FICHA TÉCNICA

Toma de usuario TV con conector F

Referencia: TEK-1

Toma de usuario para servicios de telecominucaciones por coaxial. Fabricada en materiales especiales de alta resistencia, calidad y durabilidad con protección ante llama y nula generación de sustancias tóxicas y humos. Contiene un conector (enfrentador) con topología F - Hembra certificado en ambos extremos.

ESPECIFICACIONES TÉCNICAS

Item		Parámetro	Unidad
Número de parte		ER0160	
Referencia		TEK-1	
Conector (ambos extremos)		F - Hembra	
Banda de Operación		5-3000	MHz
Pérdida por atenuación típica		0,5	dB
Tipo de cable aplicable		RG6	
Embalaje		Caja x 10 Unid.	
Material de la cubierta		Policarbonato (PC)	
Dimensiones de la toma		7,5 x 12	cm
Norma de referencia		IEC-61169	

Ritec
"Communication with passion"

DECLARACIÓN DE CONFORMIDAD DE PRODUCTO
N°071020222-2

El presente documento constituye la declaración de conformidad y cumplimiento de especificaciones bajo los requerimientos de la norma ISO 17050, de un producto fabricado y/o comercializado por Tecnesya SAS para aplicaciones del Reglamento Interno de Telecomunicaciones - RITEL en Colombia, bajo las siguientes características:

Producto: Toma de Usuario TDT.

Referencia: TEK-1.

Marca: RITEC.

Resolución aplicable: 5405 de 2018 y 5993 de 2020 de la CRC.

Norma de referencia: IEC 61169:24

Características especiales: Material PC no propagador de la flama.

El presente documento se expide a los 10 días del mes de enero de 2023.

Cordialmente,

Diego R. Sierra O.
Director de Calidad - RITEC

Ritec By Tecnesya

TECNESYA SAS.

TEST REPORT

Prepared For:	TECNESYA SAS. Avenida Carrera 50 # 1B-25, Bogotá, Colombia
Product Name:	ELECTRONIC PARTS
Model :	Wall Plate: TEK1, Compression Connectors: CC6, Terminal charge 75OHM: CT75
Prepared By :	BST Testing (Shenzhen) Co.,Ltd No.7, New Era Industrial Zone, Guantian, Bao’an District, Shenzhen, Guangdong, China
Test Date:	Sep. 24, 2021 –Oct. 08, 2021
Date of Report :	Oct. 11, 2021
Report No.:	BSTXD210921019802SR

TEST REPORT

IEC61169:24

Radio-frequency connectors –

Part 24: Sectional specification – Radio frequency coaxial connectors with screw coupling, typically for use in 75 Ω cable networks (type F)

Testing Laboratory Name	BST Testing (Shenzhen) Co.,Ltd
Address	No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Testing location	BST Testing (Shenzhen) Co.,Ltd
Applicant's Name	TECNESYA SAS.
Address	Avenida Carrera 50 # 1B-25, Bogotá, Colombia
Manufacturer …… ……:	CHANGZHOU ELEC IMP&EXP CORP. LTD.
Address …… ……:	No.38th Building XinChengDiJing, MeiYuan Road,HuTang Town WuJing district,ChangZhou Ctity
Test specification	
Standard.....	IEC 61169-24-2019
Procedure deviation	N/A
Non-standard test method	N/A
Test item description	ELECTRONIC PARTS
Trademark	Tecnesya
Model and/or type reference	Wall Plate: TEK1, Compression Connectors: CC6, Terminal charge 75OHM: CT75
Rating(s).....	/
Test case verdicts	
Test case does not apply to the test object ... :	N/A
Test item does meet the requirement ..... :	P(ass)
Test item does not meet the requirement ..... :	F(ail)

General remarks	Remark:
This report shall not be reproduced except in full without the written approval of the testing laboratory. The test results presented in this report relate only to the item(s) tested. ”(see remark #)" refers to a remark appended to the report. "(see Annex #)" refers to an annex appended to the report. Clause numbers between brackets refer to clauses in IEC61169:24 Throughout this report a comma is used as the decimal separator.	A. photo documentation B. General product information: The series products have the same circuit diagram, PCB layout and functionality. The differences are the appearance, so, we select Wall Plate: TEK1 to test.

