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**Radiofrekvenčni konektorji – 31. del: Radiofrekvenčni (RF) koaksialni konektorji z notranjim premerom zunanjega vodnika 1,0 mm (0,039 in) z navojnim spojem – Karakteristična impedanca 50 ohmov (tip 1,0) (IEC 61169-31:1999)**

Radio frequency connectors - Part 31: RF coaxial connectors with inner diameter of outer conductor 1,0 mm (0,039 in) with screw coupling - Characteristic impedance 50 ohms (type 1,0) (IEC 61169-31:1999)

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English version

**Radio-frequency connectors**  
**Part 31: RF coaxial connectors with inner diameter of outer**  
**conductor 1,0 mm (0,039 in) with screw coupling**  
**Characteristic impedance**  
**50 ohms (type 1,0)**  
**(IEC 61169-31:1999)**

Connecteurs pour fréquences  
radioélectriques

Partie 31: Connecteurs coaxiaux pour  
fréquences radioélectriques avec  
diamètre intérieur du conducteur  
extérieur de 1,0 mm (0,039 in) à  
verrouillage à vis - Impédance  
caractéristique 50 ohms (type 1,0)  
(CEI 61169-31:1999)

Hochfrequenz-Steckverbinder

Teil 31: HF-Steckverbinder mit  
1,0 mm (0,039 in) Innendurchmesser  
des Außenleiters mit Schraubverbindung  
Wellenwiderstand 50 ohms (Typ 1,0)  
(IEC 61169-31:1999)

This European Standard was approved by CENELEC on 1999-10-01. CENELEC members are bound to comply with the 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

### Foreword

The text of document 46D/323/FDIS, future edition 1 of IEC 61169-31, prepared by SC 46D, RF connectors, of IEC TC 46, Cables, wires, waveguides, R.F. connectors, and accessories for communication and signalling, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61169-31 on 1999-10-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2000-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2002-10-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 61169-31:1999 was approved by CENELEC as a European Standard without any modification.

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**Annex ZA (normative)**

**Normative references to international publications  
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications: These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61169-1	1992	Radio-frequency connectors Part 1: Generic specification - General requirements and measuring methods	EN 61169-1	1994

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NORME  
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IEC

61169-31

QC 223100  
Première édition  
First edition  
1999-09

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**Connecteurs pour fréquences radioélectriques –**

**Partie 31:**

**Connecteurs coaxiaux pour fréquences  
radioélectriques avec diamètre intérieur  
du conducteur extérieur de 1,0 mm (0,039 in)  
à verrouillage à vis –  
Impédance caractéristique 50 ohms (type 1,0)**

[SIST EN 61169-31:2005](https://standards.iteh.ai/catalog/standards/sist/96390a82-8c6f-479e-93fd-143427f5871b/sist-en-61169-31-2005)

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[143427f5871b/sist-en-61169-31-2005](https://standards.iteh.ai/catalog/standards/sist/96390a82-8c6f-479e-93fd-143427f5871b/sist-en-61169-31-2005)

**Radio-frequency connectors –**

**Part 31:**

**RF coaxial connectors with inner diameter of outer  
conductor 1,0 mm (0,039 in) with screw coupling –  
Characteristic impedance 50 ohms (type 1,0)**

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International Electrotechnical Commission  
Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RADIO-FREQUENCY CONNECTORS –****Part 31: RF coaxial connectors with inner diameter of outer conductor 1,0 mm (0,039 in) with screw coupling –  
Characteristic impedance 50 ohms (type 1,0)**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61169-31 has been prepared by subcommittee 46D: RF connectors, of IEC technical committee 46: Cables, wires, waveguides, r.f. connectors and accessories for communication and signalling.

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

FDIS	Report on voting
46D/323/FDIS	46D/327/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 3.

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 this publication remains valid until 2007.

At this date, in accordance with the committee's decision, the publication will be

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

**RADIO-FREQUENCY CONNECTORS –**  
**Part 31: RF coaxial connectors with inner diameter of outer**  
**conductor 1,0 mm (0,039 in) with screw coupling –**  
**Characteristic impedance 50 ohms (type 1,0)**

## 1 General

### 1.1 Scope

This part of IEC 61169 standardizes the interface and ratings of the type 1,0 r.f. connectors of 50  $\Omega$  impedance and having a screw coupling mechanism.

These connectors are recommended for use with semi-rigid and flexible cable and in microwave applications requiring high performance.

These connectors have an operating frequency range of up to 110 GHz.

### 1.2 Normative reference

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61169. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61169 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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

## 2 Interface dimensions

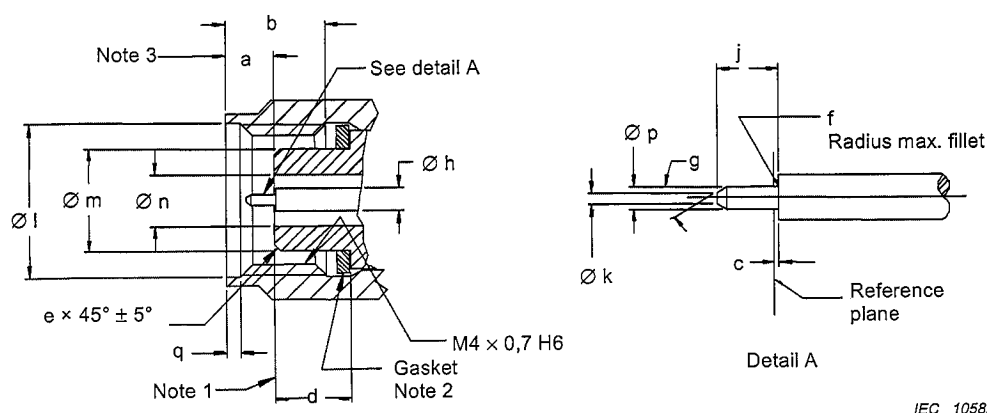
### 2.1 Mating face

#### 2.1.1 Dimensions – Grade 1 connectors

Millimetres are original dimensions.

All undimensioned pictorial configurations are for reference purposes only.

## 2.1.1.1 Connector with pin centre contact



IEC 1058/99

Reference	mm		in	
	Min.	Max.	Min.	Max.
a	1,26	1,86	0,050	0,073
b	2,840	3,04	0,112	0,120
c	0,050	0,002		
d	1,800	1,900	0,071	0,075
e	0,150	0,250	0,006	0,010
f	-	0,025	-	0,001
g	28°	32°	28°	32°
h	0,4315	0,4365	0,01699	0,01719
j	0,700	0,800	0,028	0,032
k	0,100	0,125	0,004	0,005
l	4,150	4,250	0,1634	0,1673
m	2,348	2,368	0,0924	0,0932
n	0,995	1,005	0,03917	0,03957
p	0,245	0,255	0,0096	0,0100
q	0,300	0,500	0,012	0,020

NOTE 1 Mechanical and electrical reference plane.

NOTE 2 Gasket required on grade 1 connectors.

NOTE 3 With coupling nut biased in the forward direction.

Figure 1 – Connector with pin centre contact