



SLOVENSKI STANDARD
SIST EN 50117-1:1997

01-december-1997

Coaxial cables used in cabled distribution networks - Part 1: Generic specification

Coaxial cables used in cabled distribution networks -- Part 1: Generic specification

Koaxialkabel für Kabelverteilanlagen -- Teil 1: Fachgrundspezifikation

Câbles coaxiaux pour réseaux câblés de distribution -- Partie 1: Spécification générique

Ta slovenski standard je istoveten z: EN 50117-1:1995

[SIST EN 50117-1:1997](https://standards.iteh.ai/catalog/standards/sist/2bf880b0-2693-4db9-96b7-81e9a99fca1/sist-en-50117-1-1997)

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ICS:

33.120.10 Koaksialni kabli. Valovodi Coaxial cables. Waveguides

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50117-1

June 1995

ICS 33.120.10

Descriptors: Coaxial cables, cabled distribution networks

English version

**Coaxial cables used in cabled distribution networks
Part 1: Generic specification**

Câbles coaxiaux pour réseaux câblés de
distribution
Partie 1: Spécification générique

Koaxialkabel für Kabelverteilanlagen
Teil 1: Fachgrundspezifikation

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This European Standard was approved by CENELEC on 1994-12-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard was prepared by SC 46XA, Coaxial cables, of Technical Committee CENELEC TC 46X, Communication cables.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50117-1 on 1994-12-06.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1995-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1995-12-01

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Corrigendum to EN 50117-1:1995

English version

Page 33, figure 6

Replace "Sweep Generator" by "H F Generator or synthesiser".

Replace "CUT" by "cable under test".

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1 - SCOPE

This standard establishes the requirements and applicable tests for coaxial cables with characteristic impedance of 75Ω used in CATV networks.

This standard takes into account the IEC 96 requirements. The relating cables are recommended for use with connector according to IEC 169.

2 - NORMATIVE REFERENCES

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 28	1925	International standard of resistance of copper	-	-
IEC 50	series	International Electrotechnical Vocabulary	-	-
IEC 68-1	1988	Environmental testing Part 1: General and guidance	EN 60068-1 ¹⁾	1994
IEC 68-2-1	1990	Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
IEC 68-2-3	1969	Test Ca: Damp heat	HD 323.2.3 S2 ²⁾	1987
IEC 68-2-38	1974	Test Z/AD: Composite temperature/humidity cyclic test	HD 323.2.38 S1	1988
IEC 96	series	Radio-frequency cables	-	-
IEC 169	series	Radio-frequency connectors	HD 134 EN 60169	series series
IEC 304	1982	Standard colours for insulation for low-frequency cables	HD 402 S2	1984
IEC 332-1	1993 ³⁾	Test on electric cables under fire conditions - Part 1: Test on a single vertical insulated wire or cable	-	-
IEC 332-3	1992	Part 3: Tests on bunched wires or cables	HD 405.3 S1	1993

1) EN 60068-1 includes A1:1992 to IEC 68-1.

2) HD 323.2.3 S3 includes A1:1984 to IEC 68-2-2.

3) IEC 332-1:1979 is harmonized as HD 405.1 S1:1983.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 754-1	1994	Test on gases evolved during combustion of electric cables Part 1: Determination of the amount of halogen acid gas evolved during the combustion of polymeric materials taken from cables	-	-
IEC 754-2 (mod)	1991	Part 2: Determination of degree of acidity of gases evolved during the combustion of materials taken from electric cables by measuring pH and conductivity	HD 602 S1	1992
IEC 811-1-1	1993	Common test methods for insulating and sheathing materials of electric cables Part 1: Methods for general application Section 1: Measurement of thickness and overall dimensions - Tests for determining the mechanical properties	EN 60811-1-1	1995
IEC 811-1-2	1985	Section 2: Thermal ageing methods	EN 60811-1-2 ⁴⁾	1995
IEC 811-1-4	1985	Section 4: Tests at low temperature	EN 60811-1-4 ⁵⁾	1995
IEC 811-3-1	1985	Part 3: Methods specific to PVC compounds Section 1: Pressure test at high temperature - Tests for resistance to cracking	EN 60811-3-1 ⁶⁾	1995
IEC 811-3-2	1985	Section 2: Loss of mass test - Thermal stability test	EN 60811-3-2 ⁷⁾	1995
IEC 811-4-1	1985	Part 4: Methods specific to polyethylene and polypropylene compounds Section 1: Resistance to environmental stress cracking - Wrapping test after thermal ageing in air - Measurement of the melt flow index - Carbon black and/or mineral content measurement in PE	EN 60811-4-1 ⁸⁾	1995
ISO/R 402		Tensile testing of copper and copper alloy wire		
CISPR 8B		Reports and study questions of the C.I.S.P.R. 2. Supplement, Amendment No. 1		

