



SLOVENSKI STANDARD
SIST EN 50173-4:2008/A2:2013
01-februar-2013

**Informacijska tehnologija - Univerzalni sistemi pokabljenja - 4. del: Bivalni prostori
- Dopolnilo A2**

Information technology - Generic cabling systems - Part 4: Homes

Informationstechnik - Anwendungsneutrale Kommunikationskabelanlagen - Teil 4:
Wohnungen

Technologies de l'information - Systèmes de câblage générique - Partie 4: Locaux
d'habitation

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Ta slovenski standard je istoveten z: EN 50173-4:2007/A2:2012

ICS:

33.040.50	Vodi, zveze in tokokrogi	Lines, connections and circuits
35.110	Omreževanje	Networking
91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

SIST EN 50173-4:2008/A2:2013 **en,de**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50173-4/A2

November 2012

ICS 33.040.50

English version

**Information technology -
Generic cabling systems -
Part 4: Homes**

Technologies de l'information -
Systèmes de câblage générique -
Partie 4: Locaux d'habitation

Informationstechnik -
Anwendungsneutrale
Kommunikationskabelanlagen -
Teil 4: Wohnungen

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This amendment A2 modifies the European Standard EN 50173-4:2007; it was approved by CENELEC on 2012-11-12. 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.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This document (EN 50173-4:2007/A2:2012) has been prepared by CLC/TC 215 "Electrotechnical aspects of telecommunication equipment".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2013-11-12
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2015-11-12
this document have to be withdrawn

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.

This document introduces optical fibre cabling support within homes. In addition, several editorial improvements have been introduced.

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Foreword

Add the following after EN 50173-5:

EN 50173-6 Information technology – Generic cabling systems – Part 6: Distributed building services

Introduction

Amend 1st paragraph to read:

This European Standard specifies generic cabling in homes, installed to support one or more of the following groups of applications and based upon balanced, coaxial and optical fibre cabling as appropriate:

Amend 3rd paragraph to read:

Backbone cabling connecting individual homes within single premises is built according to the relevant standard (EN 50173-1, EN 50083 series and EN 60728 series).

Replace Figure 1 by the following figure and add to the list before Figure 1:

- CLC/TR 50173-99-3, *Information technology – Generic cabling systems - Part 99-3: Home cabling infrastructures up to 50 m in length to support simultaneous and non simultaneous provision of applications*