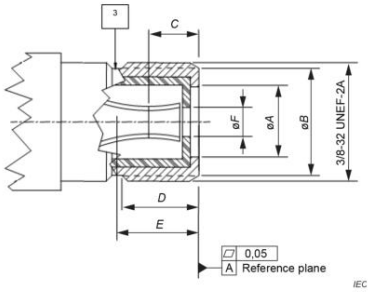
Prepared by : Jade Zhan
Engineer

Reviewer : Jacky Zhang
Supervisor

Approved & Authorized Signer :
Manager

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict
1	Scope This part of IEC 61 1 69, which is a sectional specification (SS), provides information and rules for the preparation of detail specifications (DS) for RF coaxial connectors with screw coupling, typically for use in 75 Ω cable networks (type F). It describes the interface dimensions with gauging information and the mandatory tests selected from IEC 61 1 69-1 , applicable to all DS relating to type F connectors. This specification indicates the recommended performance characteristics to be considered when writing a DS and covers test schedules and inspection requirements.		P
2	Normative references The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.		P
3	Terms and definitions No terms and definitions are listed in this document. ISO and IEC maintain terminological databases for use in standardization at the following addresses: • IEC Electropedia: available at http://www.electropedia.org/ • ISO Online browsing platform: available at http://www.iso.org/obp		P
4	Interface dimensions		P
4.1	Dimensions		

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict

4.1.1	Connector “F” type female socket (indoor) physical dimensions Figure 1 shows a connector “F” type female socket (indoor).  **Figure 1 – Connector “F” type female socket (indoor)** (for dimensions, see Table 1) **Table 1 – Connector “F” type female socket (indoor)** **Description** / **Reference** / **mm** (Min. / Max.) / **Remarks** Reference plane opening inner diameter — A — 3,90 — 7,4 — 1, 4 Reference plane outer diameter — B — 7,50 — 8,50 — Positive contact point depth — C — - — 4,70 — 2 Port minimum full thread length — D — 7,50 — - — 3 Minimum center contact depth — E — 9,00 — - — 4 Center conductor guide inner diameter — F — 1,2 — 1,5 — 1 No protrusion of the dielectric beyond the reference plane is permitted. 2 Recommended mating male center conductor diameter: 0,025 in (0,64 mm) min. to 0,042 in. (1,07 mm) max. 3 Thread relief not to exceed two full threads. 4 Center contact geometry optional.	“F” type Reference plane opening inner diameter: 4.5mm Reference plane outer diameter :8.0mm Center conductor guide inner diameter : 1.3mm	P

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict
4.1.2	Connector “F” type male plug (indoor) physical dimensions Figure 2 shows a connector “F” type male plug (indoor).	Inner conductor length:7.0mm Length of nut:5.2mm Reference plane opening inner diameter :5.5mm Reference plane opening outer diameter :7.95mm	P
4.2	Mechanical gauges		P

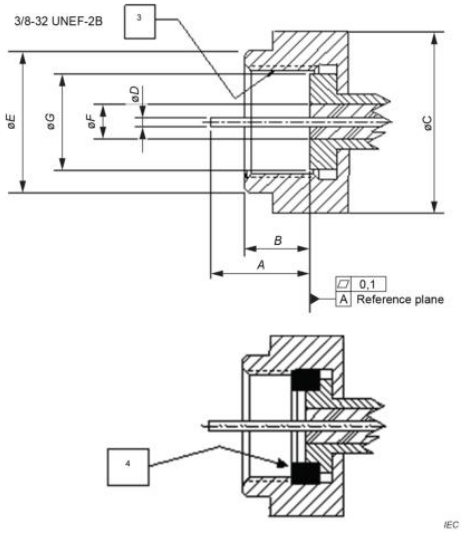
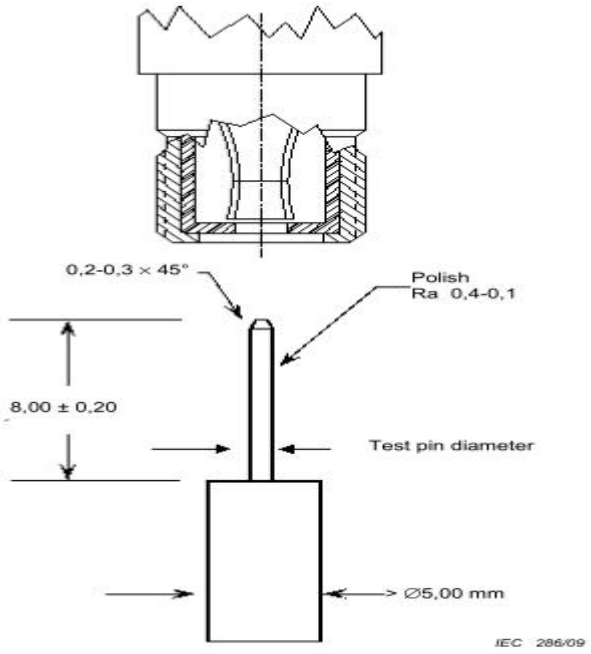


Figure 2 – Connector “F” type male plug (indoor)
(for dimensions, see Table 2)

