{m}\Omega$ $\leq \dots \text{m}\Omega$	Initial After conditioning
Insulation resistance	4.4.4	$\geq \dots \text{G}\Omega$ $\geq \dots \text{M}\Omega$	Initial After conditioning
MECHANICAL			
Contact captivation	4.5.2		
- axial force		 N	
- torsional force		 Nm	
Variant No./ Designation			
Effectiveness of clamping device against cable pulling	4.5.5 (1)	 N	
Effectiveness of clamping device against cable torsion	4.5.5 (2)	 Nm	
Tensile strength of coupling mechanism	4.5.6	 N	
Engagement & separation	4.5.4		
- axial force (insertion & withdrawal)		$\leq \dots \text{N}$	} Assessment Level U na
- torque (bayonet lock)		$\leq \dots \text{Nm}$ $\geq \dots \text{Nm}$	
Mechanical endurance	4.7.1	500 operations 100 operations ... operations	Assessment Level H Assessment Level U Assessment Level...
ENVIRONMENTAL			
Bump	4.6.2	na	
Vibration	4.6.3	... m/s^2 ... to ... Hz	(... g acceleration)
Shock	4.6.4	na	
Climatic category	4.6.5	40/155/21 na .../.../...	Assessment Level H Assessment Level U Assessment Level...
Sealing (panel and barrier sealed connectors)	4.6.8	... cm^3/h max	1000-1100 mbar pressure differential
Sealing (hermetically sealed connectors)	4.6.9	... $\times 10^{-8} \text{cm}^3/\text{s}$	1000-1100 mbar pressure differential

[10]

Supplementary Information

- marking of the component: in accordance with 2.4 of CECC 22 000.

- marking and contents of package: in accordance with 2.5 and 2.5.1 of CECC 22 000.

- ordering information: in accordance with 2.6 of CECC 22 000.

- related documents:

CECC 22 000	Generic Specification for radio frequency connectors of assessed quality (and related documents, see 2.1 of CECC 22 000)
CECC 22 120	Sectional Specification for r.f. connectors Series BNC

- certified test records (RCE): in accordance with 3.5 of CECC 22 000. (requirements to be included later)

- structural similarity: in accordance with 3.2 and 3.4 of CECC 22 000.