Doc. No. : LITD 06 (23343) IS /IEC 61196-6-2021 August 2023

BUREAU OF INDIAN STANDARDS DRAFT FOR COMMENTS ONLY

मसौदा भारतीय मानक

समाक्ष संचार केबल भाग 6 सीएटीवी ड्राप केबलों की अनुभागीय विशिष्टि (*पहला पुनरीक्षण*)

Draft Indian Standard

Coaxial communication cables – Part 6: Sectional specification for CATV drop cables

(First Revision)

ICS 33.120.10

Wires, Cables, Waveguides & Accessories Sectional Committee, LITD 06 Last Date for Comments: 01st November 2023

NATIONAL FOREWORD

This draft Indian Standard (Part 6) (First Revision) which is identical with IEC 61196-6-2021 "Coaxial communication cables –Part 6: Sectional specification for CATV drop cables' issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of Wires, Cables, Waveguides & Accessories Sectional Committee and approval of the Electronics and Information Technology Division Council.

This standard was originally published in 2009 and was identical to IEC 61196-6: 2009. The first revision of this standard has been undertaken to align it with the latest version of IEC 61196-6-2021.

The text of IEC Standard may be approved as suitable for publication an Indian Standard without deviations. Certain terminology and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard', and;
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted draft standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:-

International Standards	Corresponding Indian Standard	Degree of
		Equivalence
IEC 60068-1:2013 Environmental	IS/IEC 60068-1: 2013	Identical
testing – Part 1: General and	Environmental Testing Part 1 General	
guidance	and Guidance	
IEC 60068-2-78 Environmental	IS 9000 (Part 4): 2020	Identical with
testing – Part 2-78: Tests – Test	Environmental Testing Part 4 Tests -	IEC 60068-2-
Cab: Damp heat, steady state	Test Cab: Damp Heat, Steady State	78: 2012
	(Second Revision)	
IEC 60096-0-1 Radio frequency	IS/IEC 60096-0-1: 2017 Radio	Identical
cables - Part 0-1: Guidelines to the	Frequency Cables Part 0 Guidelines to	
design of detail specifications –	the Design of Detail Specifications	
Coaxial cables	Section 1 Coaxial cables	
IEC 61196-1:2005 Coaxial	IS/IEC 61196-1: 2005 Coaxial	-do-
communication cables – Part 1:	communication cables: Part 1 generic	
Generic specification – General,	specification - General, definitions and	
definitions and requirements	requirements	
IEC 61196-1-1 Coaxial	IS/IEC 61196-1-1: 2007 Coaxial	
communication cables - Part 1-1:	communication cables Part 1 Coaxial	-do-
Capability approval for coaxial	cables Section 1 Capability approval	
cables		
IEC 61196-1-101 Coaxial	IS/IEC 61196-1-101: 2005 Coaxial	-do-
communication cables – Part 1-101:	communication cables: Part 1 - 101	
Electrical test methods – Test	electrical test methods - Test for	
for conductor d.c. resistance of	conductor D.C. resistance of cable	
cable		

IEC 61196-1-102 Coaxial	IS/IEC 61196-1-102: 2005 Coaxial	Identical
communication cables – Part 1-102:	communication cables: Part 1 - 102	
Electrical test methods – Test	electrical test methods - Test for	
for insulation resistance of cable	insulation resistance of cable dielectric	
dielectric		
IEC 61196-1-105 Coaxial	IS/IEC 61196-1-105 : 2005 Coaxial	-do-
communication cables – Part 1-105:	communication cables: Part 1 - 105	
Electrical test methods – Test for	electrical test methods - Test for	
withstand voltage of cable	withstand voltage of cable dielectric	
dielectric		
IEC 61196-1-106 Coaxial	IS/IEC 61196-1-106: 2008 Coaxial	-do-
communication cables – Part 1-106:	communication cables Part 1-106	
Electrical test methods – Test for	Electrical Test Methods — Test for	
withstand voltage of cable sheath	Withstand Voltage of Cable Sheath	
IEC 61196-1-108 Coaxial	IS/IEC 61196-1-108: 2005 Coaxial	-do-
communication cables – Part 1-108:	communication cables: Part 1 - 108	
Electrical test methods – Test for	electrical test methods - Test for	
characteristic impedance, phase and	characteristic impedance, phase and	
group delay, electrical length and	group delay, electrical length and	
propagation velocity	propagation velocity	
IEC 61196-1-112 Coaxial	IS/IEC 61196-1-112: 2006 Coaxial	-do-
communication cables – Part 1-112:	communication cables: Part 1 - 112	
Electrical test methods – Test for	electrical test methods - Test for return	
return loss (uniformity of	loss (Uniformity Of Impedance)	
impedance)		
IEC 61196-1-113 Coaxial	IS/IEC 61196-1-113: 2018 Coaxial	-do-
communication cables – Part 1-113:	communication cables Part 1-113	
Electrical test methods – Test	Electrical Test Methods — Test for	
for attenuation constant	Attenuation Constant	
IEC 61196-1-115 Coaxial	IS/IEC 61196-1-115: 2006 Coaxial	-do-
communication cables – Part 1-115:	communication cables: Part 1 - 115	
Electrical test methods – Test	electrical test methods - Test for	
for regularity of impedance	regularity of impedance (Pulse/step	
(pulse/step function return loss)	Function Return Loss)	
IEC 61196-1-201 Coaxial	IS/IEC 61196-1-201: 2009 Coaxial	-do-
communication cables – Part 1-201:	communication cables Part 1 Test	
Environmental test methods –Test	methods Section 201 Environmental	
for cold bend performance of cable	Test for cold bend performance of	
	cable	

