

INTERNATIONAL STANDARD

IEC
61169-8

QC 222400

First edition
2007-02

Radio-frequency connectors –

Part 8:

Sectional specification –

RF coaxial connectors with inner diameter of outer
conductor 6,5 mm (0,256 in) with bayonet lock –

Characteristic impedance 50 Ω (type BNC)

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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 IEC type designation	6
4 Interface dimensions	7
4.1 Dimensions – General purpose connectors.....	7
5 Mechanical gauges and standard test connectors.....	11
5.1 Mechanical gauges.....	11
5.2 Standard test connectors.....	14
6 Outline dimensions.....	19
7 Quality assessment procedures.....	19
7.1 General.....	19
7.2 Ratings and characteristics	19
7.3 Test schedule and inspection requirements.....	21
7.4 Procedures.....	23
8 Instructions for preparation of detail specifications	23
8.1 General.....	23
8.2 Identification of the Detail specification	24
8.3 Identification of the component.....	24
8.4 Performance.....	24
8.5 Marking, ordering information and related matters.....	24
8.6 Selection of tests, test conditions and severities.....	24
8.7 Blank detail specification pro-forma for type BNC connector.....	26
Annex A (normative) Information for interface dimensions of 75 Ω characteristic impedance connector with unspecified reflection factor.....	31
Bibliography.....	35
Figure 1 – Connector with pin-centre contact (for dimensions, see Table 1).....	7
Figure 2 – Details of bayonet lock.....	8
Figures 3 and 4 – Details of alternative coupling grooves	8
Figure 5 – Details of pin-centre contact.....	8
Figure 6 – Connector with socket-centre contact (for dimensions, see Table 2)	10
Figure 7 – Details of socket-centre contact	10
Figure 8 – Gauge for outer contact of pin connector.....	11
Figure 9 – Gauge pin for socket-centre contact.....	12
Figure 10 – Dimensions of gauge for performance test (see Table 5).....	13
Figure 11 – Dimensions of connector (see Table 6)	15
Figure 12 – Dimensions of centre contact (see Table 6).....	15
Figure 13 – Dimensions of connector (see Table 7)	17
Figure 14 – Dimensions of centre contact (see Table 7).....	17
Figure A.1 – Connector with pin centre contact and Figure A.2 – Details of bayonet lock	31

Figure A.3 – Details of alternative coupling grooves.....	31
Figure A.4 – Details of pin centre contact	31
Figure A.5 – Connector with socket centre contact.....	33
Figure A.6 – Position of coupling studs	33
Figure A.7 – Details of socket centre contact	33
Table 1 – Dimensions for connector with pin-centre contact.....	9
Table 2 – Dimensions for connector with socket-centre contact	11
Table 3 – Dimensions for gauges for outer contact of pin connector.....	12
Table 4 – Dimensions for gauge pin for socket-centre contact.....	12
Table 5 – Dimensions of gauge for performance test	14
Table 6 – Dimensions of centre contact	16
Table 7 – Dimensions for standard test connector.....	18
Table 8 – Preferred climatic categories (see IEC 60068-1):.....	19
Table 9 – Ratings and characteristics	20
Table 10 – Acceptance tests	21
Table 11 – Periodic tests	22
Table A.1 – Dimensions for pin connector	32
Table A.2 – Dimensions for socket connector.....	34

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RADIO-FREQUENCY CONNECTORS –**Part 8: Sectional specification – RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic impedance 50 Ω (type BNC)**

FOREWORD

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International Standard IEC 61169-8 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

This first edition of IEC 61169-8 cancels and replaces IEC 60169-8 published in 1978 as well as its Amendment 1 (1996) and Amendment 2 (1997). This edition constitutes a technical revision.

This first edition of IEC 61169-8 differs from IEC 60169-8 primarily in that it contains a new Clause 7: Quality assessment procedures and a new Clause 8: Instructions for preparation of detail specifications. Furthermore this IEC 61169-8 refers to IEC 61169-1 whereas IEC 60169-8 referred to IEC 60169-1.

The text of this standard is based on the following documents:

FDIS	Report on voting
46F/57/FDIS	46F/67/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61169 series, published under the general title *Radio frequency connectors*, can be found on the IEC website.

The QC number that appears on the front cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual edition of this document may be issued at a later date.

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RADIO-FREQUENCY CONNECTORS –

Part 8: Sectional specification – RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic impedance 50 Ω (type BNC)

1 Scope

This part of IEC 61169, which is a sectional specification (SS), provides information and rules for the preparation of detail specifications (DS) for RF coaxial connectors which may preferably be used with RF cables 60096 IEC 50-3 of IEC 60096-2. These connector patterns are for low power, quick connect/disconnect applications using a bayonet type coupling mechanism and are commonly known as type "BNC".

It describes the interface dimensions for general purpose connectors, dimensional details for standard test connectors together with gauging information and the mandatory tests selected from IEC 61169-1, applicable to all DS relating to type BNC connectors.

This specification indicates the recommended performance characteristics to be considered when writing a DS and covers test schedules and inspection requirements.

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.

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1 (1992)

IEC 60096-2, *Radio-frequency cables – Part 2: Relevant cable specifications*

IEC 61169-1:1992, *Radio-frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

3 IEC type designation

Connectors of this standard shall be designated by:

- a) the reference to this standard, 61169-8 IEC;
- b) a serial number (see Clause 6);
- c) a letter corresponding to the climatic category (see 7.2).