Table 2 – Connector “F” type male plug (indoor)

Description	Reference	mm		Remarks
		Min.	Max.	
Inner conductor length	*A*	6,35	8,63	
Length of nut	*B*	4,00	7,29	1,2
Maximum envelope dimension	*C*	-	16,61	
Inner conductor diameter	*D*	0,64	1,13	
Sealing surface diameter for seal ring	*E*	10,41	11,04	
Reference plane opening inner diameter	*F*	-	5,84	1, 2
Reference plane opening outer diameter	*G*	7,88		

1 No protrusion of the dielectric beyond the reference plane is permitted.
2 The mating of the F female socket to the reference plane is not impeded.
3 Gasket seal optional, if used, does not avoid to meet all performance requirements.

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict
4.2.1	Mating socket centre conductor acceptance diameter test In order to verify that the centre female contact of the socket does not suffer from mechanical deformation when mated with the full range of indicated inner conductor diameters, a test has been devised. This test measures the force required to insert and withdraw a selection of precision test pins into and out of the "F" female socket under test. The test apparatus should be so designed as to enable accurate alignment of the "F" female socket under test with the precision test pin. The apparatus should hold either the socket or the test pin in a fixed position, and the moving part of the apparatus should be fitted with an instrument capable of measuring the insertion and withdrawal force. Using the test sequence shown below, the insertion and withdrawal force shall be measured and recorded in newtons.  Figure 3 – Gauge for the centre socket conductor **Table 3 – Test sequence for the centre socket conductor** The insertion force required to insert the test pin into the socket centre female contact shall not exceed 20 N under all circumstances. The withdrawal force required to withdraw the test pin from the socket centre female contact shall be a minimum of 0,3 N under all circumstances.	15 NTest pin Diameter : 0,855mm	P

Test sequence	1st test	2nd test	3rd test	4th test	5th test	6th test
Test pin diameter	0,635 +/- 0,005 mm	0,850 +/- 0,005 mm	1,136 +/- 0,005 mm	0,635 +/- 0,005 mm	1,136 +/- 0,005 mm	0,635+/- 0,005 mm

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict

4.2.2	Mating port centre conductor acceptance electrical test After completion of the mechanical tests described in 3.2.1 , the centre conductor contact resistance, when re-mated with a male “F” plug whose centre conductor diameter is 0,635 mm, shall not exceed 1 0 mΩ with an applied test ampere rate of 1 A.	0,635 mm 5 mΩ	P
4.2.3	Reference plane electrical contact The electrical contact shall be made by the mating of the reference plane face of the “F” female socket with the mating face of the “F” male plug and not by the threads alone.		P
5	Quality assessment procedures		P
5.1	General The following subclauses provide recommended ratings, performance and test conditions to be considered when writing a detail specification (DS). They also provide an appropriate schedule of tests with minimum levels of conformance inspection.		P
5.2	Ratings and characteristics The RF connectors defined in this standard are designed for use with a variety of flexible and semi-rigid coaxial cables and in microwave integrated circuits and similar uncabled applications. Rating and characteristics are given in Table 4.	Straight styles: Min. 30 dB up to 1 GHz	P

Table 4 – Ratings and characteristics

Ratings and characteristics	IEC 61169-1:2013 Subclause	Value	Remarks, deviation from standard test method
Electrical			
Nominal impedance			Shall meet the requirements of 9.2.1.1 of IEC 61169-1:2013 when terminating a Z_c = 75 Ω cable
Frequency range		5 MHz to 1 GHz 5 MHz to 2 GHz 5 MHz to 3 GHz 5 MHz to 6 GHz	See DS For most applications For some satellite applications For some head end applications For some satellite broadcasting and precision applications (Annex B)
Return loss	9.2.1		
– straight styles •		Min. 30 dB up to 1 GHz Min. 25 dB up to 2 GHz Min. 20 dB up to 3 GHz Min. 15 dB up to 6 GHz	Min. $37-7,5f+0,64f^2$ dB f in GHz (1 GHz ≤ f ≤ 6 GHz)
– right angle styles			See DS
– solder bucket and PCB mounting style			Under consideration
– insertion loss		0,1 dB max. up to 1 GHz 0,2 dB max. at 2 GHz 0,3 dB max. at 3 GHz 0,4 dB max. at 6 GHz	Max. $-0,04+0,15f-0,013f^2$ dB f in GHz (1 GHz ≤ f ≤ 6 GHz)
Centre contact resistance	9.2.3		
– initial		≤ 5 mΩ	
– after conditioning		≤ 10 mΩ	
Outer conductor continuity	9.2.3		
– initial		≤ 2,5 mΩ	
– after conditioning		≤ 5 mΩ	
Insulation resistance	9.2.5		
– initial		> 1 GΩ	
– after conditioning		> 1 MΩ	
Proof voltage at sea level + #	9.2.6	750 V	86 kPa to 106 kPa
Screening effectiveness	9.2.7	a_s ≥ 90 dB from 5 MHz to 3 GHz	Z_t < 3,2 mΩ at 3 GHz
Discharge test (Corona)	9.2.8	na	
Mechanical			
Insertion force (resilient contacts)	9.3.4		See 3.2 of IEC 61169-1:2013
Contact captivation – axial force – torque	9.3.5	 20 N max. na	 Captivated contacts only
Engagement and separation Coupling torque	9.3.6		Screw coupling connectors To overcome friction of a coupling nut

