

CECC

CONNECTEURS COAXIAUX POUR FREQUENCE RADIOELECTRIQUE Série SMC

RADIO FREQUENCY COAXIAL CONNECTORS

HOCHFREQUENZ- KOAXIAL-STECKVERBINDER Serie SMC



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Edition
Issue
Ausgabe

CECC 22141-801

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Documents

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Information about the System may be obtained from:



FEN Secretariat
and
CECC General Secretariat
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Telefax Int.+ (49) 69 6 30 82 83 (Gr. 2/3)
or from the National Authorized Institutions
of the participating countries listed
who can supply copies of:

- 1 The Internal Regulations of the FEN e.V.
- 2 CECC Specifications of the FEN and National Specifications for the System
- 3 CECC 00 200: Qualified Products List (QPL)
- 4 CECC 00 300: CECC Publications and their related national documents

Austria

Österreichischer Verband
für Elektrotechnik
Eschenbachgasse 9
A-1010 Vienna

Belgium

Comité Electrotechnique Belge
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B-1000 Brussels

Denmark

Dansk Elektroteknisk Komite
Strandgade 36
DK-1401 Copenhagen K

Finland

Finnish Electrotechnical
Standards Association
P.O. Box 134
SF-00211 Helsinki 21

France

Union Technique de l'Electricité
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Germany

Deutsche Elektrotechnische
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Stresemannallee 15
D-6000 Frankfurt/Main 70

Ireland

EOLAS- The Irish Science and
Technology Agency
Glasnevin
IRL-Dublin 9

Italy

Comitato Elettrotecnico Italiano
Viale Monza, 259
I-20126 Milan

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Nederlands Elektrotechnisch Comité
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PREFACE

This detail specification (DS) was prepared by CECC Working Group 22: "RF Connectors".

It relates to Series SMC connectors covered by sectional specification CECC 22 140 and by blank detail specification CECC 22 141. These in turn are related to the generic specification CECC 22 000.

It is based, wherever possible, on the Publications of the International Electro-technical Commission, and in particular on IEC 169-9 (1978) Part 9: R.F. coaxial connectors with inner diameter of outer conductor 3 mm (0,12 in) with screw coupling - Characteristic impedance 50 ohms (Type SMC).

The text of this detail specification was circulated to the members of CECC WG 22 and was approved for publication under the accelerated procedure for the acceptance of detail specifications in accordance with Decision 10 of the minutes of the CECC CD in document (Secretariat)1838.

Document

WG22(Secretariat)372

Approval Date

January 1986

CECC 22 141-801 Issue 1

[1]	page 1 of 9	[2] CECC 22 141 - 801	
ELECTRONIC COMPONENT OF ASSESSED [3] QUALITY IN ACCORDANCE WITH GENERIC SPECIFICATION 22 000 SECTIONAL SPECIFICATION 22 140	[4]	Issue 1	

[5] DETAIL SPECIFICATION for

RADIO FREQUENCY COAXIAL CONNECTOR OF ASSESSED QUALITY:

SERIES

SMC

Style: Straight plug, with female centre contact

Special Features & Markings:

Method of cable/wire* attachment: centre conductor - solder/~~crimp~~*: outer conductor - ~~solder~~/clamp/~~crimp~~*

Mass: 3,5g (Max.)

*Delete as appropriate

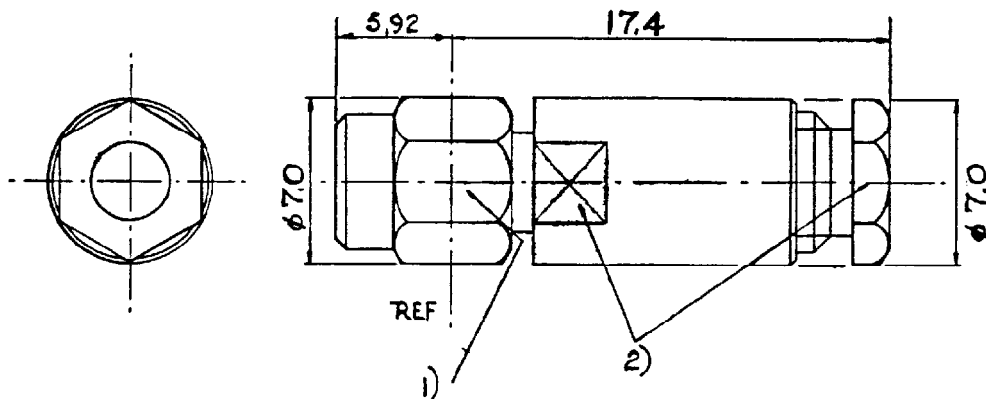
[6] Assessment level : H

Characteristic Impedance 50 Ω Climatic category 55/155 $^{\circ}$ /21

[7] Outline and maximum dimensions

All dimensions in mm

Panel piercing and mounting details



- NOTES: 1 Width across flats 6,35 (6 permissible)
 2 To suit standard wrench
 3 Contours optional within dimensional envelope

For mating interface dimensions and position of reference plane see CECC 22 140

~~Maximum panel thickness: for front mounting mm, for rear mounting mm~~

The outline dimensions meet the requirements of IEC 169-9

[8] Variants

Variant No.	Description of Variant	Relevant Cables			
		IEC 96	MIL-C-17 RG	GB URM	FR NF
Body Shell Finish	Max. dia. over dielectric				
Au Non-tarnish					
Plating					
-01 -05	0,94	50-1-1,1-2,1-3	178B/U,404/U	110	KX21
-02 -06	1,60	50-2-1,2-2,2-3 2-4,2-5,2-6	174A/U,316/U	95,109 116	KX3A KX22A
-03 -07	1,70		405/U		KS1
-04 -08	3,00		402/U		KS2

† Note : With variants using semi-rigid cable the upper temperature limit should be reduced to 115 $^{\circ}$ C.