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- 4) EN 60811-1-2 includes corrigendum May 1986 and A1:1989 to IEC 811-1-2.
5) EN 60811-1-4 includes corrigendum May 1986 and A1:1993 to IEC 811-1-4.
6) EN 60811-3-1 includes corrigendum May 1986 to IEC 811-1-2.
7) EN 60811-3-2 includes corrigendum May 1986 and A1:1993 to IEC 811-3-2.
8) EN 60811-4-1 includes corrigendum May 1986 and A2:1993 to IEC 811-4-1.

3 - DEFINITIONS

3-1- IEV Definitions

Terms used in the Publication which are defined in the International Electrotechnical Vocabulary IEC Publication 50 are given in the table below:

Term	IEV definition	Term	IEV definition
absorption	726-06-05		
absolute error	301-08-06		
analogue signal	37-15-050		
armour of cable	25-30-110		
attenuation	303-01-04	dielectric strength	05-15-205
attenuation coefficient	55-05-255	digital signal	37-15-055
attenuation distortion	55-10-010	direction of propagation	726-02-01
attenuator	303-03-17	directional coupler	726-14-02
		directivity	726-14-03
bonded screen	461-03-06	drain wire	461-03-07
braiding	25-30-090		
brazing soldering	40-15-005	earth	05-40-155
		electrification	05-15-015
cable	55-30-010		
cable core	25-30-045	frequency	05-02-055
cable drum	461-20-01	frequency range	303-06-10
capacitance	05-15-175		
capacitance meter	20-15-2	gain	303-01-05
coaxial cable	55-30-050	group delay	726-05-16
coaxial pair	55-30-045	group velocity	726-05-17
composite loss	55-05-175	guided wave	726-02-10
conductor	461-01-01		
conductor resistance	05-20-140	impedance to earth	303-02-15
		incident wave	25-50-055
delay distortion	55-10-020	input (output) impedance	303-02-13
delay time	726-15-24	insertion loss	726-06-17
dielectric	05-15-095	insulation resistance	05-40-200
dielectric constant/ permittivity	05-15-120	intrinsic error	301-01-09
		Kelvin/Thomson double bridge	302-05-02

Term	IEV definition	Term	IEV definition
matched termination	726-22-09		
megohmmeter	20-15-160		
measurement	301-10-04		
noise	303-0-09	screen	55-25-355
normalised impedance	726-07-03	sensitivity	66-10-385
		sheath (of a cable)	25-30-105
pad attenuator	726-12-03	short circuit	
phase delay	55-05-230	signal generator	303-03-12
phase distortion	55-10-015	slotted line	726-19-06
phase velocity	726-05-13	spark test	461-22-01
plug-in unit	303-03-16	spectrum analyzer	303-03-09
port	726-11-05	stabilized supply	
probe	303-03-15	apparatus	303-03-11
propagation coefficient	726-0-0	standing wave	
		minimum (maximum)	726-02-09
radio frequency	55-05-060	strand	461-01-19
reflection coefficient	726-07-08	surface wave	726-02-13
reflected wave	726-02-05		
relative error	301-08-07	termination	726-11-07
repeatability of measurement	301-10-04	thermoplastic insulation	461-02-10
reproducibility of measurement	301-10-05	transformer bridge	302-05-03
resolution	301-10-03	transmission line	726-01-01
resonance method of measurement	301-01-09	transmitted wave	726-02-06
return loss	55-05-195	travelling wave	726-02-02
rise time	351-04-02		
		VSWR	726-07-09
		wheatstone bridge	302-05-01

3-2- Additional definitions

In addition to the definitions given in IEC Publication 50 the following will apply.

3-2-1 Air spaced cables

Cables in which the dielectric is air, except for the portion occupied by insulating spacers assembled on the inner conductor at regular intervals or helically applied tapes and/or threads. It is characteristic of this type of insulation that outside the spacers it is possible to pass from the inner conductor to the outer conductor without passing through a layer of solid plastic dielectric.