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BSI Standards Publication

Radio-frequency connectors

Part 60: Sectional specification for RF coaxial connectors with push on mating — Characteristic impedance 50 Ohm (type SMPM)

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National foreword

This British Standard is the UK implementation of EN IEC 61169-60:2021. It is identical to IEC 61169-60:2021. Together with BS EN IEC 61968-13:2021, it supersedes BS EN 61968-13:2008, which is withdrawn.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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Amendments/corrigenda issued since publication

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English Version

Radio-frequency connectors - Part 60: Sectional specification for
RF coaxial connectors with push on mating - Characteristic
impedance 50 Ohm (type SMPM)
(IEC 61169-60:2021)

Connecteurs pour fréquences radioélectriques - Partie 60:
Spécification intermédiaire relative aux connecteurs
coaxiaux pour fréquences radioélectriques avec couplage
par poussée - Impédance caractéristique 50 Ohm (type
SMPM)
(IEC 61169-60:2021)

Hochfrequenz-Steckverbinder - Teil 60:
Rahmenspezifikation für koaxiale HF-Steckverbinder mit
Push-On Verbindung - Wellenwiderstand 50 Ohm (Typ
SMPM)
(IEC 61169-60:2021)

This European Standard was approved by CENELEC on 2021-04-21. 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 CEN-CENELEC Management Centre or to any CENELEC member.

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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

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European foreword

The text of document 46F/548/FDIS, future edition 1 of IEC 61169-60, 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 61169-60:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-01-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-04-21

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

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The text of the International Standard IEC 61169-60:2021 was approved by CENELEC as a European Standard without any modification.

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(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.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 61169-1	2013	Radio frequency connectors - Part 1: Generic specification - General requirements and measuring methods	EN 61169-1	2013
IEC 62037	series	RF connectors, connector cable assemblies and cables - Intermodulation level measurement	EN IEC 62037	series

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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Mating face and gauge information.....	7
4.1 Dimensions – General connectors – Grade 2	7
4.1.1 SMPM connector with pin-centre contact	7
4.1.2 SMPM connector with socket-centre contact (see Figure 3)	9
4.2 SMPM gauges	10
4.2.1 SMPM gauge pin for socket-centre contact.....	10
4.2.2 Gauges for outer contact of SMPM connector with socket-centre contact.....	11
5 Quality assessment procedure.....	19
5.1 General.....	19
5.2 Rating and characteristics (see Clause 5 of IEC 61169-1:2013)	19
5.3 Test schedule and inspection requirements.....	22
5.3.1 Acceptance tests	22
5.3.2 Periodic tests.....	22
5.4 Procedures for the quality conformance	24
5.4.1 Quality conformance inspection	24
5.4.2 Quality conformance and its maintenance.....	24
6 Instructions for preparation of detail specifications (DS)	24
6.1 General.....	24
6.2 Identification of the component	24
6.3 Performances	25
6.4 Marking, ordering information and related matters	25
6.5 Selection of tests, test conditions and severities	25
6.6 Blank detail specification pro-forma for type SMPM connector	26
7 Marking	30
7.1 Marking of component.....	30
7.2 Marking and contents of package.....	30
Figure 1 – SMPM connector with pin-centre contact – Full detent (for dimensions, see Table 1).....	7
Figure 2 – SMPM connector with pin-centre contact – Smooth bore (for dimensions, see Table 2)	8
Figure 3 – SMPM connector with socket-centre contact (for dimensions, see Table 3).....	9
Figure 4 – SMPM gauge pin for socket-centre contact (for dimensions, see Table 4)	10
Figure 5 – SMPM engagement force gauge – Full detent (for dimensions, see Table 5).....	11
Figure 6 – SMPM Separation force gauge – Full detent (for dimensions, see Table 6)	13
Figure 7 – SMPM Engagement force gauge – Smooth bore (for dimensions, see Table 7).....	15
Figure 8 – SMPM Separation force gauge – Smooth bore (for dimensions, see Table 8).....	17
Figure 9 – SMPM gauge block (for dimensions, see Table 9)	18
Table 1 – Dimensions of SMPM connector with pin-centre contact full detent.....	7

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Table 2 – Dimensions of SMPM connector with pin-centre contact – Smooth bore	8
Table 3 – Dimensions of SMPM connector with socket-centre contact.....	9
Table 4 – Dimensions of SMPM gauge pin for socket-centre contact.....	10
Table 5 – Dimensions of SMPM engagement force gauge – Full detent	12
Table 6 – Dimensions of SMPM separation force gauge – Full detent	14
Table 7 – Dimensions of SMPM engagement force gauge – Smooth bore	16
Table 8 – Dimensions of SMPM separation force gauge – Smooth bore	18
Table 9 – Dimensions of SMPM gauge block	19
Table 10 – Preferred climatic categories (see IEC 60068-1).....	19
Table 11 – Rating and characteristics	20
Table 12 – Acceptance tests	22
Table 13 – Periodic tests	23

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RADIO-FREQUENCY CONNECTORS –

Part 60: Sectional specification for RF coaxial connectors with push on mating – Characteristic impedance 50 Ohm (type SMPM)

FOREWORD

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IEC 61169-60 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:

FDIS	Report on voting
46F/548/FDIS	46F/555/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.

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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/standardsdev/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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

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RADIO-FREQUENCY CONNECTORS –

Part 60: Sectional specification for RF coaxial connectors with push on mating – Characteristic impedance 50 Ohm (type SMPM)

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 push-on coupling, typically for use in 50 Ω RF cables or micro-strips in microwave, telecommunication, wireless systems and other fields (SMPM).

It specifies mating face dimensions for general purpose 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 SMPM RF connectors.

This specification 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 SMPM push-on coupling structure series RF coaxial connectors with the characteristic of normative impedance 50 Ω are used with various kinds of RF cables or micro-strips in microwave, telecommunication, wireless systems. The operating frequency limit is up to 65 GHz.

NOTE Imperial dimensions are original dimensions. All undimensioned pictorial configurations are for reference purpose only.

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 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 61169-1:2013, *Radio frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

IEC 62037 (all parts), *Passive RF and microwave devices, intermodulation level measurement*

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>