

Radio-frequency connectors —

**Part 29: Sectional specification —
Miniature radio frequency coaxial
connectors model screw, snap-on,
push-pull or quick-lock, slide-in
(rack and panel applications) —
Characteristic impedance
50 ohms (type 1,0/2,3) —
50 ohms and 75 ohms applications**

The European Standard EN 61169-29:2005 has the status of a
British Standard

ICS 33.120.30

National foreword

This British Standard is the official English language version of EN 61169-29:2005. It is identical with IEC 61169-29:2005.

The UK participation in its preparation was entrusted by Technical Committee EPL/46, Cables, wires and waveguides, RF connectors and accessories for communication and signalling, to Subcommittee EPL/46/2, RF connectors and waveguides, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 28, an inside back cover and a back cover.

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 9 November 2005

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ISBN 0 580 46743 0

Amendments issued since publication

Amd. No.	Date	Comments

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(IEC 61169-29:2005)**

Connecteurs pour fréquences radioélectriques
Partie 29: Spécification intermédiaire –
Connecteurs coaxiaux miniatures pour
fréquences radioélectriques avec
accouplements de type vis, pousser-tirer
et encliquetage, ou glis (applications de
"panneau" et "fond de panier") –
Impédance caractéristique 50 ohms
(type 1,0/2,3) –
Applications à 50 ohms et 75 ohms
(CEI 61169-29:2005)

Hochfrequenz-Steckverbinder
Teil 29: Rahmenspezifikation –
Koaxiale Miniatur-Hochfrequenzsteckverbinder
mit Schraub-, Einrast-, Push-pull- oder
Schnellverschluss-, Einschubkupplung
(Einschubausführung) –
Wellenwiderstand 50-Ohm (Typ 1,0/2,3) –
50-Ohm- und 75-Ohm-Anwendungen
(IEC 61169-29:2005)

This European Standard was approved by CENELEC on 2005-07-01. 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.

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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 46F/27/FDIS, future edition 1 of IEC 61169-29, prepared by SC 46F, R.F. and microwave passive components, of IEC TC 46, Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories, was submitted to IEC-CENELEC parallel vote and was approved by CENELEC as EN 61169-29 on 2005-07-01.

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) | 2006-04-01 |
| – latest date by which the national standards conflicting
with the EN have to be withdrawn | (dow) | 2008-07-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61169-29:2005 was approved by CENELEC as a European Standard without any modification.

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RADIO-FREQUENCY CONNECTORS –

Part 29: Sectional specification –

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Characteristic impedance 50 Ω (type 1,0/2,3) – 50 Ω and 75 Ω applications

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 with screw, snap-on, push-pull or quick-lock, slide-in coupling (rack and panel applications) with a characteristic impedance of 50 Ω (type 1,0/2,3) for 50 Ω and 75 Ω applications.

The connectors are normally used with flexible and semi-rigid r.f. cables for low power applications in conjunction with 50 Ω cables in an operating frequency range up to 10 GHz or in conjunction with 75 Ω cables up to 2 GHz.

It describes the interface dimensions for general purpose grade 2 connectors, dimensional details for standard test connectors, grade 0, together with gauging information and the mandatory tests selected from IEC 61169-1, applicable to all DS relating to type 1,0/2,3 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 61169-1:1992, *Radio-frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

3 IEC type designation

Type designations are given for each of the various coupling mechanisms:

- *Screw* – the coupling mechanism consists of a coupling nut (on the plug) and a thread (on the socket). The tightening torque is achieved by hand. The engagement and separation force depends on the mechanical dimensions of the inner and outer contacts of the plug and socket.
- *Snap on* – the coupling mechanism consists of a spring device (on the plug) that fits in a suitable shape of the body (on the socket). The engagement and separation force depends on the mechanical dimensions of the inner and outer contact, of the spring device and of the socket body. The coupling mechanism does not prevent accidental disengagements.
- *Push pull* or *Quick lock* (hereafter called push pull) – the coupling mechanism consists of a spring device (on the plug) that fits in a suitable shape of the body (on the socket). The engagement and separation force depends on the mechanical dimensions of the inner and outer contact, of the spring element and of the socket body. This coupling mechanism prevents accidental disengagements.
- *Slide in* – the coupling mechanism consists of a nut (on the plug) which allows a float mounting on the panel preventing a radial misalignment. The engagement and separation force depends on the mechanical dimensions of the inner and outer contacts of the plug and socket. In case of rack and panel applications, the separation range of panels may differ from the fully mated position by 1,7 mm.