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict

	<table><tr><th>Ratings and characteristics</th><th>IEC 61169-1:2013 Subclause</th><th>Value</th><th>Remarks, deviation from standard test method</th></tr><tr><td>– friction – coupling – proof</td><td></td><td>0,066 Nm max. 0,46 Nm to 0,69 Nm 2,8 Nm</td><td></td></tr><tr><td>Mechanical tests on cable – cable pulling # – cable torsion #</td><td> 9.3.8 9.3.10</td><td> 120 N 0,1 Nm</td><td></td></tr><tr><td>Strength of coupling mechanism</td><td>9.3.11</td><td>300 N</td><td></td></tr><tr><td>Bending moment</td><td>9.3.12</td><td>2 Nm</td><td>Relative to reference plane</td></tr><tr><td>Environmental</td><td></td><td></td><td></td></tr><tr><td>Vibration</td><td>9.3.3</td><td>98 m/s^2 10 Hz to 500 Hz</td><td>10 g acceleration</td></tr><tr><td>Climatic sequence</td><td>9.4.2</td><td>40/70/21</td><td></td></tr><tr><td>Sealing</td><td>9.4.7</td><td>1 cm^3/h max</td><td>100 kPa to 110 kPa pressure</td></tr><tr><td>Salt mist</td><td>9.4.10</td><td>48 h</td><td></td></tr><tr><td>Endurance</td><td></td><td></td><td></td></tr><tr><td>Mechanical</td><td>9.3.15</td><td>1 000 cycles</td><td></td></tr><tr><td>High temperature</td><td>9.4.5</td><td>1 000 h</td><td></td></tr><tr><td colspan="4">Details of symbols, abbreviations and procedures: • These values apply to basic connectors. They depend on the cable used. Relevant values are given in the DS. + Voltage values are RMS values at 50 Hz to 60 Hz, unless otherwise specified. # Cables used with these connectors may have values of lower performance than those given in this table. na Not applicable.</td></tr></table>	Mechanical tests on cable – cable pulling #	P
5.3	Environmental characteristics for outdoor sockets (see Annex A) When the “F” type male plug and the “F” type female socket are mated, the physical attributes shall be protected and sealed to prevent moisture ingress and as a minimum shall meet IPX8 rating. Any “F” type (outdoor) male plug or female socket shall be resistant to corrosion and shall meet EN 60068-2-52 salt mist cyclic test.		P
5.4	Test schedule and inspection requirements		P
5.4.1	Acceptance tests Table 5 describes the acceptance tests to be performed. **Table 5 – Acceptance tests** <table><tr><th rowspan="2"></th><th rowspan="2">IEC 61169-1:2013 Subclause</th><th colspan="4">Assessment level M (higher)</th><th colspan="4">Assessment level H (lower)</th></tr><tr><th>Test required</th><th>IL</th><th>AQL %</th><th>Period</th><th>Test required</th><th>IL</th><th>AQL %</th><th>Period</th></tr><tr><td>Group A1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Visual examination</td><td>9.1.1</td><td>a</td><td>II</td><td>1,0</td><td></td><td>a</td><td>S3</td><td>1,5</td><td></td></tr><tr><td>Group B1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Outline dimensions</td><td>9.1.2</td><td>a</td><td>S4</td><td>0,4</td><td></td><td>a</td><td>S3</td><td>4,0</td><td></td></tr><tr><td>Mechanical compatibility</td><td>9.1.2.2</td><td>a</td><td>II</td><td>1,0</td><td></td><td>a</td><td>S3</td><td>1,5</td><td></td></tr><tr><td>Engagement and separation</td><td>9.3.6</td><td>a</td><td>S4</td><td>0,40</td><td>Lot</td><td>a</td><td>S3</td><td>1,5</td><td>Lot</td></tr><tr><td>Insertion force (resilient contacts)</td><td>9.3.4</td><td>ia</td><td>II</td><td>1,0</td><td></td><td>ia</td><td>S3</td><td>1,5</td><td></td></tr><tr><td>Sealing, non-hermetic</td><td>9.4.7</td><td>ia</td><td>II</td><td>0,65</td><td>by</td><td>ia</td><td>S3</td><td>1,0</td><td>by</td></tr><tr><td>Sealing, hermetic</td><td>9.4.8</td><td>ia</td><td>II</td><td>0,015</td><td></td><td>ia</td><td>S3</td><td>0,025</td><td></td></tr><tr><td>Voltage proof</td><td>9.2.6</td><td>a</td><td>S4</td><td>0,40</td><td>lot</td><td>a</td><td>II</td><td>4,0</td><td>lot</td></tr><tr><td>Solderability</td><td>9.3.2.2</td><td>ia</td><td>S4</td><td>0,40</td><td></td><td>ia</td><td>S3</td><td>4,0</td><td></td></tr><tr><td>Insulation resistance</td><td>9.2.5</td><td>a</td><td>S4</td><td>0,40</td><td></td><td>a</td><td>S3</td><td>4,0</td><td></td></tr><tr><td colspan="10">Details of symbols, abbreviations and procedures: IL inspection level AQL acceptable quality level a suggested as applicable ia test suggested (if technically applicable)</td></tr></table>	IL II AQL: 1%	P

