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

NSAI Standards

Irish Standard
I.S. EN 50117-2-4:2004

Coaxial cables -- Part 2-4: Sectional specification for cables used in cabled distribution networks - Indoor drop cables for systems operating at 5 MHz - 3 000 MHz

© CENELEC 2004 No copying without NSAI permission except as permitted by copyright law.

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

I.S. EN 50117-2-4:2004

Incorporating amendments/corrigenda issued since publication:

EN 50117-2-4:2004/A1:2008
EN 50117-2-4:2004/A2:2013

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:	*This document is based on:* EN 50117-2-4:2004	*Published:* 5 November, 2004

This document was published under the authority of the NSAI and comes into effect on: 24 November, 2004	ICS number: 33.120.10

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

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

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50117-2-4/A2

August 2013

ICS 33.120.10

English version

Coaxial cables - Part 2-4: Sectional specification for cables used in cabled distribution networks - Indoor drop cables for systems operating at 5 MHz - 3 000 MHz

Câbles coaxiaux -
Partie 2-4: Spécification intermédiaire pour câbles utilisés dans les réseaux de distribution par câbles -
Câbles de raccordement à usage intérieur pour les systèmes fonctionnant à 5 MHz - 3 000 MHz

Koaxialkabel -
Teil 2-4: Rahmenspezifikation für Kabel für Kabelverteilanlagen -
Hausinstallationskabel im Bereich von 5 MHz -
3 000 MHz

This amendment A2 modifies the European Standard EN 50117-2-4:2004; it was approved by CENELEC on 2013-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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.

CENELEC

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

© 2013 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Ref. No. EN 50117-2-4:2004/A2:2013 E

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

Contents

Page

Foreword **3**
1 Modification to Clause 2, Normative references **4**
2 Modification to 5.4, Fire performance test methods **4**

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

Foreword

This document (EN 50117-2-4:2004/A2:2013) has been prepared by CLC/SC 46XA "Coaxial cables" of CLC/TC 46X "Communication cables".

The following dates are fixed:

– latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2014-07-01
– latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2016-07-01

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.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

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

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50117-2-4/A1

February 2008

ICS 33.120.10

English version

Coaxial cables - Part 2-4: Sectional specification for cables used in cabled distribution networks - Indoor drop cables for systems operating at 5 MHz - 3 000 MHz

Câbles coaxiaux -
Partie 2-4: Spécification intermédiaire pour câbles utilisés dans les réseaux de distribution par câbles -
Câbles de raccordement à usage intérieur pour les systèmes fonctionnant à 5 MHz - 3 000 MHz

Koaxialkabel -
Teil 2-4: Rahmenspezifikation für Kabel für Kabelverteilanlagen -
Hausintallationskabel im Bereich von 5 MHz - 3 000 MHz

This amendment A1 modifies the European Standard EN 50117-2-4:2004; it was approved by CENELEC on 2007-12-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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: rue de Stassart 35, B - 1050 Brussels

© 2008 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Ref. No. EN 50117-2-4:2004/A1:2008 E

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

Foreword

This amendment to the European Standard EN 50117-2-4:2004 was prepared by SC 46XA, Coaxial cables, of Technical Committee CENELEC TC 46X, Communication cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to EN 50117-2-4:2004 on 2007-12-01.

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-12-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2010-12-01

_____

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

3 Definitions

Add after the first paragraph:

The definition of a drop coaxial cable is one of use or intended use and application within the network rather than by specific constructional requirements of the cable itself.

3.1
drop cable
coaxial cable which is used to connect from
a) subscriber tap or a directional coupler to a system outlet,
b) subscriber tap to a subscriber splitter,
c) subscriber splitter to a system outlet

4 Requirements for cable construction

4.14 Cable identification

4.14.1 Sheath marking

Add the following note:

NOTE The Construction Products Directive (CPD) will define classes for the fire performance of cables. As long as the CPD is under consideration and fire performance classes (Euroclasses) are not defined, sheath marking with Euroclass is not required.

