BS EN IEC 60966-3:2023

BSI Standards Publication

Radio frequency and coaxial cable assemblies

Part 3: Sectional specification for semi-flexible coaxial cable assemblies

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National foreword

This British Standard is the UK implementation of EN IEC 60966-3:2023. It is identical to IEC 60966-3:2023. It supersedes BS EN 60966-3:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/46, Cables, wires and waveguides, radio frequency connectors and accessories for communication and signalling.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Date	Text affected

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60966-3

December 2023

ICS 33.120.10

Supersedes EN 60966-3:2009

English Version

Radio frequency and coaxial cable assemblies - Part 3: Sectional specification for semi-flexible coaxial cable assemblies (IEC 60966-3:2023)

Cordons coaxiaux et cordons pour fréquences radioélectriques - Partie 3: Spécification intermédiaire pour cordons coaxiaux semi-flexibles (IEC 60966-3:2023)

Konfektionierte Koaxial- und Hochfrequenzkabel - Teil 3: Rahmenspezifikation für halbflexible konfektionierte Koaxialkabel (IEC 60966-3:2023)

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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

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European foreword

The text of document 46/945/FDIS, future edition 4 of IEC 60966-3, 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 60966-3:2023.

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) 2024-09-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-12-04

This document supersedes EN 60966-3:2009 and all of its amendments and corrigenda (if any).

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60966-3:2023 was approved by CENELEC as a European Standard without any modification.

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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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-1	2013	Environmental testing - Part 1: General and guidance	EN 60068-1	2014
IEC 60966-1	2019	Radio frequency and coaxial cable assemblies - Part 1: Generic specification - General requirements and test methods	EN IEC 60966-1	2019
IEC 61169	series	Radio frequency connectors	EN 61169	series
IEC 61196-1-126	-	Coaxial communication cables - Part 1-119: Electrical test methods - Corona extinction voltage	-	-
IEC 61196-1-314	2015	Coaxial communication cables - Part 1-314: Mechanical test methods - Test for bending	-	-
IEC 61196-8	-	Coaxial communication cables - Part 8: Sectional specification for semi-flexible cables with fluoropolymer dielectric	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES –

Part 3: Sectional specification for semi-flexible coaxial cable assemblies

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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IEC 60966-3 has been prepared by IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2008. This edition constitutes a technical revision.

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

a) Added "4.3 The relative position dimensions of the interface";
b) Added "Figure 2";
c) Added "6 IEC type designation";
d) Modified "Figure 3";

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e) Added “7 Rating and characteristics”;

f) Added “Requirements/Remarks” to all the tests in Clause 8;

g) Added some characteristics, such as insertion loss stability, intermodulation level measurement, corona extinction voltage, single bending, abrasion test of cable assembly, mechanical endurance, etc.;

h) Rewrote test schedules;

i) Added Annex A and Annex B.

The text of this International Standard is based on the following documents:

Draft	Report on voting
46/945/FDIS	46/957/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_expe rts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES –

Part 3: Sectional specification for semi-flexible coaxial cable assemblies

1 Scope

This part of IEC 60966 is a sectional specification that relates to semi-flexible coaxial cable assemblies operating in the transverse electromagnetic mode (TEM). It specifies the design and construction, IEC type designation, workmanship, marking and packaging, standard rating and characteristics, electrical, mechanical and environmental requirements of finished semi-flexible cable assemblies, quality assessment, delivery and storage, etc.

This part of IEC 60966 applies to semi-flexible cable assemblies composed of semi-flexible coaxial cables and coaxial connectors. Semi-flexible cable assemblies are widely used in mobile communication systems, microwave test equipment, radar, aerospace and other fields.

NOTE 1 For the purpose of this sectional specification, a cable assembly is always regarded as an integral unit. All specifications apply to the finished assembly and not to individual and non-assembled parts thereof.

NOTE 2 This sectional specification can be supplemented with detail specifications giving additional details as required by the particular application. This application will not necessarily require all tests.

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 60068-1:2013, *Environmental testing − Part 1: General and guidance*

IEC 60966-1:2019, *Radio frequency and coaxial cable assemblies – Part 1: Generic specification – General requirements and test methods*

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

IEC 61196-1-126, *Coaxial communication cables – Part 1-126: Electrical test methods – Corona extinction voltage*

IEC 61196-1-314:2015, *Coaxial communication cables – Part 1-314: Mechanical test methods – Test for bending*

IEC 61196-8, *Coaxial communication cables – Part 8: Sectional specification for semi-flexible cables with fluoropolymer dielectric*

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