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.2 — Result - Remark: Ia, 3 years — Verdict: P

Periodic tests
There are no group C tests for levels H and M.
Table 6 describes the periodic tests to be performed.

Table 6 – Periodic tests

	IEC 61169-1:2013 subclause	Assessment level M (higher)				Assessment level H (lower)			
		Test required	Number of specimens	Permitted failures per group	Period	Test required	Number of specimens	Permitted failures per group	Period
Group D1 (d)			6	1	3 years		3	1	3 years
Solderability connector assemblies	9.3.2.2	ia				ia			
Resistance to soldering heat	9.3.2.3	ia				ia			
Mechanical tests on cable fixing									
– cable rotation (nutation)	9.3.7	ia				ia			
– cable pulling	9.3.8	ia				ia			
– cable bending	9.3.9	ia				ia			
– cable torsion	9.3.10	ia				ia			
Group D2 (d)			6	1	3 years		3	1	3 years
Contact resistance, outer conductor and screen continuity centre conductor continuity	9.2.3	a				a			
Vibration	9.3.3	a							
Damp heat, steady state	9.4.3	a				a			
Group D3 (d)			1*	1	3 years		1*	1	3 years
Dimensions piece-parts and materials	9.1.2	a				a			
Group D4 (d)			6	1	3 years		3	1	3 years
Mechanical endurance	9.3.15	a				a			
High temperature endurance	9.4.5	a				a			
Sulphur dioxide	9.4.12	na				na			
Group D5 (d)			6	1	3 years		3	1	3 years
Reflection factor	9.2.1	a				a			
Screening effectiveness	9.2.7	a				a			
Water immersion	9.4.9	ia				ia			
Group D6 (d)			6	1	3 years		3	1	3 years
Contact captivation	9.3.5	a				a			
Change of temperature	9.4.4	na				na			
Climatic sequence	9.4.2	a				a			
Group D7 (d)			1§		3 years		1#		3 years
Resistance to solvents and contaminating fluids	9.4.11	ia				ia			

	IEC 61169-1:2013 subclause	Assessment level M (higher)				Assessment level H (lower)			
		Test required	Number of specimens	Permitted failures per group	Period	Test required	Number of specimens	Permitted failures per group	Period

Details of symbols, abbreviations and procedures:

a	suggested as applicable
ia	test suggested (if technically applicable)
na	not applicable
*	one set of piece-parts each style and variant, unless using common piece parts
#	for qualification approval (QA) a total of two failures only permitted for level H, and 1 failure only for level M from groups D1 to D7
§	group D7 – number of pairs for each solvent
(d)	destructive tests – specimens shall not be returned to stock.

5.5 — Procedures — Verdict: P

5.5.1 — Verdict: P

Quality conformance inspection
This shall consist of test groups A1 and B1 on a lot-by-lot basis.