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200: Qualified Products List.

[9] PERFORMANCE (including limiting conditions of use)

RATINGS AND CHARACTERISTICS		CECC 22 140 CLAUSE	VALUE	REMARKS
ELECTRICAL				
Reflection factor	Variant No./ Designation			Measurement freq. range
	-01..to...-08	4.4.1	... < 0,1....	 < 1 GHz.....
			... < 0,15....	 < 3 GHz.....
			... < 0,25....	 < 6 GHz.....
				
				
				
				
				
				
Centre contact resistance		4.4.2	< 5.... mΩ	Initial
			< 15.... mΩ	After conditioning
Outer conductor continuity		4.4.3	< ...2,5... mΩ	Initial
			< ...7,5... mΩ	After conditioning
Insulation resistance		4.4.4	≥ 1.... GΩ	Initial
			≥ 500... MΩ	After conditioning
+ Proof voltage at sea level	-01.....-05	4.4.5	0,5.... kV	86 to 106 kPa
	-02.....-06		0,75... kV	
	-03.....-07		0,75... kV	
	-04.....-08		1.... kV	
				
				
				
				
				
+ Proof voltage at 20 km altitude	-01.....-05	4.6.5	100.... V	4,4 kPa
	-02.....-06		150.... V	
	-03.....-07		150.... V	
	-04.....-08		200.... V	
				
				
				
				
				

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

RATINGS AND CHARACTERISTICS		CECC 22 140 CLAUSE	VALUE	REMARKS
ELECTRICAL				
	Variant No./ Designation			
+ Working voltage at sea level	-01.....-05		170.... V	86 to 106 kPa
	-02.....-06		335.... V	
	-03.....-07		250.... V	
	-04.....-08		335.... V	
				
				
				
				
+ Working voltage at 20 km altitude	-01.....-05		45.... V	4,4 kPa
	-02.....-06		85.... V	
	-03.....-07		65.... V	
	-04.....-08		85.... V	
				
				
				
				
Screening effectiveness	-01..to...-08	4.4.8	$Z_t \leq \dots NA \dots \Omega$	Providing $\geq$ dB
				
				
				
				
				
				
				
ADDITIONAL ELECTRICAL CHARACTERISTICS				
MECHANICAL				
Contact captivation: - axial force - torque		4.5.2	4..... N NA.... Nm	CECC 22 000 method (or as specified)

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

RATINGS AND CHARACTERISTICS		CECC 22 140 CLAUSE	VALUE	REMARKS
MECHANICAL				
Engagement and separation torque		4.5.4	0,1 Nm max.	(to overcome friction of coupling nut)
Effectiveness of clamping device against cable pulling	Variant No./ Designation			
	-01.....-05	4.5.5	50..... N	
	-02.....-06	(1)	50..... N	
	-03.....-07		50..... N	
	-04.....-08		100..... N	
				
				
				
				
				
Effectiveness of clamping device against cable torsion	-01.....-05	4.5.5	...0,039... Nm	
	-02.....-06	(2)	...0,039... Nm	
	-03.....-07		NA.....	
	-04.....-08		NA.....	
				
				
				
				
				
Tensile strength of coupling mechanism		4.5.6	150..... N	
Coupling torque				
- normal			0,25 to 0,35 Nm	
- proof			0,71... Nm	
Bending moment		4.5.9	0,8.... Nm	Relative to reference plane
ADDITIONAL MECHANICAL CHARACTERISTICS				

RATINGS AND CHARACTERISTICS	CECC 22 140 CLAUSE	VALUE	REMARKS
ENVIRONMENTAL			
Vibration	4.6.3	...100... m/s ² ..10 to 500 Hz	(10g _n acceleration)
Shock	4.6.4	...500... m/s ² ½ sine 11 ms	(50g _n acceleration)
Climatic category	4.6.5	55/155/21	
Sealing (panel and barrier sealed connectors)	4.6.8	NA.....	100 to 110 kPa pressure differential
Sealing (hermetically sealed connectors)	4.6.9	NA.....	100 to 110 kPa pressure differential
ADDITIONAL ENVIRONMENTAL CHARACTERISTICS			
ENDURANCE			
Mechanical	4.7.1	500 operations	
High temperature -01 -02 -05 -06 -03 -04 -07 -08	4.7.2	1000.... h at...155... °C at...115... °C	With appropriate cable
ADDITIONAL ENDURANCE CHARACTERISTICS			

[10] SUPPLEMENTARY INFORMATION

- marking of the component: in accordance with 2.4 of CECC 22 000,
in the following order of precedence:

(1) Component identification	Variant No./ Designation	Identification
	-01	..22 141-801/-01..
	-02	..22 141-801/-02..
	-03	..22 141-801/-03..
	-04	..22 141-801/-04..
	-05	..22 141-801/-05..
	-06	..22 141-801/-06..
	-07	..22 141-801/-07..
	-08	..22 141-801/-08..
		