Coaxial communication cables –
Part 9: Sectional specification for RF flexible cables
CONTENTS

FOREWORD ........................................................................................................................... 3
1 Scope .................................................................................................................................. 5
2 Normative references ....................................................................................................... 5
3 Terms and definitions ...................................................................................................... 7
4 Materials and cable construction ..................................................................................... 7
  4.1 Cable construction ............................................................................................. 7
  4.2 Inner conductor .................................................................................................. 7
  4.3 Dielectric ........................................................................................................... 8
  4.4 Outer conductor or screen ................................................................................. 8
  4.5 Sheath ............................................................................................................... 8
5 Standard ratings and characteristics ................................................................................ 8
  5.1 Operational temperatures ................................................................................... 8
  5.2 Operating frequency .......................................................................................... 8
  5.3 Current-carrying capacity ................................................................................... 9
6 Identification, marking and labelling ................................................................................. 9
  6.1 Cable identification ............................................................................................ 9
  6.2 IEC marking ....................................................................................................... 9
  6.3 Labelling ............................................................................................................ 9
7 Tests of finished cables ................................................................................................... 9
  7.1 Electrical testing of the finished cable ................................................................ 9
    7.1.1 Low-frequency and d.c. electrical measurements ........................................ 9
    7.1.2 High-frequency electrical and transmission measurements .............. 10
  7.2 Environmental testing of the finished cable ...................................................... 11
  7.3 Mechanical testing of the finished cables .......................................................... 12
  7.4 Fire performance test methods ....................................................................... 12
8 Quality assessment ....................................................................................................... 13
9 Delivery and storage ...................................................................................................... 13

Bibliography .......................................................................................................................... 14

Table 1 – Operational temperatures .................................................................................. 8
Table 2 – Low-frequency and d.c. electrical measurements .............................................. 9
Table 3 – High-frequency electrical and transmission measurements ......................... 10
Table 4 – Environmental testing of the finished cable ..................................................... 11
Table 5 – Mechanical testing ....................................................................................... 12
Table 6 – Fire performance test methods ...................................................................... 13
INTERNATIONAL ELECTROTECHNICAL COMMISSION

COAXIAL COMMUNICATION CABLES –
Part 9: Sectional specification for RF flexible cables

FOREWORD

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International Standard IEC 61196-9 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:

<table>
<thead>
<tr>
<th>FDIS</th>
<th>Report on voting</th>
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<tbody>
<tr>
<td>46A/1166/FDIS</td>
<td>46A/1178/RVD</td>
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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.

This standard is intended to be read in conjunction with IEC 61196-1. It is based on the second edition (2005) of that standard.
A list of all parts of the IEC 61196 series, under the general title: *Coaxial communication cables*, 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 web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

A bilingual version of this publication may be issued at a later date.
COAXIAL COMMUNICATION CABLES –
Part 9: Sectional specification for RF flexible cables

1 Scope

This part of IEC 61196 applies to RF flexible coaxial communication cables with a characteristic impedance of 50 Ω and with solid or with semi-air-spaced dielectric.

It is to be read in conjunction with IEC 61196-1.

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 60068-1:2013, Environmental testing – Part 1: General and guidance

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

IEC 60096-0-1, Radio frequency cables – Part 0-1: Guide to the design of detail specifications – Coaxial cables

IEC 60332 (all parts), Tests on electric and optical fibre cables under fire conditions

IEC 60754-1, Test on gases evolved during combustion of materials from cables – Part 1: Determination of the halogen acid gas content


IEC 61034-2, Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements

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

IEC 61196-1-1, Coaxial communication cables – Part 1-1: Capability approval for coaxial cables

IEC 61196-1-102, Coaxial communication cables – Part 1-102: Electrical test methods – Test for insulation resistance of cable dielectric

IEC 61196-1-103, Coaxial communication cables – Part 1-103: Electrical test methods – Test for capacitance of cable

IEC 61196-1-105, Coaxial communication cables – Part 1-105: Electrical test methods – Test for withstand voltage of cable dielectric

IEC 61196-1-106, Coaxial communication cables – Part 1-106: Electrical test methods – Test for withstand voltage of cable sheath


IEC 61196-1-111, Coaxial communication cables – Part 1-111: Electrical test methods – Test for stability of phase constant

IEC 61196-1-112, Coaxial communication cables – Part 1-112: Electrical test methods – Test for return loss (uniformity of impedance)

IEC 61196-1-113, Coaxial communication cables – Part 1-113: Electrical test methods – Test for attenuation constant

IEC 61196-1-115, Coaxial communication cables – Part 1-115: Electrical test methods – Test for regularity of impedance (pulse/step function return loss)

IEC 61196-1-119, Coaxial communication cables – Part 1-119: Electrical test methods – RF power rating

IEC 61196-1-201, Coaxial communication cables – Part 1-201: Environmental test methods – Test for cold bend performance of cable

IEC 61196-1-203, Coaxial communication cables – Environmental test methods – Test for water penetration of cable

IEC 61196-1-206, Coaxial communication cables – Part 1-206: Environmental test methods – Climatic sequence

IEC 61196-1-301, Coaxial communication cables – Part 1-301: Mechanical test methods – Test for ovality

IEC 61196-1-302, Coaxial communication cables – Part 1-302: Mechanical test methods – Test for eccentricity

IEC 61196-1-313, Coaxial communication cables – Part 1-313: Mechanical test methods – Adhesion of dielectric and sheath

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

IEC 61196-1-316, Coaxial communication cables – Part 1-316: Mechanical test methods – Test of maximum pulling force of cable
3 Terms and definitions
For the purposes of this document, the terms and definitions given in IEC 61196 -1 as well as the following apply.

3.1 flexible coaxial communication cable
coaxial cable which can repeat flexure in service

Note 1 to entry: The typical construction for this type of cable is a single inner conductor which can be solid or stranded covered by dielectric core material, which is surrounded by a braided outer conductor(s), with a protective sheath.

4 Materials and cable construction

4.1 Cable construction
The cable construction shall be in accordance with 4.2 to 4.5 and the requirements shall be specified in the detail specification.

4.2 Inner conductor
Subclauses 4.4.1 to 4.4.4 of IEC 61196 -1:2005 apply.

The nominal diameter shall be specified in the detail specification.

Diameter tolerance for the completed inner conductor shall be as specified in the detail specification.

The inner conductor shall be smooth and continuous.