IEC 61196-1-203 Coaxial	IS/IEC 61196-1-203: 2007 Coaxial	Identical
communication cables – Part 1-203:	communication cables Part 1 Test	
Environmental test methods –	methods Section 203 Environmental	
Test for water penetration of cable	Test for water penetration of cable	
IEC 61196-1-206 Coaxial	IS/IEC 61196-1-206: 2005 Coaxial	-do-
communication cables – Part 1-206:	communication cables Part 1-206	
Environmental test methods –	Environmental test methods - Climatic	
Climatic sequence	sequence	
IEC 61196-1-301 Coaxial	IS/IEC 61196-1-301: 2005 Coaxial	-do-
communication cables – Part 1-301:	communication cables: Part 1 - 301	
Mechanical test methods –	mechanical test methods - Test for	
Test for ovality	ovality	
IEC 61196-1-302, Coaxial	IS/IEC 61196-1-302: 2005 Coaxial	-do-
communication cables – Part 1-302:	Communication Cables Part 1-302	
Mechanical test methods – Test for	Mechanical Test Methods - Test for	
eccentricity	Eccentricity	
IEC 61196-1-308 Coaxial	IS/IEC 61196-1-308: 2012 Coaxial	-do-
communication cables – Part 1-308:	Communication Cables Part 1	
Mechanical test methods –	Mechanical Test Methods Section 308	
Test for tensile strength and	Test for tensile strength and	
elongation for copper-clad metals	elongation for copper-clad metals	
	(First Revision)	
IEC 61196-1-310 Coaxial	IS/IEC 61196-1-310: 2005 Coaxial	-do-
communication cables - Part 1-	communication cables - Part 1-310:	
310: Mechanical test methods	Mechanical test methods –Test for	
-Test for torsion characteristics of	torsion characteristics of copper-clad	
copper-clad metals	metals	
IEC 61196-1-313 Coaxial	IS/IEC 61196-1-313: 2009 Coaxial	-do-
communication cables – Part 1-313:	communication cables Part 1-313	
Mechanical test methods –	Mechanical Test Methods —	
Adhesion of dielectric and sheath	Adhesion of Dielectric and Sheath	
IEC 61196-1-314:2015 Coaxial	IS/IEC 61196-1-314: 2015 Coaxial	-do-
communication cables – Part 1-314:	communication cables Part 1-314	
Mechanical test methods	Mechanical Test Methods — Test for	
– Test for bending	Bending	
IEC 61196-1-316 Coaxial	IS/IEC 61196-1-316: 2005 Coaxial	
communication cables – Part 1-316:	communication cables – Part 1-316:	-do-
Mechanical test methods –Test of	Mechanical test methods -Test of	
maximum pulling force of cable	maximum pulling force of cable	

IEC 61196-1-324 Coaxial	IS/IEC 61196-1-324: 2006 Coaxial	Identical
communication cables – Part 1-324:	communication cables Part 1-324	
Mechanical test methods –	Mechanical Test Methods — Test for	
Test for abrasion resistance of cable	Abrasion Resistance of Cable	
IEC 62153-4-3 Metallic	IS/IEC 62153-4-3: 2013 Metallic	-do-
communication cable test methods	communication cable test methods	
– Part 4-3: Electromagnetic	Part 4 Electromagnetic compatibility	
compatibility (EMC) – Surface	EMC Section 3 Surface transfer	
transfer impedance – Triaxial	impedance-Triaxial method	
method		
IEC 62153-4-4 Metallic	IS/IEC 62153-4-4: 2015 Metallic	-do-
communication cable test methods	communication cable test methods	
– Part 4-4: Electromagnetic	Part 4 Electromagnetic compatibility	
compatibility (EMC) – Test method	EMC Section 4 Test method for	
for measuring of the screening	measuring of the screening attenuation	
attenuation as up to and	a s up to and above 3 GHz triaxial	
above 3 GHz, triaxial method	method	
IEC 62230 Electric cables –	IS 10810(Part 44) 1984 Method of test	Not
Spark-test method	for cables part 44 spark test	Equivalent

The technical committee has reviewed the provisions of the following International Standard referred in this adopted draft standard and has decided that it is acceptable for use in conjunction with this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International Standard	Title
IEC 60811-605	Electric and optical fibre cables – Test methods for non-metallic
	materials –Part 605: Physical tests – Measurement of carbon black
	and/or mineral filler in polyethylene compounds
IEC 61196-1-209	Coaxial communication cables – Part 1-209: Environmental test
	methods –Thermal cycling
IEC 61196-1-212	Coaxial communication cables – Part 1-212: Environmental test
	methods –UV stability
IEC 61196-1-317	Coaxial communication cables – Part 1-317: Mechanical test
	methods –Test for crush resistance of cable
IEC 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 (IDFT)

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2: 2022 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Scope of IEC 61196-6: 2021 is as follows:

This part of IEC 61196 applies to coaxial communications cables. It specifies the requirements for CATV drop cables for analogue and digital one and two way signal transmission, e.g. for cable networks for television signals, sound signals, interactive services, surveillance & control systems, and satellite television receiving systems according to the requirements of IEC 60728 1, IEC 60728-101, IEC 60728-10, ISO/IEC 11801-1 and ISO/IEC 11801-4.

This also includes the transmission of BCT signals provided by a CATV, MATV or SMATV cable network.

The operating frequency is from 5 MHz to 1 000 MHz or from 5 MHz to 3 000 MHz. Operating temperature is between -40 °C and +70 °C.

NOTE- The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details please refer IEC 61196-6: 2021 or kindly contact.

Head Electronics & IT Department Bureau of Indian Standards 9, B.S. Zafar Marg, New Delhi-110002 Email: hlitd@bis.gov.in litd@bis.gov.in Telefax: 011-23237093