IEC 61196-9-1

Edition 1.0 2015-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Coaxial communication cables –
Part 9-1: Flexible RF coaxial cables – Blank detail specification

Câbles coaxiaux de communication –
Partie 9-1: Câbles coaxiaux RF souples – Spécification particulière cadre

IEC 61196-9-1:2015-11(en-fr)

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CONTENTS

FOREWORD 3
1 Scope 5
2 Normative references 5
3 Guidance for the preparation of detail specifications 5
4 Blank detail specification 6
Annex A (normative) Maximum attenuation 11
Bibliography 12

Table A.1 – Maximum attenuation 11

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COAXIAL COMMUNICATION CABLES –

Part 9-1: Flexible RF coaxial cables – Blank detail specification

FOREWORD

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International Standard IEC 61196-9-1 has been prepared by subcommittee 46A: Coaxial cables, 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
46A/1271/FDIS	46A/1284/RVD

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 61196 series, under the general title: *Coaxial communication cables*, can be found on the IEC website.

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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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COAXIAL COMMUNICATION CABLES –

Part 9-1: Flexible RF coaxial cables – Blank detail specification

1 Scope

This part of IEC 61196, which is a blank detail specification, applies to RF flexible coaxial communication cables described in IEC 61196-9.

This blank detail specification is to be read in conjunction with IEC 61196-1 and IEC 61196-9. It determines the layout and style for detail specification.

Detail specifications, based on this blank detail specification, may be prepared by a national organization, a manufacturer or a user.

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 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 61196-1:2005, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

IEC 61196-1-314:2006, *Coaxial communication cables – Part 1-314: Mechanical test methods – Test for bending*

IEC 61196-9:2014, *Coaxial communication cables – Part 9: Sectional specification for RF flexible cables*

IEC 62037-1:2012, *Passive RF and microwave devices, intermodulation level measurement – Part 1: General requirements and measuring methods*

NOTE Documents which are needed to achieve the tests according to Clause 4, item [9] or item [10], respectively, are listed in IEC 61196-9.

3 Guidance for the preparation of detail specifications

The detail specification shall be written in accordance with the layout of the blank detail specification, which forms part of this standard.

When a characteristic does not apply, then na (for not applicable) should be entered in the appropriate space.

When a characteristic applies but a specific value is not considered necessary, then ns (for not specified) should be entered in the appropriate space.

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The numbers shown in brackets in this and the following pages correspond to the following items of required information, which should be entered in the space provided.

[1] Name and address of the organization that has prepared the document

[2] IEC document number and date of issue

[3] Address of the organization from which the document is available

[4] Related documents

[5] Any other references to the cable, national reference, trade name, etc.

[6] Description of the cable

[7] Details of the cable construction

[8] Engineering information of the cable, provided by the manufacturer

[9] List of the finished cable characteristics. They are separated into electrical, environmental and mechanical characteristics

[10] Reference to the relevant subclause of the sectional specification IEC 61196-9

[11] Minimum requirements, the values entered shall meet as a minimum the requirements of sectional specification IEC 61196-9

[12] Relevant requirements

4 Blank detail specification

Title			
[1] Prepared by:	**[2]**	**Document No.:** **Issue:** **Date:**	
[3] Available from:	**[4]**	**Generic specification** **Sectional specification**	**IEC 61196-1** **IEC 61196-9**
[5] Additional references: IEC 62037-4, IEC 62230			
[6] Cable description: a) Cable variant b) Inner conductor c) Dielectric d) Outer conductor e) Sheath			

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[7] Cable construction **a) Inner conductor** Material Diameter (mm) nominal Tolerance (mm): ± … **b) Dielectric** Material Diameter (mm) nominal Tolerance (mm): ± … **c) Outer conductor** Material Diameter (mm) nominal Tolerance (mm): ± … Minimum coverage factor of braiding **d) Sheath** Material Minimum thickness (mm) Diameter (mm) Tolerance (mm): ± …
[8] Engineering information (reference only) a) Operational temperature range b) Maximum operating frequency c) Installation temperature range d) Storage temperature range e) Nominal characteristic impedance f) Maximum continue working voltage g) Minimum bending radius (static state) h) Minimum bending radius (dynamic state) i) Nominal weight j) Power rating

[9] Parameter	[10] IEC 61196-9:2014 Subclause	[11] Value	[12] Requirements
Electrical characteristics	7.1		
Continuity	7.1.1.1	pass	
Conductor resistance – inner	7.1.1.2	≤ … Ω/m at 20 °C	
Conductor resistance – outer	7.1.1.3	≤ … Ω/m at 20 °C	
Insulation resistance	7.1.1.4	≥ … MΩ·km	≥ 1 000 MΩ·km, according to IEC 61196-9
Withstand voltage of dielectric	7.1.1.5	… kV rms	40 Hz ~ 60 Hz
Withstand voltage of sheath [a]	7.1.1.6	… kV rms	40 Hz ~ 60 Hz
Spark test (in-process inspection) [a]	7.1.1.7	… kV rms	40 Hz ~ 60 Hz
Capacitance	7.1.1.8	≤ … pF/m	
Inductance	7.1.1.9	≤… mH/m	

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