

KOAKSIAALKAABLID. OSA 9-1: ANALOOG- JA
DIGITAALSIGNAALIDE EDASTAMISEKS KASUTATAVATE
KOAKSIAALKAABLITE LIIGITUS. SISERUUMIDE
RIPPKAABLID SAGEDUSEL 5 MHZ KUNI 1000 MHZ
TALITLEVATELE SÜSTEEMIDELE

Coaxial cables - Part 9-1: Sectional specification for
coaxial cables for analogue and digital signal
transmission - Indoor drop cables for systems operating
at 5 MHz - 1 000 MHz

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50117-9-1:2019 sisaldab Euroopa standardi EN 50117-9-1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 50117-9-1:2019 consists of the English text of the European standard EN 50117-9-1:2019.
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English Version

**Coaxial cables - Part 9-1: Sectional specification for coaxial
cables for analogue and digital signal transmission - Indoor drop
cables for systems operating at 5 MHz - 1 000 MHz**

Câbles coaxiaux - Partie 9-1: Spécification intermédiaire
pour câbles coaxiaux pour la transmission de signaux
analogiques et numériques - Câbles de raccordement à
usage intérieur pour les systèmes fonctionnant entre 5 MHz
et 1 000 MHz

Koaxialkabel - Teil 9-1: Rahmenspezifikation für
Koaxialkabel für analoge und digitale Signalübertragung -
Innenkabel für Systeme im Bereich von 5 MHz - 1 000 MHz

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Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 50117-9-1:2019) has been prepared by CLC/SC 46XA "Coaxial cables" of CLC/TC 46X "Communication cables".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-09-29
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-03-29

This document supersedes EN 50117-2-1:2005.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

All materials used for cables according to this standard should fulfil the requirements of the current REACH Regulation and ROHS Directives.

1 Scope

This part of EN 50117 which is a sectional specification applies to coaxial indoor drop cables for analogue and digital one and two way signal transmission, e.g. for cable networks for television signals, sound signals and interactive services in accordance with EN 60728-1, EN 60728-1-1, EN 60728-101, EN 60728-10, EN 50173-1 and EN 50173-4. This includes also the transmission of BCT signals provided by a CATV, MATV or SMATV cable network.

The purpose of this document is to specify the applicable test methods and requirements for the electrical, mechanical and environmental characteristics and for fire performance of the cables.

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.

EN 50117-1:2019, *Coaxial cables - Part 1: Generic specification*

EN 50173-1, *Information technology - Generic cabling systems - Part 1: General requirements*

EN 50173-4, *Information technology - Generic cabling systems - Part 4: Homes*

EN 50289-3-9:2001, *Communication cables - Specifications for test methods - Part 3-9: Mechanical test methods - Bending tests*

EN 50290-1-2:2004, *Communication cables - Part 1-2: Definitions*

EN 50290-2-1:2005, *Communication cables - Part 2-1: Common design rules and construction*

EN 50290-2-22, *Communication cables - Part 2-22: Common design rules and construction - PVC sheathing compounds*

EN 50290-2-27, *Communication cables - Part 2-27: Common design rules and construction - Halogen free flame retardant thermoplastic sheathing compounds*

EN 50290-2-37, *Communication cables - Part 2-37: Common design rules and construction - Polyethylene insulation for coaxial cables*

EN 50290-2-38, *Communication cables - Part 2-38: Common design rules and construction - Polypropylene insulation for coaxial cables*

EN 50290-4-1:2014, *Communication cables - Part 4-1: General considerations for the use of cables - Environmental conditions and safety aspects*

EN 50290-4-2:2014, *Communication cables - Part 4-2: General considerations for the use of cables - Guide to use*

EN 60728-1, *Cable networks for television signals, sound signals and interactive services - Part 1: System performance of forward paths (IEC 60728-1)*

EN 60728-1-1, *Cable networks for television signals, sound signals and interactive services - Part 1-1: RF cabling for two way home networks (IEC 60728-1-1)*

EN 60728-10, *Cable networks for television signals, sound signals and interactive services - Part 10: System performance for return paths (IEC 60728-10)*

EN 60728-101, *Cable networks for television signals, sound signals and interactive services - Part 101: System performance of forward paths loaded with digital channels only (IEC 60728-101)*

EN 62153-1-1, *Metallic communication cables test methods - Part 1-1: Electrical - Measurement of the pulse/step return loss in the frequency domain using the Inverse Discrete Fourier Transformation (IDFT) (IEC 62153-1-1)*

IEC 61196-1-112, *Coaxial communication cables - Part 1-112: Electrical test methods - Test for return loss (uniformity of impedance)*

IEC 61196-1-115, *Coaxial communication cables - Part 1-115: Electrical test methods - Test for regularity of impedance (pulse/step function return loss)*

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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50290-1-2:2004, EN 50117-1:2019, EN 60728-1 and the following apply.

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

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

3.1

drop cable

coaxial cable which is used to connect from:

- a) subscriber tap or a directional coupler to a system outlet,
- b) subscriber tap to a subscriber splitter,
- c) subscriber splitter to a system outlet

3.2

indoor drop cable

drop cable for indoor application

4 Requirements for cable construction and design

4.1 General

Cables according to this standard are designed for an operating temperature range from $-40\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$ ¹⁾ and at frequencies between 5 MHz and 1 000 MHz.

When designing the cable, consideration should be given to the maximum admissible current stated in the detail specification. It is assumed that the raise of temperature of the inner conductor when submitted to the maximum current under nominal ambient conditions does not affect the mechanical and electrical properties of the cable.

¹ This value is valid for applications without ampacity only, see also Table A.1 concerning max. DC current.