

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

Câbles coaxiaux de communication –
Partie 1-106: Méthodes d'essais électriques – Essai de tenue en tension des
gaines de câble

STANDARD PREVIEW
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COAXIAL COMMUNICATION CABLES –**Part 1-106: Electrical test methods –
Test for withstand voltage of cable sheath**

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International Standard IEC 61196-1-106 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/872/FDIS	46A/889/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 the 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 maintenance result 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

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COAXIAL COMMUNICATION CABLES –

Part 1-106: Electrical test methods –

Test for withstand voltage of cable sheath

1 Scope

This part of IEC 61196 applies to coaxial communication cables. It specifies test methods for determining the withstand voltage of cable sheath.

NOTE This test is primarily a proof test respectively a type test.

2 Normative references

The following referenced documents are indispensable for the application 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 61196-1, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

3 Terms and definitions

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

4 Test for withstand voltage of cable sheath

4.1 Principle

The test by immersion in water is used to determine the withstand voltage of the sheath.

4.2 Test equipment

A metallic water tank using a suitable electrode and an a.c. power supply of 40 Hz to 60 Hz, adjustable from 0,8 kV r.m.s. to 5 kV r.m.s.

4.3 Sample preparation

A sufficient length as specified in the relevant sectional or detail specification shall be cut from the finished cable length. The sheath shall be removed from one end to contact the cable screen with the power supply.

4.4 Procedure

The cable shall be immersed in water at a temperature between 15 °C and 35 °C for a period of 1 h. The cable ends shall protrude out of the water for a sufficient length to avoid a voltage breakdown. At the end of the immersion period an a.c. test voltage, as specified in the table below (unless otherwise specified), shall be applied for not less than 1 min and not more than 2 min between the outer conductor or screen and the water.

Nominal sheath thickness mm	Test voltage kV r.m.s.
Up to and including 0,5	1
Over 0,5 and up to and including 0,8	2
Over 0,8 and up to and including 1,0	3
Over 1,0	5

5 Test report

The test report shall give the test conditions:

- temperature,
- sample length,
- test voltage,
- test frequency,
- test time,

and report whether voltage breakdown (fail) or pass

6 Requirement

There shall be no breakdown.

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