Connectors conforming to this part of IEC 61169 shall be designated by:

- a) the reference to this part of IEC 61169: IEC 61169-29;
- b) the grade number:
 - Grade 0 = standard test connector = G0
 - Grade 2 = general purpose connector = G2
- c) identification number (see Clause 8 of IEC 61169-1).

4 Interface information

4.1 Dimensions

4.1.1 General purpose connectors - Grade 2

Millimetre dimensions are original dimensions. All undimensioned pictorial configurations are for reference purposes only.

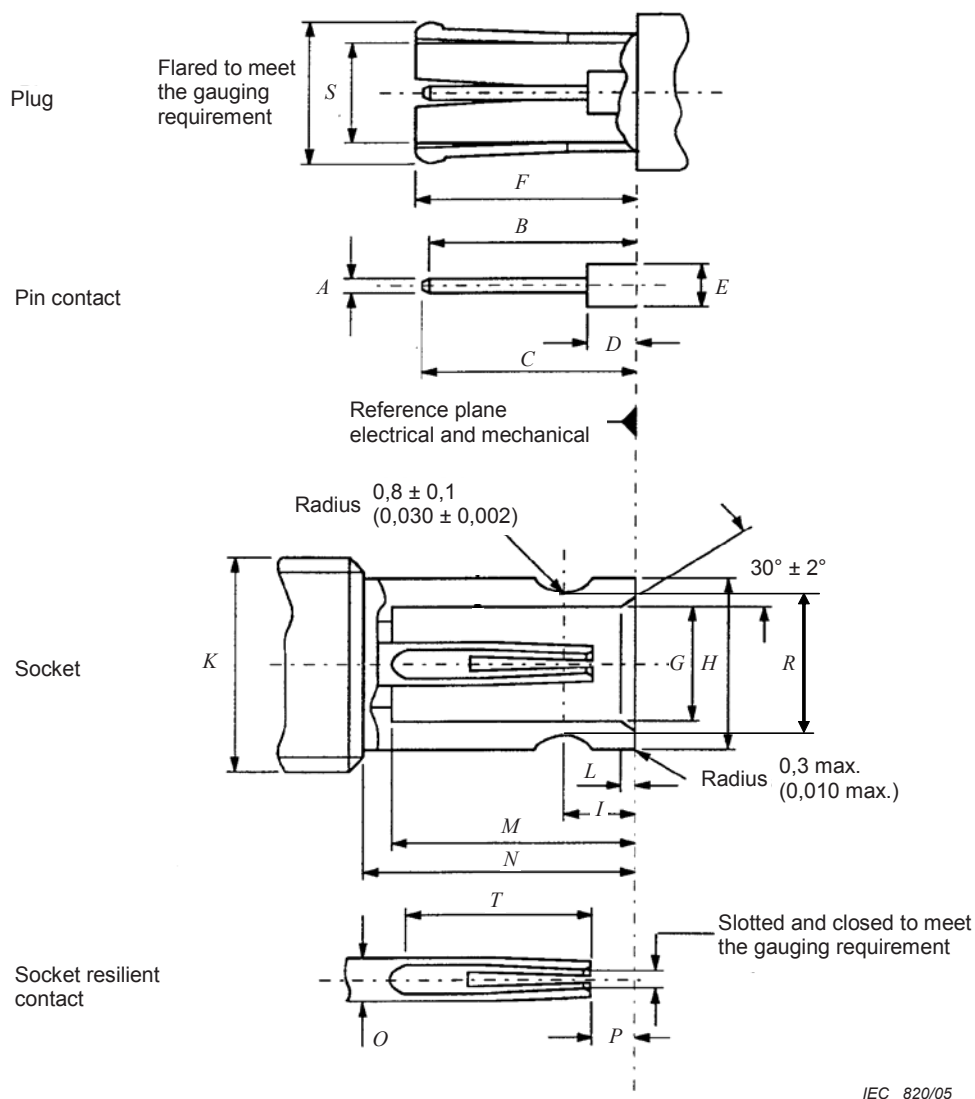


Figure 1 – Interfaces (for dimensions, see Table 1)

