BS EN 60966-2-3:2009

BSI British Standards

Radio frequency and coaxial cable assemblies —

Part 2-3: Detail specification for flexible coaxial cable assemblies — Frequency range 0 MHz to 1 000 MHz, IEC 61169-8 connectors

National foreword

This British Standard is the UK implementation of EN 60966-2-3:2009. It is identical to IEC 60966-2-3:2009. It supersedes BS EN 60966-2-3:2003 which is withdrawn.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.

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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 30 September 2009

Amendments issued since publication

Amd. No.	Date	Text affected

EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN 60966-2-3

August 2009

ICS 33.120.10

Supersedes EN 60966-2-3:2003

English version

Radio frequency and coaxial cable assemblies - Part 2-3: Detail specification for flexible coaxial cable assemblies - Frequency range 0 MHz to 1 000 MHz, IEC 61169-8 connectors

(IEC 60966-2-3:2009)

Ensembles de cordons coaxiaux et de cordons pour fréquences radioélectriques - Partie 2-3: Spécification particulière pour cordons coaxiaux souples - Bande de fréquences de 0 MHz à 1 000 MHz, connecteurs CEI 61169-8 (CEI 60966-2-3:2009)

Konfektionierte Koaxial- und Hochfrequenzkabel - Teil 2-3: Bauartspezifikation für flexible konfektionierte Koaxialkabel - Frequenzbereich 0 MHz bis 1000 MHz, Steckverbinder nach IEC 61169-8 (IEC 60966-2-3:2009)

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 46/302/FDIS, future edition 3 of IEC 60966-2-3, 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 60966-2-3 on 2009-07-01.

This European Standard supersedes EN 60966-2-3:2003.

The major change with respect to EN 60966-2-3:2003 is the reference to EN 61169-8 instead of EN 60169-8.

This detail specification is to be read in conjunction with EN 60966-1:1999, with EN 60966-2-1:2009, and with EN 60966-2-2:2003.

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.

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Endorsement notice

The text of the International Standard IEC 60966-2-3:2009 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

Reference documents 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.

Publication	Year	Title	EN/HD	Year
IEC 60966-1	1999	Radio frequency and coaxial cable assemblies - Part 1: Generic specification - General requirements and test methods	EN 60966-1	1999
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 61169-8	-[1)]	Radio-frequency connectors - Part 8: Sectional specification - RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock - Characteristics impedance 50 ohms (type BNC)	EN 61169-8	2007[2)]
IEC 61196-6	-[1)]	Coaxial communication cables - Part 6: Sectional specification for CATV drop cables	-	-

[1)] Undated reference.

[2)] Valid edition at date of issue.

INTRODUCTION

This part of IEC 60966 is a detail specification that applies to flexible coaxial cables described in IEC 60096-2. It relates to flexible coaxial cable assemblies using BNC connectors.

This detail specification 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 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 relating CQCs as defined in 12.3 of IEC 60966-2-1 and described in the 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 and described in the CM.

Reference documents

IEC 60966-1:1999, *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 61169-8, *Radio-frequency connectors – Part 8: Sectional specification – RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic impedance 50 ohm (type BNC)*

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

RADIO FREQUENCY AND COAXIAL CABLE ASSEMBLIES –

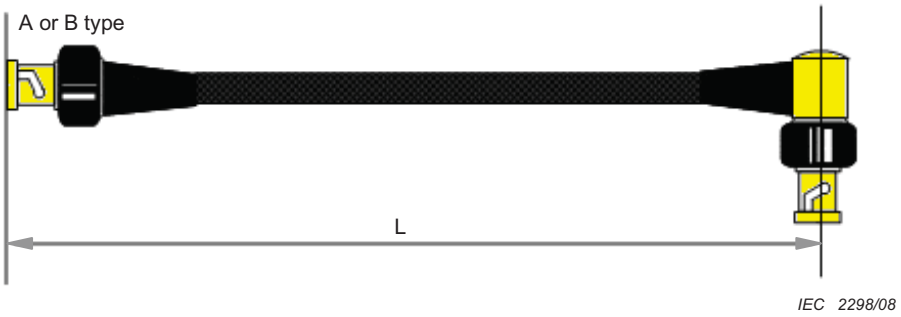
Part 2-3: Detail specification for flexible coaxial cable assemblies – Frequency range 0 MHz to 1 000 MHz, IEC 61169-8 connectors

[1] Prepared by IEC TC 46		**[2] Document** No. 60966-2-3 Issue: Third Issue **Date:** 06/01/09
[3] Available from: IEC 3 rue de Varembé Genève Suisse	**[4]** Generic specification: IEC 60966-1 Sectional Specification: IEC 60966-2-1 Blank detail specification: IEC 60966-2-2	

[5] Additional references:

Detail specification for flexible coaxial cable assemblies

NOTE Example diagram, manufacturer to insert actual diagram



[6] Maximum diameter < 16,6 mm

[7] Characteristic impedance: 50 Ω	**[8]** Frequency range: 0 MHz to 1 000 MHz
[9] Weight: 40 g/m + 37 g (typically)	**[10]** Minimum inside radius: for static bending: 20 mm for dynamic bending: 75 mm
[11] Climatic category: 40/70/21	**[12]** Applicable test group: Ba, Eb, Ez, Mn

	A	B
[13] Connector type	IEC 61169-8 (BNC)	IEC 61169-8 (BNC)
	Straight plug	Right angled plug
Cable type	IEC 61196-6 or equivalent	IEC 61196-6 or equivalent
Marking	Optional	Optional

Taper sleeves: On both ends (colour optional)

[14] Variants	1 A-A 2 A-B 3 B-B	**[15]** Page 1 of 3 pages

[16] Inspection values, ratings or characteristics	[17] Subclause[a]	[18] Value	[19] Remarks
Electrical			
Uniformity of impedance	8.2	50 Ω ± 2 Ω	≤ 200 ps rise time
Voltage proof	8.10	1,0 kV min	50 Hz to 65 Hz peak value
Insulation resistance	8.11	$>10^5$ MΩ	Test voltage 500 V 1 min
Inner conductor continuity	8.12	OK	Low voltage d.c.
Outer conductor continuity	8.12	≤ 10 mΩ	After tensile test 9.1
Mechanical			
Tensile	9.1	> 30 N	Interface OK Duration 1 min Test 8.12
Flexure	9.2	500 cycles	Force 5 N 20/min Test 8.12
Flexing endurance	9.3	500 cycles 20 cycles min	Test 8.12
Cable assembly crushing	9.4	600 N min	Test 8.2

[a] The relevant standard could be the generic, the sectional or both of them.

Recommended grouping of test			Recommended severity					
[20] Group	[21] Subclause[a]	Test	[22] Periodicity	[23] NC IL	[24] NQA AQL	[25] *n*	[26] c	[27] Length of specimen
Ba	7.2	Visual inspection	lot by lot	S3	4.0			
	7.3	Dimensional inspection	lot by lot	S3	4.0			
Ez	8.2	Uniformity of impedance	lot by lot	II	1.0			
Eb	8.10	Voltage proof	lot by lot	II	1.0			
	8.11	Insulation resistance	lot by lot	II	1.0			
	8.12	Inner and outer conductor continuity	lot by lot	III	1.0			
Mn	9.1	Tensile	3 years			3	0	On a CQC variant 1 l =300 mm
	9.2	Flexure	3 years					
	9.3	Flexing endurance	3 years					
	9.4	Cable assembly crushing	3 years					

[a] The relevant standard could be the generic, the sectional or both of them.

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