SVENSK STANDARD SS-EN IEC 60966-1

Fastställd	Utgåva	Sida	Ansvarig kommitté
2019-05-16	3	1 (1+56)	SEK TK 46

Koaxialkablar med påmonterade anslutningsdon – Del 1: Artspecifikation – Allmänna fordringar och provningsmetoder

Radio frequency and coaxial cable assemblies – Part 1: Generic specification – General requirements and test methods

Som svensk standard gäller europastandarden EN IEC 60966-1:2019. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60966-1:2019.

Nationellt förord

Europastandarden EN IEC 60966-1:2019

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60966-1, Third edition, 2019 - Radio frequency and coaxial cable assemblies - Part 1: Generic specification - General requirements and test methods**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60966-1, utgåva 2, 1999, gäller ej fr o m 2022-03-15.

ICS 33.120.10

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60966-1

April 2019

ICS 33.120.10

Supersedes EN 60966-1:1999

English Version

Radio frequency and coaxial cable assemblies - Part 1: Generic specification - General requirements and test methods (IEC 60966-1:2019)

Cordons coaxiaux et cordons pour fréquences radioélectriques - Partie 1: Spécification générique - Exigences générales et méthodes d'essai (IEC 60966-1:2019)

Konfektionierte Koaxial- und Hochfrequenzkabel - Teil 1: Fachgrundspezifikation - Allgemeine Anforderungen und Prüfverfahren (IEC 60966-1:2019)

This European Standard was approved by CENELEC on 2019-03-06. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 60966-1:2019 E

SEK Svensk Elstandard

SS-EN IEC 60966-1, utg 3:2019

European foreword

The text of document 46/700A/FDIS, future edition 3 of IEC 60966-1, prepared by IEC/TC 46 "Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60966-1:2019.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2019-12-15
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2022-03-15

This document supersedes EN 60966-1:1999.

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.

Endorsement notice

The text of the International Standard IEC 60966-1:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60339 (series)	NOTE	Harmonized as HD 350.1 S1 (series)
ISO 9000	NOTE	Harmonized as EN ISO 9000
ISO 9001:2015	NOTE	Harmonized as EN ISO 9001:2015 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068	series	Environmental testing	EN 60068	series
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	-
IEC 60068-2-11	-	Basic environmental testing procedures - Part 2-11: Tests - Test Ka: Salt mist	EN 60068-2-11	-
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 60068-2-42	-	Environmental testing - Part 2-42: Tests - Test Kc: Sulphur dioxide test for contacts and connections	EN 60068-2-42	-
IEC 60068-2-68	-	Environmental testing - Part 2-68: Tests - Test L: Dust and sand	EN 60068-2-68	-
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests - Test Cab: Damp heat, steady state	EN 60068-2-78	-
IEC 60332-1-2	2004	Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame	EN 60332-1-2	2004
-	-		+ A11	2016
IEC 60512-6-2	-	Connectors for electronic equipment - Tests and measurements - Part 6-2: Dynamic stress tests - Test 6b: Bump	EN 60512-6-2	-
IEC 60512-7-2	-	Connectors for electronic equipment - Tests and measurements - Part 7-2: Impact tests (free components) - Test 7b: Mechanical strength impact	EN 60512-7-2	-
IEC 60529	-	Classification of degrees of protection provided by enclosures	-	-

Publication	Year	Title	EN/HD	Year
IEC 60966-2	series	Radio frequency and coaxial cable assemblies	EN 60966-2	series
IEC 60966-3	series	Radio frequency and coaxial cable assemblies	EN 60966-3	series
IEC 60966-4	series	Radio frequency and coaxial cable assemblies	EN 60966-4	series
IEC 61169	series	Radio frequency connectors	EN 61169	series
IEC 61169-1	2013	Radio frequency connectors - Part 1: Generic specification - General requirements and measuring methods	EN 61169-1	2013
IEC 61196	series	Coaxial communication cables	-	series
IEC 61196-1-119	-	Coaxial communication cables - Part 1-119: Electrical test methods - RF power rating	-	-
IEC 62037-2	-	Passive RF and microwave devices, intermodulation level measurement - Part 2: Measurement of passive intermodulation in coaxial cable assemblies	EN 62037-2	-
IEC 62153-4-6	-	Metallic cables and other passive components test methods - Part 4-6: Electromagnetic compatibility (EMC) - Surface transfer impedance - line injection method	-	-
IEC 62153-4-7	2015	Metallic communication cable test methods – Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring of transfer impedance Z_T and screening attenuation a_S or coupling attenuation a_C of connectors and assemblies up to and above 3 GHz – Triaxial tube in tube method	EN 62153-4-7	2016

