

Irish Standard I.S. EN 60966-2-1:2009

Radio frequency and coaxial cable assemblies -- Part 2-1: Sectional specification for flexible coaxial cable assemblies (IEC 60966-2 -1:2008 (EQV))

© NSAI 2009 No copying without NSAI permission except as permitted by copyright law.

Incorporating amendments/corrigenda issued since publication:

This document replaces: I.S. EN 60966-2-1:2003

This document is based on: EN 60966-2-1:2009 EN 60966-2-1:2003 Published: 6 August, 2009 21 November, 2003

This document was published under the authority of the NSAI and comes into effect on: 14 September, 2009

ICS number: 33.120.10

NSAI
1 Swift Square,
Northwood, Santry

T +353 1 807 3800 F +353 1 807 3838 F standards@nsai ie W **NSAI.ie**  **Sales:** T +353 1 857 6730 F +353 1 857 6729 W standards ie

Price Code:

Údarás um Chaighdeáin Náisiúnta na hÉireann

**EUROPEAN STANDARD** 

EN 60966-2-1

NORME EUROPÉENNE EUROPÄISCHE NORM

August 2009

ICS 33.120.10

Supersedes EN 60966-2-1:2003

English version

# Radio frequency and coaxial cable assemblies Part 2-1: Sectional specification for flexible coaxial cable assemblies

(IEC 60966-2-1:2008)

Ensembles de cordons coaxiaux et de cordons pour fréquences radioélectriques -Partie 2-1: Spécification intermédiaire pour cordons coaxiaux souples (CEI 60966-2-1:2008) Konfektionierte Koaxial- und Hochfrequenzkabel -Teil 2-1: Rahmenspezifikation für flexible konfektionierte Koaxialkabel (IEC 60966-2-1:2008)

This European Standard was approved by CENELEC on 2009-07-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### **CENELEC**

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

EN 60966-2-1:2009

- 2 -

#### **Foreword**

The text of document 46/262/CDV, future edition 3 of IEC 60966-2-1, 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 was approved by CENELEC as EN 60966-2-1 on 2009-07-01.

This European Standard supersedes EN 60966-2-1:2003.

The major change with respect to EN 60966-2-1:2003 is a better definition of the tests to be performed.

This sectional specification is to be read in conjunction with EN 60966-1:1999. It contains the same clauses as that of EN 60966-1 and completes or amends them when required. When a clause of EN 60966-1 does not appear in this standard, it applies as it is in EN 60966-1. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

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) 2010-04-01

 latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 2012-07-01

Annex ZA has been added by CENELEC.

#### **Endorsement notice**

The text of the International Standard IEC 60966-2-1:2008 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 referenced documents are indispensable for the application 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 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>	EN/HD	<u>Year</u>
IEC 60068-2-6	_1)	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	2008 <sup>2)</sup>
IEC 60096-2	_1)	Radio-frequency cables - Part 2: Relevant cable specifications	-	-
IEC 60410	_1)	Sampling plans and procedures for inspection by attributes	-	-
IEC 60966-1	1999	Radio frequency and coaxial cable assemblies - Part 1: Generic specification - General requirements and test methods	EN 60966-1	1999
IEC 61169	Series	Radio-frequency connectors	EN 61169	Series
IEC 61196	Series	Coaxial communication cables	EN 61196	Series
IEC QC 001002	Series	IEC quality assessment system for electronic components (IECQ) - Rules of procedure	-	-
ISO 9000	_1)	Quality management systems - Fundamentals and vocabulary	EN ISO 9000	2005 <sup>2)</sup>

\_

<sup>1)</sup> Undated reference.

<sup>&</sup>lt;sup>2)</sup> Valid edition at date of issue.

This is a free page sample. Access the full version online.

I.S. EN 60966-2-1:2009

This page is intentionally left BLANK.

- 2 - 60966-2-1 © IEC:2008(E)

### CONTENTS

FO	REWORD	3			
1	Scope				
2	Normative references				
3	Terms and definitions				
4	Design and manufacturing requirements				
	4.1 Cable design and construction	6			
	4.2 Connector design and construction	6			
	4.3 Outline and interface dimensions	6			
5	Workmanship, marking and packaging	7			
6	Quality assessment	8			
7	Test methods – General				
8	Electrical tests				
9	Mechanical robustness tests	9			
10	Environmental tests	9			
11	Specialized test methods	11			
12	Test schedules	11			
Fig	ure 1 – Length definition of cable assemblies	7			
	ure 2 – Example of a cable assembly				
_	ure 3 – Preferred arrangement for the vibration test				
	ure 4 – Example production flow chart for a flexible cable assembly				
Tab	ole 1 – Grouping of tests for specification purposes	12			
Tab	ole 2 – Test schedule	13			
Tab	ole 3 – Assignment of CQCs	15			

60966-2-1 © IEC:2008(E)

- 3 -

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

#### RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES -

#### Part 2-1: Sectional specification for 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.
- 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 provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 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 60966-2-1 has been prepared by IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

This third edition cancels and replaces the second edition published in 2003. It constitutes a technical revision.

The major change with respect to the second edition is a better definition of the tests to be performed.

This sectional specification is to be read in conjunction with the second edition of IEC 60966-1 (1999). It contains the same clauses as that of IEC 60966-1 and completes or amends them when required. When a clause of IEC 60966-1 does not appear in this standard, it applies as it is in IEC 60966-1. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

**-4-**

60966-2-1 © IEC:2008(E)

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

CDV	Report on voting	
46/262/CDV	46/295/RVC	

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

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 maintenance result date indicated on the IEC web site 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.

A bilingual version of this publication may be issued at a later date.

60966-2-1 © IEC:2008(E)

- 5 -

#### RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES -

#### Part 2-1: Sectional specification for flexible coaxial cable assemblies

#### 1 Scope

This part of IEC 60966 is a sectional specification that relates to flexible coaxial cable assemblies operating in the transverse electromagnetic mode (TEM). It establishes uniform requirements for testing the electrical, mechanical and climatic properties of flexible cable assemblies composed of flexible coaxial cables and coaxial connectors.

NOTE 1 For the purposes 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 should 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 referenced documents are indispensable for the application 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 60068-2-6, Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)

IEC 60096-2, Radio-frequency cables – Part 2: Relevant cable specifications

IEC 60410, Sampling plans and procedures for inspection by attributes

IEC 60966-1:1999, Radio frequency and coaxial cable assemblies – Part 1: Generic specification – General requirements and test methods

IEC 61169 (all parts), Radio-frequency connectors

IEC 61196 (all parts), Coaxial communication cables

IEC QC 001002 (all parts), IEC Quality Assessment System for Electronic Components (IECQ) – Rules of procedure

ISO 9000, Quality management systems – Fundamentals and vocabulary

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60966-1 apply.



This is a free preview	<ul> <li>Purchase the entire</li> </ul>	e publication at the link below:
------------------------	---	----------------------------------

**Product Page** 

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation