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GB/T 17737.100-2018 / IEC 61196-1-100:2015

**Coaxial Communication Cables – Part 1-100:
Electrical Test Methods – General Requirements**

(IEC 61196-1-100:2015, IDT)

同轴通信电缆 第 1-100 部分：电气试验方法 通用要求

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Foreword

GB/T 17737 *Coaxial Communication Cables* has been or plans to issue the following parts:

- Part 1: Generic Specification – General, Definitions, Requirements and Test Methods;
- Part 1-100: Electrical Test Methods – General Requirements;
- Part 1-101: Electrical Test Methods – Test for Conductor D.C. Resistance Cable;
- Part 1-102: Electrical Test Methods – Test for Insulation Resistance of Cable Dielectric;
- Part 1-103: Electrical Test Methods – Test for Capacitance of Cable;
- Part 1-104: Electrical Test Methods – Test for Capacitance Stability of Cable;
- Part 1-105: Electrical Test Methods – Test for Withstand Voltage of Cable Dielectric;
- Part 1-106: Electrical Test Methods – Test for Withstand Voltage of Cable Sheath;
- Part 1-107: Electrical Test Methods – Test for Cable Microphony Charge Level (Mechanical Induced Noise);
- Part 1-108: Electrical Test Methods – Test for Characteristics Impedance, Phase and Group Delay, Electrical Length and Propagation Velocity;
- Part 1-110: Electrical Test Methods – Continuity;
- Part 1-111: Electrical Test Methods – Phase Constant Stability Test;
- Part 1-112: Electrical Test Methods – Test for Return Loss (Uniformity of Impedance);
- Part 1-113: Electrical Test Methods – Attenuation Constant Test;
- Part 1-114: Electrical Test Methods – Inductance;
- Part 1-115: Electrical Test Methods – Test for Regularity of Impedance (Pulse/Step Function Return Loss);
- Part 1-116: Electrical Test Methods – Measuring Characteristic Impedance by TDR Method;

Coaxial Communication Cables – Part 1-100: Electrical Test Methods – General Requirements

1 Scope

This Part of GB/T 17737 gives the general requirements and conditions for electrical test of coaxial communication cables. This Part is applicable to the serial standards of GB/T 17737 XX; such serial standards specify the electrical test method of coaxial communication cables.

Test details (e.g.: temperature, duration) and/or test requirements shall be given in the relevant cable standards.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

IEC 61196-1 Coaxial Communication Cables – Part 1: Generic Specification – General, Definitions and Requirements

3 Terms and Definitions

The terms and definitions stipulated in IEC 61169-1 are applicable to this document.

4 Specimen

4.1 Cable under Test (CUT)

Unless otherwise specified in the relevant test methods, the length of the cable under test (CUT) shall be selected taking into account the dynamic range of the measuring equipment and specified frequency range; so that obtain the required measurement accuracy. Unless otherwise specified in the relevant cable specifications, the measurement accuracy of cable length shall be superior than 1%.

Appendix A

(Informative)

Electrical Test Methods of IEC 61196-1-1 X X Series

IEC 61196-1-1 XX consists of the following standards:

IEC 61196-1-100 (General Requirements)

IEC 61196-1-101 (Test for Conductor D.C. Resistance Cable)

IEC 61196-1-102 (Test for Insulation Resistance of Cable Dielectric)

IEC 61196-1-103 (Test for Capacitance of Cable)

IEC 61196-1-104 (Test for Capacitance Stability of Cable as the Changes of Temperature)

IEC 61196-1-105 (Test for Withstand Voltage of Cable Dielectric)

IEC 61196-1-106 (Test for Withstand Voltage of Cable Sheath)

IEC 61196-1-107 [Test for Cable Microphony Charge Level (Mechanical Induced Noise)]

IEC 61196-1-108 (Test for Characteristics Impedance, Phase and Group Delay, Electrical Length and Propagation Velocity)

IEC 61196-1-110 (Continuity)

IEC 61196-1-111 (Phase Constant Stability Test)

IEC 61196-1-112 [Test for Return Loss (Uniformity of Impedance)]

IEC 61196-1-113 (Attenuation Constant Test)

IEC 61196-1-114 (Inductance)

IEC 61196-1-115 [Test for Regularity of Impedance (Pulse/Step Function Return Loss)]

IEC 61196-1-116 (Measuring Characteristic Impedance by TDR Method)

IEC 61196-1-119 (RF Rated Power)

IEC 61196-1-122 (Test for Cross-Talk between Coaxial Cables)

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