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

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FOREWORD

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IEC 61196-1-105 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. It is an International Standard.

This second edition cancels and replaces the first edition published in 2005. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) The scope provides indication on the specific area concerned.
b) The test equipment is updated.
c) The rate of increase of the test voltage has been changed.

d) The leakage current has been taken into consideration in the test report and requirements.

e) The test procedures for the cables with special structure are specified in Annex A.

The text of this International Standard is based on the following documents:

Draft	Report on voting
46A/1659/CDV	46A/1676/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 61196 series, published under the general title *Coaxial communication cables*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

COAXIAL COMMUNICATION CABLES –

Part 1-105: Electrical test methods – Test for withstand voltage of cable dielectric

1 Scope

This part of IEC 61196 applies to coaxial communication cables. It specifies test methods for determining the withstand voltage of the dielectric of coaxial cables. It is intended to detect the flaws in the dielectric of finished coaxial cables.

The test procedures for the cables with special structure are specified in Annex A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 terms and definitions given in IEC 61196-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

4 Test for withstand voltage of dielectric

4.1 Principle

The purpose of the test is to determine the withstand voltage of the dielectric under AC or DC conditions.

4.2 Test equipment

The test can be carried out by one of the two following test equipment:

– a test set up including an AC or DC power supply, a kilovoltmeter and a milliammeter;
– a Hipot tester capable of performing the withstand voltage test and monitoring leakage current of the cable under test.

The frequency of the AC voltage shall be between 40 Hz and 60 Hz and the waveform shall be sinusoidal.