Table 2 – High-frequency electrical and transmission measurements

Replace the rows for 5.1.2.6 and 5.1.2.7 and the footnotes by:

5.1.2.6	Transfer impedance	Screening Class A: ≤ 5 mΩ/m from 5 MHz to 30 MHz; Screening Class A+: ≤ 2,5 mΩ/m from 5 MHz to 30 MHz; Screening Class B: ≤ 15 mΩ/m from 5 MHz to 30 MHz; Screening Class C: ≤ 50 mΩ/m from 5 MHz to 30 MHz[d]. Test procedure according to EN 50289-1-6, triaxial method, after completion of the flexure test according to 5.2.9 of this standard.
5.1.2.7	Screening attenuation	Screening Class A: ≥ 85 dB from 30 MHz to 1 000 MHz; ≥ 75 dB from 1 000 MHz to 2 000 MHz; ≥ 65 dB from 2 000 MHz to 3 000 MHz. Screening Class A+: ≥ 95 dB from 30 MHz to 1 000 MHz; ≥ 85 dB from 1 000 MHz to 2 000 MHz; ≥ 75 dB from 2 000 MHz to 3 000 MHz. Screening Class B: ≥ 75 dB from 30 MHz to 1 000 MHz; ≥ 65 dB from 1 000 MHz to 2 000 MHz; ≥ 55 dB from 2 000 MHz to 3 000 MHz. Screening Class C: ≥ 75 dB from 30 MHz to 1 000 MHz; ≥ 65 dB from 1 000 MHz to 2 000 MHz; ≥ 55 dB from 2 000 MHz to 3 000 MHz[d]. Test procedure according to EN 50289-1-6, triaxial method, after completion of the flexure test according to 5.2.9 of this standard.

[a] In each frequency band, 3 peak return loss values up to 4 dB lower than the stated specified limit are permissible.

[b] A more detailed description of the subject is given in 46XA/Sec104/INF and 46XA/Sec105/INF.

[c] An EN test procedure is under consideration by CLC/SC 46XA.

[d] Screening class C cables are not intended for use in systems operating at frequencies ≤ 30 MHz.

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

Add the following Clause 6:

6 Cable types

Table 6 indicates typical cable properties for informative purposes for cables with copper inner conductors.

Alternative conductor materials, dimensions and characteristics shall be defined in the detail specification.

Table 6 - Drop cable types - Dimensions and ratings

Characteristic/Type	45 A+/A/B	29 A+/A/B	23 A+/A/B	18 A+/A/B	13 A+/A/B
Nom. diameter [mm]					
over dielectric	2,0	3,0	3,7	4,8	7,2
outer diameter	4,0	4,5	6,0	7,0	10,5
Attenuation max. [dB/100 m]					
@ 200 MHz	21	14	12	9	6
@ 800 MHz	45	29	23	18	13
@ 2 400 MHz	82	52	45	32	25
Attenuation coeff. [a]					
a	1,36	0,94	0,77	0,54	0,39
b	0,006 1	0,002 2	0,002 1	0,002 0	0,001 8
c	0,50	0,50	0,40	0,40	0,30
Screening class	A+/A/B	A+/A/B	A+/A/B	A+/A/B	A+/A/B
Max. D.C. current [b] [A]	0,8	2,1	3,4	6,1	13,2
Euroclass ???					

[a] $a(f)/[dB/100\ m] = a*\sqrt{f} + b*f + c$.

[b] Calculated value for aerial installation.

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

EUROPEAN STANDARD **EN 50117-2-4**

NORME EUROPÉENNE

EUROPÄISCHE NORM November 2004

ICS 33.120.10

English version

Coaxial cables
Part 2-4: Sectional specification for cables used in cabled distribution networks – Indoor drop cables for systems operating at 5 MHz - 3 000 MHz

Câbles coaxiaux
Partie 2-4: Spécification intermédiaire pour les câbles utilisés dans les réseaux de distribution câblés – Câbles de raccordement à usage intérieur pour systèmes fonctionnant à 5 MHz - 3 000 MHz

Koaxialkabel
Teil 2-4: Rahmenspezifikation für Kabel für Kabelverteilanlagen - Hausintallationskabel im Bereich von 5 MHz - 3 000 MHz

This European Standard was approved by CENELEC on 2004-09-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

© 2004 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Ref. No. EN 50117-2-4:2004 E

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

EUROPEAN STANDARD **EN 50117-2-4**

NORME EUROPÉENNE

EUROPÄISCHE NORM November 2004

ICS 33.120.10

English version

Coaxial cables
Part 2-4: Sectional specification for cables used in cabled distribution networks – Indoor drop cables for systems operating at 5 MHz - 3 000 MHz