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.2	Qualification approval and its maintenance This shall consist of three consecutive lots passing test groups A1 and B1 followed by selection of specimens from the lots as appropriate. These specimens shall successfully pass the specified periodic D tests.	Groups A1	P
6	Instructions for preparation of detail specifications		P
6.1	General Detail specifications (DS) writers shall use the appropriate BDS pro-forma. The following pages comprise the pro-forma BDS dedicated for use with 75 Ω type F connectors. As such, it will already have entered on it information relating to a) the basic specification number applicable to all the detail specifications covering connector styles of the type covered by the sectional specification; b) the connector series designation. The specification writer should enter the details relating to the connector style/variant(s) to be covered as indicated. The numbers in brackets on the BDS pro-forma correspond to the following indications which shall be given.	75 Ω type F connectors	P
6.2	Identification of the component (1) Enter the following details: – Style: The style designation of the connector including type of fixing and sealing, if applicable. – Attachment: By deletion of the inapplicable options of cable/wire: given for centre and outer conductors. – Special features and markings: As applicable. (2) Enter details of assessment level and the climatic category. (3) A reproduction of the outline drawing and details of the panel piercing, if applicable. It shall provide the maximum envelope dimensions, also the position of the reference plane and, in the case of a fixed connector, the position of the mounting plane(s) relative to the front face of the connector. (4) Any maximum panel thickness limitations for fixed connectors shall be stated. (5) Particulars of all variants covered by the DS. As 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 including, when applicable, those for use with microwave integrated circuit (MIC) components.	Meet	P

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict
6.3	Performance (6) Performance data listing the most important characteristics of the connector, taking into account the recommended values in 5.2 of this specification. Deviations from the minimum requirements shall be clearly indicated. Non-applicable parameters shall be marked ‘na’.		P
6.4	Marking, ordering information and related matters (7) Insert marking and ordering information as appropriate, together with details of related documents and any invoked structural similarity.		P
6.5	Selection of tests, test conditions and severities (8) ‘na’ shall be used to indicate non-applicable tests. All tests marked ‘a’ by the detail specification writer shall be mandatory. When using the normal procedure with a dedicated BDS, the letter ‘a’ – for applicable – shall be entered in the ‘test required’ column against each of the tests indicated as being mandatory in the test schedule as in 5.4 of this specification. Any additional tests required at the discretion of the specification writer shall also be indicated by an ‘a’. The specification writer shall also indicate, when necessary, details of deviations from the standard test methods and test conditions, including any relevant deviations given in the test schedule of the sectional specification.		P

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict
6.6	Blank detail specification pro-forma for type F connector The following pages contain the complete BDS pro-forma.		P

(1) | Page 1 of (2)

ELECTRONIC COMPONENT OF ASSESSED QUALITY IN ACCORDANCE WITH GENERIC SPECIFICATION SECTIONAL SPECIFICATION NATIONAL REFERENCE | (3) (4) ....

(5) Detail specification for radio frequency coaxial connector of assessed quality | Type **F**

Style:..... | Special features and markings

Method of cable/wire+ attachment | centre conductor – solder/crimp+
outer conductor – solder/clamp/crimp +
+ delete as appropriate

(6) Assessment level..... | Characteristic impedance 75 Ω | Climatic category...../...../...../

(7) Outline and maximum dimensions | Panel piercing and mounting details

(8) Variants

Variant No.	Description of variant	IEC 61196			
01.....		.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
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	.....	.....	.....	.....	.....
	.....				

Information about manufacturers who have components qualified under the IECQ Conformity Assessment System is available through the IECQ on-line certificate system.

IEC61169:24			
Clause	Requirement + Test	Result - Remark	Verdict

(9) Performance (including limiting conditions of use)

Ratings and characteristics		IEC 61169-1:2013 Subclause	Value	Remarks including any deviations from standard test methods
Electrical				
Nominal impedance			75 Ω	
Frequency range			0 GHz to 3 GHz	Measurement frequency range
Reflection factor	Variant No. Designation 01.....	9.2.1	....	....
Centre contact resistance		9.2.3	≤ .....mΩ ≤.....mΩ	Initial After conditioning
Centre conductor continuity	01.....	9.2.3	.....mΩ .....mΩ .....mΩ .....mΩ	Resistance change due to conditioning
Outer contact continuity		9.2.3	≤ .....mΩ ≤.....mΩ	Initial After conditioning
Insulation resistance		9.2.5	≥.....GΩ ≥.....GΩ	Initial After conditioning
+ Proof voltage at sea level	01.....	9.2.6	.....kV .....kV .....kV .....kV	86 kPa to 106 kPa
+ Proof voltage at 4,4 kPa	01.....		.....V .....V .....V V	.....kPa (if not 4,4 kPa)
+ Environment test voltage at sea level	01.....		.....V .....V .....V V	86 kPa to 106 kPa
Environment test voltage at 4,4 kPa	01.....		.....V .....V .....V V	.....kPa (if not 4,4 kPa)
Screening effectiveness	01.....	9.2.7	≥ dB at....GHz	Z_t≤.....Ω
ADDITIONAL ELECTRICAL CHARACTERISTICS				

+ Voltage values are RMS values at 50 Hz to 60 Hz, unless otherwise specified.

Ratings and characteristics		IEC 61169-1:2013 Subclause	Value	Remarks including any deviations from standard test methods
Mechanical				
Soldering - bit size		9.3.2		
Insertion force (resilient contacts) - inner contact - outer contact		9.3.4		
Centre contact captivation - axial force - permitted displacement each direction		9.3.5	 .....N .....mm	
Engagement and separation - axial force		9.3.6	.....N (eng) .....N (sep)	
Effectiveness of cable fixing against				
- cable rotation	01.....	9.3.7	Rotations	
- cable pulling	01.....	9.3.8	.....N	
- cable bending	01.....	9.3.9	.....cycles	Length of cable and mass ....
- cable torsion	01.....	9.3.10	.....Nm	
Bending moment		9.3.12	.....Nm	Relative to reference plane
Vibration		9.3.3	.....m/s^2 .....to....Hz	(.....g_n acceleration)
ADDITIONAL MECHANICAL CHARACTERISTICS				

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Clause	Requirement + Test	Result - Remark	Verdict

Ratings and characteristics	IEC 61169-1:2013 Subclause	Value	Remarks including any deviations from standard test methods
Environmental			
Climatic category		...../...../.....	
Sealing non-hermetically sealed connectors	9.4.7	.....cm^3/h	100 kPa to 110 kPa pressure differential
Sealing hermetically sealed connectors	9.4.8	10^{-6} $bar/cm^3/h$	100 kPa to 110 kPa pressure differential
Water immersion	9.4.9		
ADDITIONAL ENVIRONMENTAL CHARACTERISTICS			
ENDURANCE			
Mechanical	9.3.15	.....operations	
High temperature	9.4.5	.....h at.....°C	
ADDITIONAL ENDURANCE CHARACTERISTICS			
CHEMICAL CONTAMINATION			
Resistance to solvents and contaminating fluids to be used	9.4.11	....	
Applicable fluids			
Sulphur dioxide	9.4.12	... .days	

(10) Supplementary information

- **Marking of the component: in accordance with 11.1 of IEC 61169-1:2013 in the following order of preference:**
  1) Manufacturer code: .....
  2) Manufacturing date code: year/week
  3) Component identification: Variant No./ designation Identification
     .....
     .....
     .....
     .....
     .....
     .....
     .....
     .....
- **Marking and contents of package: in accordance with 11.2 of IEC 61169-1:2013**
  1) Information prescribed in 11.1 of IEC 61169-1:2013 detailed above
  2) Nominal characteristic impedance .....75 Ω.....
  3) Assessment level code letter .....
  4) Any additional marking required .....
- **Ordering information**
  1) Number of the detail specification / variant code.
  2) Assessment level code letter .....
  3) Body finish (if more than one listed) .....
  4) Any additional information or special requirements .....
- Related documents (if not included in IEC 61169-1:2013 or sectional specification):
  .....
  .....
- Structural similarity in accordance with 10.2.2 of IEC 61169-1:2013

Relevant information on a basic style should be entered as variant 01.

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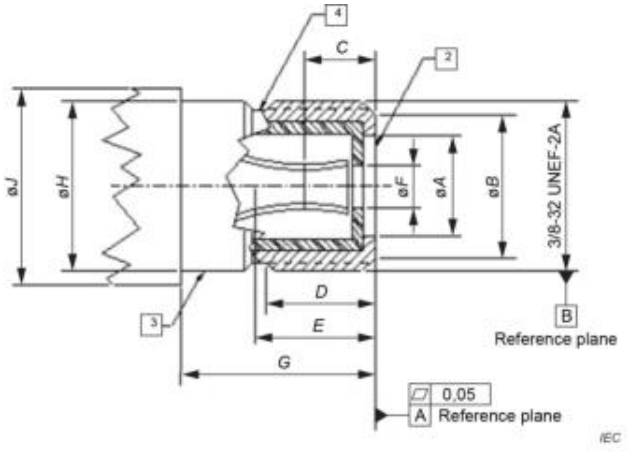
Clause	Requirement + Test	Result - Remark	Verdict

Annex A (informative)	Recommended outdoor “F” type socket / plug physical dimensions A.1 Outdoor “F” type female socket Figure A.1 shows an outdoor female “F” socket.  **Figure A.1 – Outdoor female “F” socket** (for dimensions, see Table A.1)	Outdoor “F” type female socket	P
	Table A.1 – Outdoor female “F” socket dimensions		P

Description	Reference	mm		inch		Remarks
		Min.	Max.	Min.	Max.	
Reference plane opening inner diameter	*A*	3,90	6,10	0,154	0,240	1,4
Reference plane outer diameter	*B*	7,50	8,00	0,295	0,315	
Positive contact point depth	*C*	-	4,70	-	0,185	2
Full thread depth	*D*	8,26	8,89	0,325	0,350	3
Minimum center conductor clearance	*E*	9,00	-	0,354	-	4
Center conductor guide inner diameter	*F*	1,20	1,50	0,047	0,059	
Port length	*G*	12,32	13,08	0,485	0,515	
Sealing surface diameter for seal ring	*H*	9,35	9,65	0,368	0,380	5
Bulkhead diameter	*J*	10,80	-	0,425	-	

1 No material must protrude beyond reference plane.

2 Thread relief not to exceed two full threads.

3 Dimension to point of positive contact of male center conductor. Recommended mating male center conductor diameter: 0,025 in (0,64 mm) min. / 0,042 in (1,07 mm) max.

