BS EN 60966-2-4:2016



BSI Standards Publication

Radio Frequency and coaxial cable assemblies

Part 2-4: Detail specification for cable assemblies for radio and TV receivers — Frequency range 0 MHz to 3 000 MHz, IEC 61196-2 connectors

bsi.

National foreword

This British Standard is the UK implementation of EN 60966-2-4:2016. It is identical to IEC 60966-2-4:2016. It supersedes BS EN 60966-2-4:2009 which is withdrawn.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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016.
Published by BSI Standards Limited 2016

ISBN 978 0 580 84840 7
ICS 33.120.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2016.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60966-2-4

July 2016

ICS 33.120.10

Supersedes EN 60966-2-4:2009

English Version

Radio Frequency and coaxial cable assemblies - Part 2-4: Detail specification for cable assemblies for radio and TV receivers - Frequency range 0 MHz to 3 000 MHz, IEC 61169-2 connectors (IEC 60966-2-4:2016)

Cordons coaxiaux et cordons pour fréquences radioélectriques - Partie 2-4: Spécification particulière relative aux cordons pour récepteurs de télévision ou radio - Plage de fréquences de 0 MHz à 3 000 MHz, connecteurs IEC 61169-2
(IEC 60966-2-4:2016)

Konfektionierte Koaxial- und Hochfrequenzkabel - Teil 2-4: Bauartspezifikation für konfektionierte Kabel für Ton- und Fernsehrundfunkempfänger - Frequenzbereich 0 MHz bis 3 000 MHz, Steckverbinder nach IEC 61169-2
(IEC 60966-2-4:2016)

This European Standard was approved by CENELEC on 2016-06-22. 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, 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: Avenue Marnix 17, B-1000 Brussels

© 2016 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

European foreword

The text of document 46/599/FDIS, future edition 4 of IEC 60966-2-4, prepared by IEC/TC 46 "Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60966-2-4:2016.

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)	2017-03-22
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-06-22

This document supersedes EN 60966-2-4:2009.

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

Endorsement notice

The text of the International Standard IEC 60966-2-4:2016 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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 60728-4	-	Cable networks for television signals, sound signals and interactive services -- Part 4: Passive wideband equipment for coaxial cable networks	EN 60728-4	-
IEC 60966-1	-	Radio frequency and coaxial cable assemblies -- Part 1: Generic specification - General requirements and test methods	EN 60966-1	-
IEC 60966-2-1	2008	Radio frequency and coaxial cable assemblies -- Part 2-1: Sectional specification for flexible coaxial cable assemblies	EN 60966-2-1	2009
IEC 60966-2-2	2003	Radio frequency and coaxial cable assemblies -- Part 2-2: Blank detail specification for flexible coaxial cable assemblies	EN 60966-2-2	2003
IEC 61169-2	-	Radio-frequency connectors -- Part 2: Sectional specification - Radio frequency coaxial connectors of type 9,52	EN 61169-2	-
IEC 61196-6	-	Coaxial communication cables - Part 6: Sectional specification for CATV drop cables	-	-
IEC 62153-4-7	-	Metallic communication cable test methods -- Part 4-7: Shielded screening attenuation test method for measuring the transfer impedence ZT and the screening attenuation aS or the coupling attenuation aC of RF-Connectors and asemblies up to and above 3 GHz, Tube in tube method	EN 62153-4-7	-

CONTENTS

FOREWORD....3
INTRODUCTION....5

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES –

Part 2-4: Detail specification for cable assemblies for radio and TV receivers – Frequency range 0 MHz to 3 000 MHz, IEC 61169-2 connectors

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60966-2-4 has been prepared by IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

This fourth edition cancels and replaces the third edition published in 2009 and constitutes a technical revision.

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

a) The return loss requirements and insertion loss requirements are matched to the relevant cables.
b) Screening effectiveness shall be measured according to IEC 62153-4-7, triaxial method.
c) Screening class B was cancelled.

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

FDIS	Report on voting
46/599/FDIS	46/600/RVD

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

This part of IEC 60966 is to be read in conjunction with IEC 60966-1:1999, IEC 60966-2-1:2008 and IEC 60966-2-2:2003.

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

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

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

INTRODUCTION

This part of IEC 60966 is a detail specification which applies to flexible coaxial cables described in the IEC 61196 series. It relates to cable assemblies for radio and TV receivers, and in particular to the cable assemblies subfamily 9,52 (IEC 61169-2). These cable assemblies are used as described in IEC 60728-4.

This part of IEC 60966 gives subfamily requirements and severities which shall be applied.

Under qualification approval, the qualification will be conducted in accordance with 12.2 of IEC 60966-2-1:2008 taking into account the specified variants. Only the tests whose results might depend on the variants will be repeated.

Under capability approval, the qualification will be conducted on the related capability qualifying components (CQCs) as defined in 12.3 of IEC 60966-2-1:2008 and described in the capability manual (CM). Unless otherwise specified in the CM, only lot-by-lot tests from groups Ba and Eb will be conducted on delivered products, all other tests will be performed on CQCs as defined in 12.3 of IEC 60966-2-1:2008 and described in the CM.

Reference documents

IEC 60728-4, *Cable networks for television signals, sound signals and interactive services – Part 4: Passive wideband equipment for coaxial cable networks*

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

IEC 60966-2-1:2008, *Radio frequency and coaxial cable assemblies – Part 2-1: Sectional specification for flexible coaxial cable assemblies*

IEC 60966-2-2:2003, *Radio frequency and coaxial cable assemblies – Part 2-2: Blank detail specification for flexible coaxial cable assemblies*

IEC 61169-2, *Radio-frequency connectors – Part 2: Sectional specification – Radio frequency coaxial connectors of type 9,52*

IEC 61196-6, *Coaxial communication cables – Sectional specification for CATV drop cables*

IEC 62153-4-7, *Metallic communication cable test methods – Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring the transfer impedance and the screening or the coupling attenuation – Tube in tube method*