Table 1 – Dimensions of the interfaces

Ref.	mm		in		Note
	Min.	Max.	Min.	Max.	
<i>A</i>	0,475	0,520	0,018 7	0,020 5	Diameter
<i>B</i>	4,5		0,177		
<i>C</i>		5,5		0,217	
<i>D</i>		1,15		0,045	
<i>E</i> (*)		1 nominal		0,039 nominal	Diameter
<i>F</i>	5,4	5,7	0,213	0,224	
<i>G</i>	3,00	3,06	0,118	0,120	Diameter
<i>H</i>	4,03	4,14	0,159	0,163	Diameter
<i>I</i>	1,8	1,9	0,071	0,075	
<i>K</i>	M 5,5 × 0,5				
<i>L</i>	0,5	0,6	0,020	0,024	
<i>M</i>	5,8	5,9	0,228	0,232	
<i>N</i>	6,4	6,5	0,252	0,256	
<i>O</i> (*)		1 nominal		0,039 nominal	Diameter
<i>P</i>	1,15	1,75	0,045	0,069	
<i>R</i>	3,525	3,600	0,138 8	0,141 7	Diameter
<i>S</i>		2,3 nominal		0,091 nominal	Diameter
<i>T</i>	4,5		0,177		
(*) = only for 50 Ω version.					

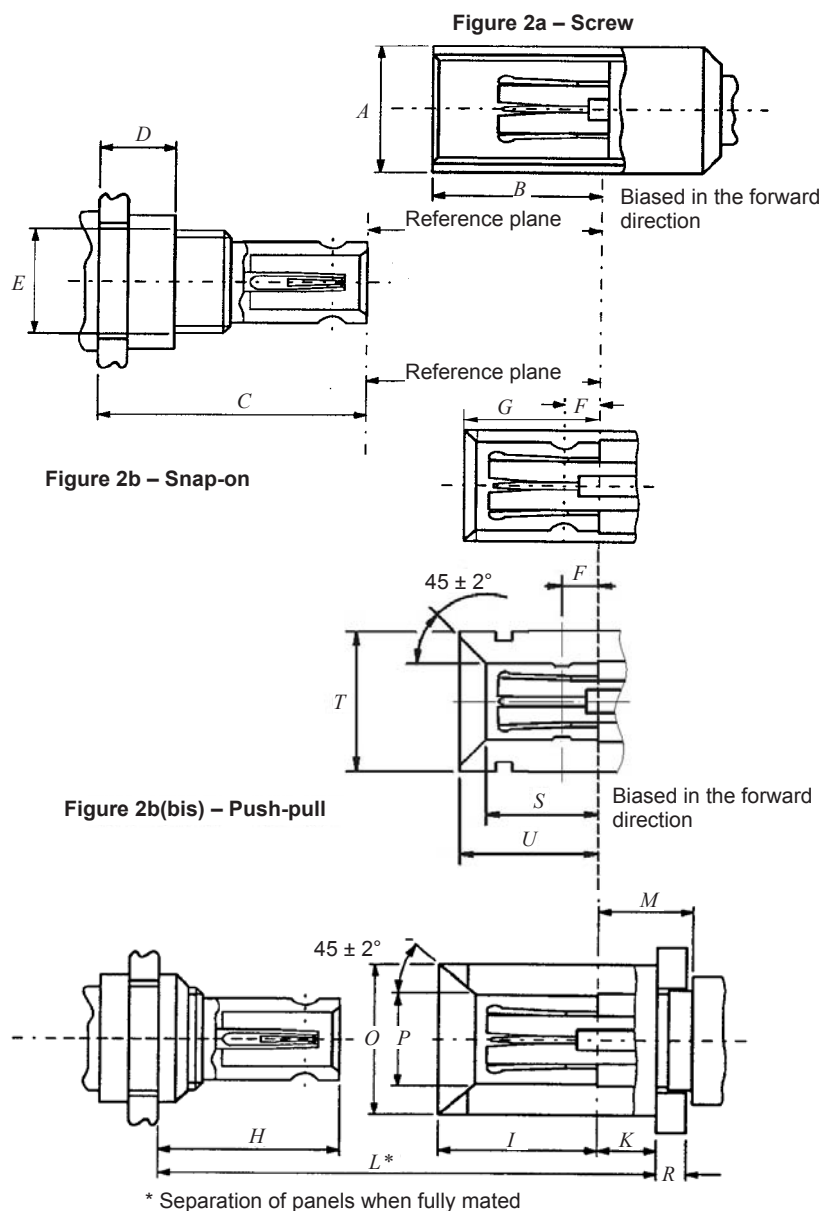


Figure 2c – Slide-in (rack and panel applications)

IEC 821/05

Figure 2 – Locking devices (for dimensions, see Table 2)