Example:

61169-8-IEC-1A denotes a free pin connector belonging to climatic category 40/85/21 to be used with an RF coaxial cable 60096 IEC 50-3-1/3/4.

NOTE The type designation used in this standard is provisional. A final type designation is under consideration.

4 Interface dimensions

4.1 Dimensions – General purpose connectors

The original dimensions are in inches.

All undimensioned pictorial configurations are for reference purposes only.

4.1.1 Pin connector

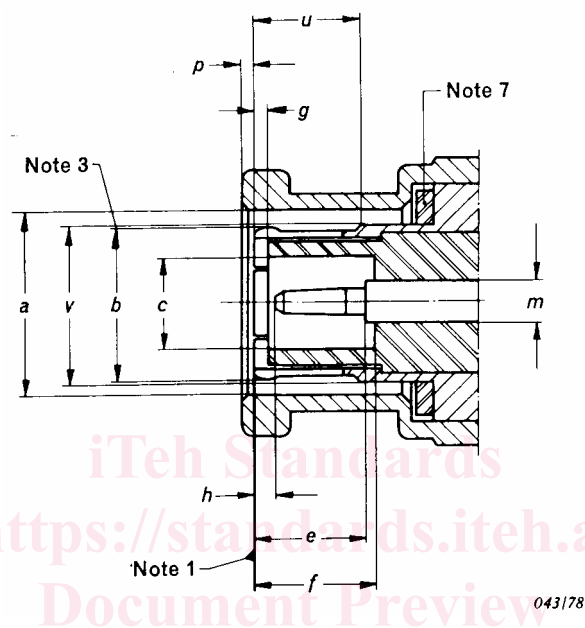


Figure 1 – Connector with pin-centre contact (for dimensions, see Table 1)

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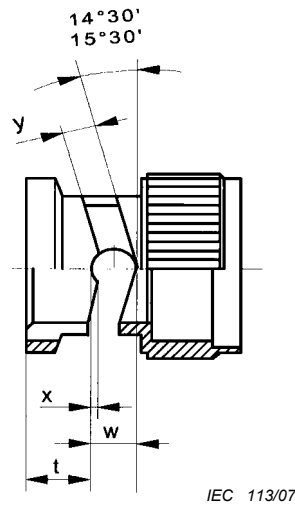
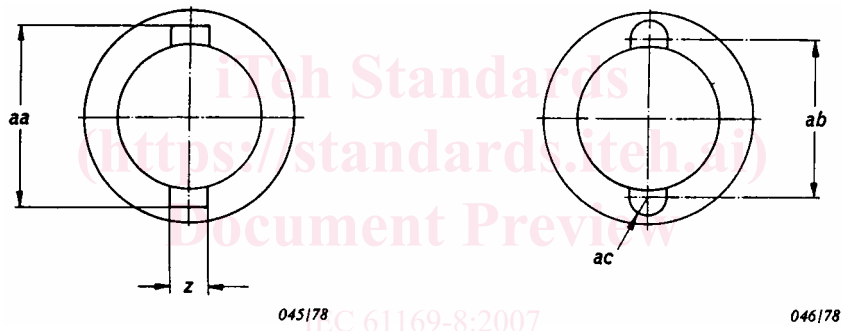


Figure 2 – Details of bayonet lock



Figures 3 and 4 – Details of alternative coupling grooves

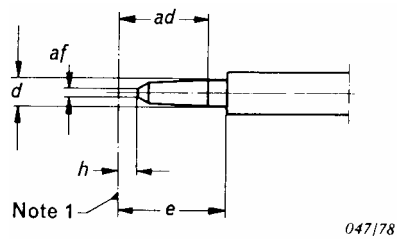


Figure 5 – Details of pin-centre contact

Table 1 – Dimensions for connector with pin-centre contact

Reference	mm		inch		Note
	Min.	Max.	Min.	Max.	
a	9,78	9,91	0,385	0,390	9/diam.
b	–	–	–	–	3/9/diam.
c	4,83	–	0,190	–	9/diam.
d	1,32	1,37	0,052	0,054	9/diam.
e	5,33	–	0,210	–	
f	5,28	–	0,208	–	
g	0,15	–	0,006	–	
h	0,08	1,02	0,003	0,040	
m	2,140 nom.		0,0842 nom.		diam.
p	1,44 nom.		0,057 nom		10
u	5,38	–	0,212	–	
v	–	8,18	–	0,322	9/diam.
z	2,31	2,46	0,091	0,097	6
aa	11,76	–	0,463	–	6
ab	10,14 nom.		0,399 nom.		6
ac	1,14	–	0,045	–	6/rad.
ad	1,96	3,05	0,077	0,120	
af	–	0,64	–	0,025	diam.
t	4,47	4,67	0,180	0,184	
w	3,15	–	0,124	–	
x	0,46	0,56	0,018	0,022	
y	2,31	2,46	0,091	0,097	

NOTE 1 Mechanical and electrical reference plane.

NOTE 3 Slotted and flared to meet gauge test according to 5.1.1.

NOTE 6 It is permitted to use either Figure 3 or Figure 4.

NOTE 7 Sealing gasket to meet required electrical and environmental performance.

NOTE 9 Diameters shall be gauged to ensure that on mmC each feature is on or can take up a common axis.

NOTE 10 This dimension shows the position when the bayonet sleeve is locked.