



BSI Standards Publication

Radio- frequency connectors

Part 10: Sectional specification for RF coaxial connectors with inner diameter of outer conductor 3 mm (0,12 in) with snap-on coupling — Characteristic impedance 50 Ω (Type SMB)

National foreword

This British Standard is the UK implementation of EN IEC 61169-10:2024. It is identical to IEC 61169-10:2024. It supersedes BS 9210 N007-1:1976, BS QC 221300:1997 and BS EN 122130:1994, which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/46, Cables, wires and waveguides, radio frequency connectors and accessories for communication and signalling.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Published by BSI Standards Limited 2024

ISBN 978 0 539 20540 4

ICS 33.120.30

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2024.

Amendments/corrigenda issued since publication

Date	Text affected
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English Version

Radio-frequency connectors - Part 10: Sectional specification for
RF coaxial connectors with inner diameter of outer conductor 3
mm (0,12 in) with snap-on coupling - Characteristic impedance
50 Ω (Type SMB)
(IEC 61169-10:2024)

Connecteurs pour fréquences radioélectriques - Partie 10:
Spécification intermédiaire relative aux connecteurs
coaxiaux pour fréquences radioélectriques avec diamètre
intérieur du conducteur extérieur de 3 mm (0,12 in) à
couplage par encliquetage - Impédance caractéristique
50 Ω (type SMB)
(IEC 61169-10:2024)

Hochfrequenz-Steckverbinder - Teil 10: Hochfrequenz-
Koaxialsteckverbinder mit einem Innen-
/Außenleiterdurchmesser von 3 mm (0,12 Zoll) mit
Schnappkupplung - Wellenwiderstand 50 Ohm (Typ SMB)
(IEC 61169-10:2024)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 46F/658/FDIS, future edition 1 of IEC 61169-10, prepared by SC 46F "RF and microwave passive components" of IEC/TC 46 "Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61169-10:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-12-28 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-03-28 document have to be withdrawn

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Endorsement notice

The text of the International Standard IEC 61169-10:2024 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61169-1	2013	Radio frequency connectors - Part 1: Generic specification - General requirements and measuring methods	EN 61169-1	2013
IEC 62153-4-7	-	Metallic cables and other passive components test methods - Part 4-7: Electromagnetic compatibility (EMC) - Test method for measuring of transfer impedance Z_T and screening attenuation a_s or coupling attenuation a_c of connectors and assemblies - Triaxial tube in tube method	EN IEC 62153-4-7	-

CONTENTS

FOREWORD	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Mating face and gauge information	6
4.1 Dimensions – General connectors – Grade 2	6
4.1.1 Connector with pin centre contact	6
4.1.2 Connector with socket centre contact	7
4.2 Gauges	9
4.2.1 Gauge pin for socket centre contact	9
4.2.2 Gauge for outer contact of connector with pin centre contact	9
4.3 Dimensions – Standard test connectors – Grade 0	11
4.3.1 Connectors with pin centre contact	11
4.3.2 Connector with socket centre contact	12
5 Quality assessment procedures	14
5.1 General	14
5.2 Ratings and characteristics	14
5.3 Test schedule and inspection requirements	17
5.3.1 Acceptance tests	17
5.3.2 Periodic tests	17
5.3.3 Procedures for the quality conformance	20
6 Instructions for preparation of detail specifications	20
6.1 General	20
6.2 Identification of the component	20
6.3 Performance	20
6.4 Marking, ordering information and related matters	21
6.5 Selection of tests, test conditions and severities	21
6.6 Blank detail specification pro-forma for SMB connectors	21
Figure 1 – Connector with pin centre contact	6
Figure 2 – Connector with socket centre contact	8
Figure 3 – Gauge pin for socket centre contact	9
Figure 4 – Gauge for outer contact of connector with pin centre contact	10
Figure 5 – Connector with pin centre contact	11
Figure 6 – Connector with socket in centre contact	13
Table 1 – Dimensions of connector with pin centre contact	7
Table 2 – Dimensions of connector with socket centre contact	8
Table 3 – Dimensions of gauge pin for socket centre contact	9
Table 4 – Dimensions of gauge for outer contact of connector with pin centre contact	10
Table 5 – Dimensions of connector with pin centre contact	12
Table 6 – Dimensions of connector with socket centre contact	14
Table 7 – Preferred climatic categories	15
Table 8 – Ratings and characteristics	15
Table 9 – Acceptance tests	17
Table 10 – Periodic tests	18

INTERNATIONAL ELECTROTECHNICAL COMMISSION

RADIO-FREQUENCY CONNECTORS –

**Part 10: Sectional specification for RF coaxial connectors with inner diameter of outer conductor 3 mm (0,12 in) with snap-on coupling –
Characteristic impedance 50 Ω (Type SMB)**

FOREWORD

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IEC 61169-10 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. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
46F/658/FDIS	46F/665/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

RADIO-FREQUENCY CONNECTORS –

Part 10: Sectional specification for RF coaxial connectors with inner diameter of outer conductor 3 mm (0,12 in) with snap-on coupling – Characteristic impedance 50 Ω (Type SMB)

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 series SMB RF coaxial connectors with snap-on coupling with a characteristic impedance of 50 Ω .

This document prescribes mating face dimensions for high performance connectors – grade 2, dimensional details of standard test connectors – grade 0, gauging information and tests selected from IEC 61169-1, applicable to all detail specifications relating to series SMB RF connectors.

This document indicates recommended performance characteristics to be considered when writing a detail specification and it covers test schedules and inspection requirements for assessment levels M and H.

The series SMB connectors are used to connect with all kinds of RF cables and microstrips in microwave transmission systems. The operating frequency is up to 4 GHz.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 61169-1:2013, *Radio frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

IEC 62153-4-7, *Metallic cables and other passive components test methods – Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring of transfer impedance Z_T and screening attenuation a_S or coupling attenuation a_C of connectors and assemblies – Triaxial tube in tube method*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>