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES –

Part 1: Generic specification – General requirements and test methods

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 60966-1 has been prepared by technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

This third edition cancels and replaces the second edition published in 1999. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Annex C (informative) Measurement method for screening effectiveness was cancelled;
b) Subclause 8.9 gives references to relevant test procedures.

The text of this standard is based on the following documents:

FDIS	Report on voting
46/700A/FDIS	46/704/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60966 series, published under the general title *Radio frequency and coaxial cable assemblies*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES –

Part 1: Generic specification – General requirements and test methods

1 Scope

This part of IEC 60966 specifies requirements for radio frequency coaxial cable assemblies operating in the transverse electromagnetic mode (TEM) and establishes general requirements for testing the electrical, mechanical and environmental properties of radio frequency coaxial cable assemblies composed of cables and connectors. Additional requirements relating to specific families of cable assemblies are given in the relevant sectional specifications.

The design of the cables and connectors used will preferably conform to the applicable parts of IEC 61196 and IEC 61169 respectively.

NOTE 1 This document does not include tests which are normally performed on the cables and connectors separately. These tests are described in IEC 61196-1 (all parts) and IEC 61169-1 respectively.

NOTE 2 Wherever possible, cables and connectors used in cable assemblies, even if they are not described in the IEC 61196 or IEC 61169 series, are tested separately according to the tests given in the relevant generic specification.

NOTE 3 Where additional protection is applied to a cable assembly, the mechanical and environmental tests described in this document are applicable.

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.

IEC 60068 (all parts), *Environmental testing*

IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-11, *Basic environmental testing procedures – Part 2-11: Tests – Test Ka: Salt mist*

IEC 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-27, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60068-2-42, *Environmental testing – Part 2-42: Tests – Test Kc: Sulphur dioxide test for contacts and connections*

IEC 60068-2-68, *Environmental testing – Part 2-68: Tests – Test L: Dust and sand*

IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60332-1-2:2004, *Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed* flame

IEC 60512-6-2, *Connectors for electronic equipment –Tests and measurements – Part 6-2: Dynamic stress tests – Test 6b: Bump*

IEC 60512-7-2, *Connectors for electronic equipment – Tests and measurements – Part 7-2: Impact tests (free components) – Test 7b: Mechanical strength impact*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60966-2 (all parts), *Radio frequency and coaxial cable assemblies*

IEC 60966-3 (all parts), *Radio frequency and coaxial cable assemblies*

IEC 60966-4 (all parts), *Radio frequency and coaxial cable assemblies*

IEC 61169 (all parts), *Radio-frequency connectors*

IEC 61169-1:2013, *Radio-frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

IEC 61196 (all parts), *Coaxial communication cables*

IEC 61196-1-119, *Coaxial communication cables – Part 1-119: Electrical test methods – RF power rating*

IEC 62037-2, *Passive RF and microwave devices, intermodulation level measurement – Part 2: Measurement of passive intermodulation in coaxial cable assemblies*

IEC 62153-4-6, *Metallic cables and other passive components test methods – Part 4-6: Electromagnetic compatibility (EMC) – Surface transfer impedance – Line injection method*

IEC 62153-4-7:2015, *Metallic communication cable test methods – Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring of transfer impedance Z_T and screening attenuation a_s or coupling attenuation a_C of connectors and assemblies up to and above 3 GHz – Triaxial tube in tube method*