4 Minimum clearance required for maximum length male center conductor.

5 If cast feature, no parting lines permitted.

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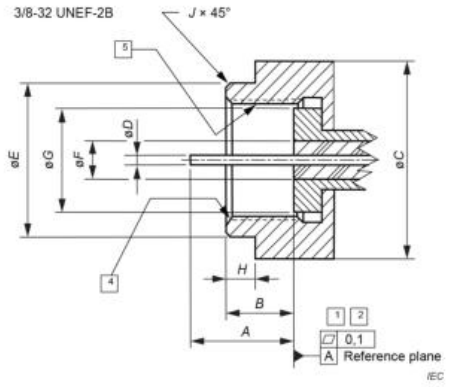
Clause	Requirement + Test	Result - Remark	Verdict

A.2	Outdoor “F” type male plug Figure A.2 shows an outdoor “F” type male plug.  **Figure A.2 – Outdoor “F” type male plug** (for dimensions, see Table A.2)		P
	Table A.2 – Outdoor “F” type male plug dimensions (see table below)	Meet	P

Description	Reference	mm		inch		Remarks
		Min.	Max.	Min.	Max.	
Inner conductor length	A	6,35	8,63	0,250	0,340	1
Length of nut	B	4,29	6,10	0,169	0,240	2
Maximum envelope dimension	C	-	16,61	-	0,654	
Inner conductor diameter	D	0,64	1,07	0,025	0,42	3
Sealing diameter for seal ring	E	10,50	11,00	0,413	0,433	
Reference plane inner diameter	F	-	5,84	-	0,230	4
Reference plane outer diameter	G	7,11	-	0,310	-	
Sealing surface length	H	1,78	4,45	0,079	0,175	
Chamfer break	J	0,127	0,381	0,005	0,015	5

1 Dielectric must not protrude beyond reference plane.
2 Minimum one thread lead-in.
3 Cable inner conductor or integral pin.
4 The mating of the “F” female socket to the reference plane should not be impeded.
5 Drawing not to scale.

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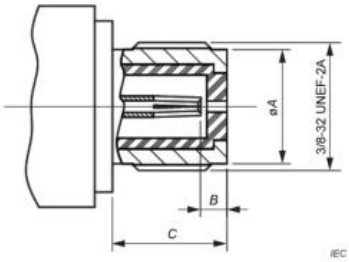
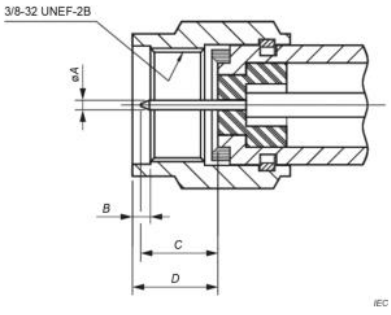
Clause	Requirement + Test	Result - Remark	Verdict

Annex B (informative)	Recommended satellite broadcasting “F” type socket / Plug physical dimensions B.1 Satellite broadcasting “F” type female socket Figure B.1 shows a satellite broadcasting “F” socket.  **Figure B.1 – Satellite broadcasting “F” socket** (for dimensions, see Table B.1) **Table B.1 – Satellite broadcasting “F” type socket dimensions** Reference / mm (Min., Max.) / inch (Min., Max.) / Note A: - / 8,5 / - / 0,335 B: - / 4,3 / - / 0,169 C: 8,0 / - / 0,315 / -	Meet	P
B.2	Satellite broadcasting “F” type male plug Figure B.2 shows a satellite broadcasting “F” type male plug.  **Figure B.2 – Satellite broadcasting “F” type male plug** (for dimensions, see Table B.2) **Table B.2 – Satellite broadcasting “F” type male plug dimensions** Reference / mm (Min., Max.) / inch (Min., Max.) / Note A: 0,75 / 0,85 / 0,030 / 0,033 B: - / 1,50 / - / 0,059 C: 6,20 / 6,80 / 0,244 / 0,267 D: 6,70 / 7,30 / 0,263 / 0,287	Meet	P

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX B:

Photo-document

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Clause	Requirement + Test	Result - Remark	Verdict

Photo 1

Photo 2