Câbles coaxiaux
Partie 2-4: Spécification intermédiaire pour les câbles utilisés dans les réseaux de distribution câblés – Câbles de raccordement à usage intérieur pour systèmes fonctionnant à 5 MHz - 3 000 MHz

Koaxialkabel
Teil 2-4: Rahmenspezifikation für Kabel für Kabelverteilanlagen - Hausintallationskabel im Bereich von 5 MHz - 3 000 MHz

This European Standard was approved by CENELEC on 2004-09-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

© 2004 CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Ref. No. EN 50117-2-4:2004 E

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

Foreword

This European Standard was prepared by SC 46XA, Coaxial cables, of Technical Committee CENELEC TC 46X, Communication cables.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50117-2-4 on 2004-09-01.

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)	2005-09-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2007-09-01

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

Contents

1 Scope **4**
2 Normative references **4**
3 Definitions **4**
4 Requirements for cable construction **5**
4.1 General 5
4.2 Inner conductor 5
4.3 Dielectric 5
4.4 Outer conductor or screen 5
4.5 Filling compounds 5
4.6 Moisture barriers 5
4.7 Wrapping layers 5
4.8 Sheath 5
4.9 Metallic protection 6
4.10 Cable integral suspension strand (Messenger wire) 6
4.11 Oversheath 6
4.12 Fauna proofing 6
4.13 Chemical and/or environmental proofing 6
4.14 Cable identification 6
4.14.1 Sheath marking 6
4.14.2 Labelling 6
5 Tests for completed cables **7**
5.1 Electrical tests 7
5.1.1 Low-frequency and D.C. electrical measurements 7
5.1.2 High-frequency electrical and transmission measurements 7
5.2 Mechanical tests 9
5.3 Environmental tests 11
5.4 Fire performance test methods 11

Table 1 – Low-frequency and D.C. electrical measurements 7
Table 2 – High-frequency electrical and transmission measurements 7
Table 3 – Mechanical tests 9
Table 4 – Environmental tests 11
Table 5 – Fire performance test methods 11

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

1 Scope

This European Standard relates to EN 50117-1 and should be read in conjunction with this generic specification.This specification applies to indoor drop cables for use in cabled distribution systems operating at temperature between -40 °C and +70 °C [1] and at frequencies between 5 MHz and 3 000 MHz and complying with the requirements of EN 50083.

The purpose of this European Standard is to specify the applicable test methods and requirements for the electrical, mechanical, environmental and fire performance of the cables.

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.

EN 50083 series	Cable networks for television signals, sound signals and interactive services
EN 50117-1	Coaxial cables – Part 1: Generic specification
EN 50289-1-6	Communication cables – Specifications for test methods – Part 1-6: Electrical test methods – Electromagnetic performance
EN 50289-3-9	Communication cables – Specifications for test methods – Part 3-9: Mechanical test methods – Bending tests
EN 50290-1-2 [2]	Communication cables – Part 1-2: Definitions
EN 50290-2-22	Communication cables – Part 2-24: Common design rules and construction – PVC sheathing compounds
EN 50290-2-23	Communication cables – Part 2-23: Common design rules and construction – PE insulation
EN 50290-2-25	Communication cables – Part 2-25: Common design rules and construction – Polypropylene insulation compounds
EN 50290-2-27	Communication cables – Part 2-27: Common design rules and construction – Halogen free flame retardant thermoplastic sheathing compounds
EN 50290-4-1	Communication cables – Part 4-1: General considerations for the use of cables – Environmental conditions and safety aspects
EN 62153-1-1	Metallic telecommunication cable test methods – Part 1-1: Electrical – Measurement of the pulse/step return loss in the frequency domain using the Inverse Discrete Fourier Transformation (IDFT) (IEC 62153-1-1)
IEC 61196-1-115 [2]	Coaxial communication cables – Part 1-115: Electrical test methods – Test for pulse return loss (regularity of impedance)

3 Definitions

For the purposes of this European Standard, the definitions of EN 50290-1-2 and EN 50117-1 apply.

---

[1] This value is valid for applications without ampacity only.

[2] At draft stage.

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation