

# INTERNATIONAL STANDARD

**Coaxial communication cables –  
Part 11: Sectional specification for semi-rigid cables with polyethylene (PE)  
dielectric**



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Part 11: Sectional specification for semi-rigid cables with polyethylene (PE)  
dielectric**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## COAXIAL COMMUNICATION CABLES –

**Part 11: Sectional specification for semi-rigid cables  
with polyethylene (PE) dielectric**

## FOREWORD

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International Standard IEC 61196-11 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/1280/FDIS	46A/1291/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.

It is to be read in conjunction with IEC 61196-1:2005, on which it is based.

A list of all parts in 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 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 11: Sectional specification for semi-rigid cables with polyethylene (PE) dielectric

#### 1 Scope

This part of IEC 61196 applies to semi-rigid coaxial communication cables with polyethylene (PE) dielectric and tubular outer conductor. These cables are intended for use in microwave and wireless equipments or other signal transmission equipments or units at frequencies above 500 MHz.

#### 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 60096-0-1:2012, *Radio frequency cables – Part 1- 0: Guide to the design of detail specifications – Section 1 – Coaxial cables*

IEC 60096-0-1:2012/ AMD1:\_\_\_<sup>1</sup>

IEC 60332-1-2, *Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame*

IEC 60811-406:2012, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 406: Miscellaneous tests – Resistance to stress cracking of polyethylene and polypropylene compounds*

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 61169-4, *Radio-frequency connectors – Part 4: RF coaxial connectors with inner diameter of outer conductor 16 mm (0,63 in) with screw lock – Characteristic impedance 50 Ω (type 7-16)*

IEC 61196-1 (all parts), *Coaxial communication cables*

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

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<sup>1</sup> To be published.

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

IEC 61196-1-101, *Coaxial communication cables – Part 1-101: Electrical test methods – Test for conductor d.c. resistance of cable*

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 61196-1-108, *Coaxial communication cables – Part 1-108: Electrical test methods – Test for characteristic impedance, phase and group delay, electrical length and propagation velocity*

IEC 61196-1-110, *Coaxial communication cables – Part 1-110: Electrical test methods – Test for continuity*

IEC 61196-1-112, *Coaxial communication cables – Part 1-112: Electrical test methods – Test for return loss*

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 61196-1-201:2009, *Coaxial communication cables – Part 1-201: Environmental test methods – Test for cold bend performance of cable*

IEC 61196-1-203, *Coaxial communication cables – Part 1-203: 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 61196-1-215, *Coaxial communication cables – Part 1-215: Environmental test methods – High temperature cable ageing<sup>2</sup>*

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

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<sup>2</sup> To be published.



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*

IEC 61196-1-317, *Coaxial communication cables – Part 1-317: Mechanical test methods – Test for crush resistance of cable*

IEC TR 62222:2012, *Fire performance of communication cables installed in buildings*

IEC 62037-4, *Passive RF and microwave devices, intermodulation level measurement – Part 4: Measurement of passive intermodulation in coaxial cables*

IEC 62153-4-3, *Metallic communication cable test methods – Part 4-3: Electromagnetic compatibility (EMC) – Surface transfer impedance – Triaxial method*

IEC 62153-4-4, *Metallic communication cable test methods – Part 4-4: Electromagnetic compatibility (EMC) – Test method for measuring of the screening attenuation as up to and above 3 GHz, triaxial method*

IEC 62230, *Electric cables – Spark-test method*

EN 50289-4-17, *Communication cables – Specifications for test methods – Part 4-17: Test methods for UV resistance evaluation of the sheath of electrical and optical fibre cable*

### **3 Terms and definitions**

For the purposes of this document, the terms and definitions given in IEC 61196-1 apply.

### **4 Materials and cable construction**

#### **4.1 Cable construction**

The cable construction shall be in accordance with 4.2 to 4.5 of this part of IEC 61196 and the requirements stated in the detail specification.

#### **4.2 Inner conductor**

##### **4.2.1 Conductor material**

Subclause 4.4.1 of IEC 61196-1:2005 applies.

The inner conductor material shall be as stated in the relevant cable detail specification.

##### **4.2.2 Conductor construction**

The conductor shall consist of a solid or strand wire or corrugated or smooth tube.