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Radio-frequency connectors - Part 21: Sectional specification for RF connectors with inner diameter of outer conductor 9,5 mm (0,374 in) with screw coupling - Characteristic impedance 50 ohms (Type SC)

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EN IEC 61169-21

April 2022

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Radio-frequency connectors - Part 21: Sectional specification for RF connectors with inner diameter of outer conductor 9,5 mm (0,374 in) with screw coupling - Characteristic impedance 50 ohms (Type SC) (IEC 61169-21:2022)

Connecteurs pour fréquences radioélectriques - Partie 21: Spécification intermédiaire relatives aux connecteurs RF avec conducteur extérieur de 9,5 mm (0,374 in) de diamètre intérieur à verrouillage à vis - Impédance caractéristique de 50 ohms (Type SC) (IEC 61169-21:2022)

Hochfrequenz-Steckverbinder - Teil 21: Rahmenspezifikation für HF-Steckverbinder mit einem Innen-/Außenleiterdurchmesser von 9,5 mm mit Schraubkupplung - Wellenwiderstand 50 Ohm (Typ SC) (IEC 61169-21:2022)

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European foreword

The text of document 46F/601/FDIS, future edition 1 of IEC 61169-21, 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 61169-21:2022.

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Radio-frequency connectors – Part 21: Sectional specification for RF connectors with inner diameter of outer conductor 9,5 mm (0,374 in) with screw coupling − Characteristic impedance 50 ohms (Type SC)

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Connecteurs pour fréquences radioélectriques – Partie 21: Spécification intermédiaire relatives aux connecteurs RF avec conducteur extérieur de 9,5 mm (0,374 in) de diamètre intérieur à verrouillage à vis – Impédance caractéristique de 50 ohms (Type SC)

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RADIO-FREQUENCY CONNECTORS –

Part 21: Sectional specification for RF connectors with inner diameter of outer conductor 9,5 mm (0,374 in) with screw coupling − Characteristic impedance 50 ohms (Type SC)

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

Draft	Report on voting
46F/601/FDIS	46F/613/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.

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RADIO-FREQUENCY CONNECTORS –

Part 21: Sectional specification for RF connectors with inner diameter of outer conductor 9,5 mm (0,374 in) with screw coupling − Characteristic impedance 50 ohms (Type SC)

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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 type SC threaded RF coaxial connectors with 50 Ω characteristic impedance. The connectors are used with flexible and semi-rigid cables. They are recommended for use in medium power and low reflection applications up to 11 GHz. The dielectric filled interface is especially beneficial in applications involving severe environmental exposure.

This document specifies mating face dimensions, dimensional details, gauging information for general connectors − grade 2 and standard test connectors − grade 0 as well as test schedules and inspection requirements selected from IEC 61169-1, applicable to all detail specifications relating to type SC RF connectors. Type SC interface specified in this document is equivalent to type SC-B interface in IEC 60169-21:1985.

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.

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

IEC 61169-1-6, *Radio-frequency connectors – Part 1-6: Electrical test methods – RF power*

IEC 60169-21:1985, *Radio-frequency connectors – Part 21: Two types of radio-frequency connectors with inner diameter of outer conductor 9,5 mm (0,374 in) with different versions of screw coupling − Characteristic impedance 50 ohms (Types SC-A and SC-B)*

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.