



**NSAI**  
Standards

Irish Standard  
I.S. EN 61169-53:2016

Radio-frequency connectors - Part 53:  
Sectional specification for RF coaxial  
connectors with inner diameter of outer  
conductor 16 mm with screw lock -  
Characteristic impedance 50 Ohm (Type S7-  
16)

**I.S. EN 61169-53:2016**

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## National Foreword

I.S. EN 61169-53:2016 is the adopted Irish version of the European Document EN 61169-53:2016, Radio-frequency connectors - Part 53: Sectional specification for RF coaxial connectors with inner diameter of outer conductor 16 mm with screw lock - Characteristic impedance 50 Ohm (Type S7-16)

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EUROPEAN STANDARD

**EN 61169-53**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2016

ICS 33.120.30

English Version

**Radio-frequency connectors - Part 53: Sectional specification for  
RF coaxial connectors with inner diameter of outer conductor 16  
mm with screw lock - Characteristic impedance 50 Ohm  
(Type S7-16)  
(IEC 61169-53:2015)**

Connecteurs pour fréquences radioélectriques - Partie 53:  
Spécification intermédiaire relative aux connecteurs  
coaxiaux pour fréquences radioélectriques avec diamètre  
intérieur des conducteurs extérieurs de 16 mm à  
verrouillage à vis - Impédance caractéristique 50 Ohm  
(Type S7-16)  
(IEC 61169-53:2015)

Hochfrequenz-Steckverbinder - Teil 53:  
Rahmenspezifikation für koaxiale HF-Steckverbinder mit 16  
mm Innendurchmesser des Außenleiters und  
Schraubverriegelung - Wellenwiderstand 50 Ohm (Typ S7-  
16)  
(IEC 61169-53:2015)

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**EN 61169-53:2016**

**European foreword**

The text of document 46F/309/CDV, future edition 1 of IEC 61169-53, 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 the IEC-CENELEC parallel vote and approved by CENELEC as EN 61169-53:2016.

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) 2016-07-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-29

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## **Annex ZA** (normative)

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

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NOTE 1 When 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](http://www.cenelec.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 62037	series	Passive RF and microwave devices, intermodulation level measurement	EN 62037	series

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**IEC 61169-53**

Edition 1.0 2015-09

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Radio-frequency connectors –  
Part 53: Sectional specification for RF coaxial connectors with inner diameter of  
outer conductor 16 mm with screw lock – Characteristic impedance 50  $\Omega$  (Type  
S7-16)**

**Connecteurs pour fréquences radioélectriques –  
Partie 53: Spécification intermédiaire relative aux connecteurs coaxiaux pour  
fréquences radioélectriques avec diamètre intérieur des conducteurs extérieurs  
de 16 mm à verrouillage à vis – Impédance caractéristique 50  $\Omega$  (Type S7-16)**



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**IEC 61169-53**

Edition 1.0 2015-09

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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## **Radio-frequency connectors –**

**Part 53: Sectional specification for RF coaxial connectors with inner diameter of outer conductor 16 mm with screw lock – Characteristic impedance 50  $\Omega$  (Type S7-16)**

## **Connecteurs pour fréquences radioélectriques –**

**Partie 53: Spécification intermédiaire relative aux connecteurs coaxiaux pour fréquences radioélectriques avec diamètre intérieur des conducteurs extérieurs de 16 mm à verrouillage à vis – Impédance caractéristique 50  $\Omega$  (Type S7-16)**

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## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Mating face and gauge information .....	6
3.1 Dimensions – General connectors – Grade 2 .....	6
3.1.1 Connector with pin-centre contact .....	6
3.1.2 Connector with socket centre contact .....	7
3.2 Gauges .....	8
3.2.1 Gauge pin for socket-centre contact .....	8
3.2.2 Test procedure .....	9
3.3 Dimensions – Standard test connectors – Grade 0 .....	9
3.3.1 Connector with pin-centre contact .....	9
3.3.2 Standard test connector with socket-centre contact .....	10
4 Quality assessment procedures .....	12
4.1 General .....	12
4.2 Ratings and characteristics (see Clause 5 of IEC 61169-1:2013) .....	12
4.3 Test schedule and inspection requirements .....	14
4.3.1 Acceptance tests .....	14
4.3.2 Periodic tests .....	14
4.4 Procedures for the quality conformance .....	15
4.4.1 Quality conformance inspection .....	15
4.4.2 Qualification approval and its maintenance .....	16
5 Instructions for preparation of detail specifications .....	16
5.1 General .....	16
5.2 Identification of the component .....	16
5.3 Performances .....	16
5.4 Marking, ordering information and related matters .....	16
5.5 Selection of tests, test conditions and severities .....	16
5.6 Blank detail specification pro-forma for type S7-16 connector .....	17
6 Marking .....	21
6.1 Marking of component .....	21
6.2 Marking and contents of package .....	21
Figure 1 – Connector with pin-centre contact (for dimensions, see Table 1) .....	7
Figure 2 – Connector with socket-centre contact (for dimensions, see Table 2) .....	8
Figure 3 – Gauge pin for socket-centre contact (for dimensions, see Table 3) .....	9
Figure 4 – Connector with pin-centre contact (for dimensions, see Table 4) .....	10
Figure 5 – Connector with socket-centre contact (for dimensions, see Table 5) .....	11
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 connector with pin-centre contact .....	10
Table 5 – Dimensions of connector with socket-centre contact .....	11

Table 6 – Rating and characteristics .....	12
Table 7 – Acceptance tests .....	14
Table 8 – Periodic tests .....	15

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RADIO-FREQUENCY CONNECTORS –****Part 53: Sectional specification for RF coaxial connectors  
with inner diameter of outer conductor 16 mm with screw lock –  
Characteristic impedance 50  $\Omega$  (Type S7-16)**

## FOREWORD

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International Standard IEC 61169-53 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

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

FDIS	Report on voting
46F/309/CDV	46F/321/RVC

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 2.

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 publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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## RADIO-FREQUENCY CONNECTORS –

### **Part 53: Sectional specification for RF coaxial connectors with inner diameter of outer conductor 16 mm with screw lock – Characteristic impedance 50 $\Omega$ (Type S7-16)**

#### **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 threaded coupling, typically for use in 50  $\Omega$  cable networks (Type S7-16).

It prescribes 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 4.1-9.5 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 S7-16 series RF coaxial connectors with nominal impedance 50  $\Omega$  are threaded coupling units which are used with all kinds of RF cables and microstrips in microwave transmission system. And the working frequency is up to 7,5 GHz.

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

#### **2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 62037-3 (all parts), *Passive RF and microwave devices, intermodulation level measurement*

#### **3 Mating face and gauge information**

##### **3.1 Dimensions – General connectors – Grade 2**

###### **3.1.1 Connector with pin-centre contact**

The mating face of connector with pin-centre contact is shown in Figure 1 and its dimensions are shown in Table 1.



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