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IEC 61196-1-101

DRAFT TANZANIA STANDARD

(Draft for comments only)

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

TANZANIA BUREAU OF STANDARDS

National Foreword

1 Introduction

This draft Tanzania Standard is being prepared by the Communication Equipment Technical Committee, under the supervision of the Electrical Engineering Divisional Standards Committee (EEDC)

This draft Tanzania Standard is an adoption of the International Standard **IEC 61196-1-101:2005** *Coaxial communication cables - Part 1-101: Electrical test methods - Test for conductor d.c. resistance of cable* which has been prepared by the International Electrotechnical Commission.

2 Preamble

This draft Tanzania Standard applies to coaxial communications cables. It specifies test methods for determining the conductor d.c. resistance of coaxial cables.

3 Terminology and conventions

Some terminologies and certain conventions are not identical with those used in Tanzania Standards; attention is drawn especially to the following: -

- 1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use “full point” on the baseline as the decimal marker.
- 2) Where the words “International Standard(s)” appear, referring to this standard they should read “Tanzania Standard(s)”.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COAXIAL COMMUNICATION CABLES –**Part 1-101: Electrical test methods –
Test for conductor d.c. resistance of cable**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61196-1 -101 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/753/FDIS	46A/766/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.

IEC 61196 consists of the following parts, under the general title *Coaxial communication cables*:

Part 1: Generic specification – General, definitions and requirements

Part 1-1: Capability Approval for Coaxial communication cables – Generic Specification ¹ Part 1-1XX: Electrical test methods

Part 1-2XX: Environmental test methods Part

1-3XX: Mechanical test methods

Part 2: Sectional specification for semi-rigid radio-frequency and coaxial cables with polytetrafluoroethylene (PTFE) insulation

Part 3: Sectional specification for coaxial cables for use in local area networks

Part 3-1: Coaxial cables for digital communication in horizontal floor wiring – Section 1: Detail specification for cables of 500 m reach and up to 10 Mb/s

Part 3-2: Coaxial cables for digital communication in horizontal floor wiring – Detail specification for coaxial cables with solid dielectric for local area networks for 185 m reach and up to 10 Mb/s.

Part 3-3: Coaxial cables for digital communication in horizontal floor wiring – Detail specification for coaxial cables with foamed dielectric for local area networks of 185 m reach and up to 10 Mb/s

Part 3-4: Detail specification for coaxial cables with optimised braid outer conductor (screen) for use in local area networks for 185 m reach and up to 10 Mb/s ¹

Part 4: Sectional specification for radiating cables

Part 5: Sectional specification for CATV trunk and distribution cables ¹ Part 5-1: Blank

detail specification for CATV trunk and distribution cables ¹ Part 6: Sectional

specification for CATV drop cables ¹

Part 6-1: Blank detail specification for CATV drop cables ¹

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

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

¹ Under consideration.

COAXIAL COMMUNICATION CABLES –

Part 1-101: Electrical test methods – Test for conductor d.c. resistance of cable

1 Scope

This part of IEC 61196 applies to coaxial communications cables. It specifies test methods for determining the conductor d.c. resistance of coaxial cables.

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 terms and definitions given in IEC 61196-1 apply.

4 Test method

4.1 Equipment

The d.c. resistance shall be measured by means of equipment capable of measuring d.c. resistance accurately to within $\pm 0,5$ % of the value to be determined. A bridge circuit or a current source in conjunction with a voltmeter is used. Depending on the magnitude of the d.c. resistance value, a two or four terminal method may be applied. The measurement current density shall not exceed 1 A/mm^2 of conductor to avoid any significant increase in temperature during the test.

4.2 Test sample

The length of the Cable Under Test (CUT) shall be ≥ 100 m and known to within ≤ 1 %. If the length of the CUT is shorter than 100 m, it should be noted in the test report. Both ends of the CUT shall be prepared, such that the current flows through all elements of the circuit under test and that the contact resistance can be neglected with respect to the result. The CUT shall be pre-conditioned at a constant temperature between $15 \text{ }^\circ\text{C}$ and $35 \text{ }^\circ\text{C}$ for such time as to allow the specimen temperature to stabilize.