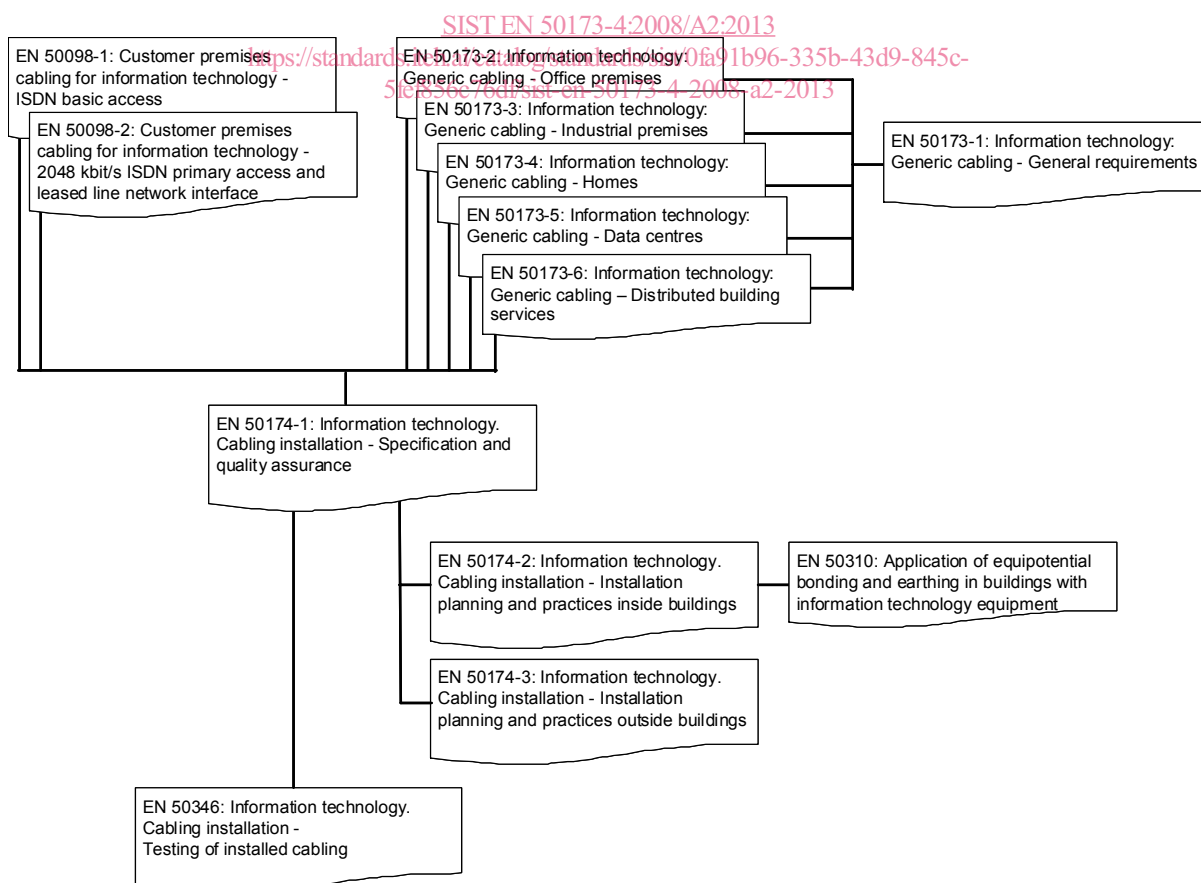


Figure 1 - Schematic relationship between the EN 50173 series and other relevant standards

1 Scope and conformance

1.1 Scope

Amend 1st paragraph to read:

This European Standard specifies generic cabling in homes, installed to support one or more of the following groups of applications and based upon balanced, coaxial and optical fibre cabling as appropriate:

1.2 Conformance

In the English version, amend 2nd sub-bullet of item f) to read “ensured” instead of “assured”.

2 Normative references

Insert the following:

EN 61754-20:2012, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 20: Type LC connector family (IEC 61754-20:2012)*

4 Structure of the generic cabling system to support ICT and/or BCT applications in homes

4.7 Dimensioning and configuring

4.7.1 Distributors

Replace Table 2 with the following:

Table 2 – Maximum channel lengths for reference implementations of ICT, BCT and optical channels

Cabling type			
ICT	BCT-B	BCT-C	Optical
100 m	50 m	100 m	100 m
NOTE 1 See 6.3.2.3 and Annex B for performance and length considerations for BCT channels. NOTE 2 Some BCT applications may not be supported over the maximum lengths (see EN 50173-1:2011, Annex F). NOTE 3 Some implementations of optical channels are not supported over the maximum lengths (see 6.3.3 for performance and length considerations).			

4.7.5.1 General requirements

Amend title to read:

4.7.5.1 General

Amend 8th, 9th, 10th and 11th paragraphs to read

Additional balanced cables (for ICT and/or BCT applications), coaxial cables (for BCT applications) or optical fibre cables should be provided as defined by

- the number and mix of applications (e.g. satellite feed, multi-cable feed of CATV, in-house generated video);

NOTE Some applications, such as direct satellite feeds, use frequencies above 1 000 MHz that are only supported by the higher bandwidth BCT-C channels.

- the number of application outlets to be served.

For metallic cabling supporting both ICT and BCT channels, the application outlet is termed the MATO. A MATO may also be used to support CCCB applications where appropriate, see EN 50173-1:2011, Annex F.

For balanced cabling supporting ICT channels only, the application outlet is termed the TO and uses connecting hardware specified in 9.2. A TO may also be used to support BCT and CCCB applications where appropriate, see EN 50173-1:2011, Annex F.

For balanced or coaxial cabling supporting BCT channels only, the application outlet is termed the BO and uses connecting hardware specified in 9.3. A BO using balanced BCT-B cabling may also be used to support ICT and CCCB applications where appropriate, see EN 50173-1:2011, Annex F.

Insert the following after 11th paragraph:

For optical channels supporting either ICT or BCT channels, the application outlet is termed an optical TO/BO and terminates a minimum of one cable containing two optical fibres in accordance with 6.3.3.2 using connecting hardware as specified in 9.5.

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Insert a new subclause 4.7.5.5:

4.7.5.5 Optical TO/BO

The optical TO/BO shall be located in readily accessible locations in the room, depending on the design of the building and subject to the requirements of national and local regulations.

Each optical TO/BO shall be terminated in accordance with 9.5.

6 Channel performance in homes

6.1 General

Amend 3rd paragraph to read:

The transmission performance of balanced, coaxial and optical fibre cabling channels is specified in terms of Classes in 6.3.

6.3 Transmission performance

6.3.1 General

Insert the following new subclause headings after 6th paragraph:

6.3.2 Balanced and coaxial cabling channels

6.3.2.1 General

Insert the remainder of existing 6.3.1.

Delete NOTE 2 and **renumber** NOTE 1 into NOTE.

Delete row entitled “Optical channel” in Table 3.

Amend paragraph 9 (after Table 3) to read:

While cabling channels for ICT and CCCB within the home presently are provided via balanced cables only, channels for BCT may be provided via balanced cable or coaxial cable. The CCCB channel specified in this Clause assumes power feeding and information transfer on the same pair(s). The CCCB channel is specified with a current carrying capacity of 0,7 A. This requirement may be met with one pair of a CCCB cable or the use, in combination, of the pairs of an ICT cable. All channels specified in this Clause assume bi-directional transmission.

6.3.2 ICT channel performance

Renumber to read:

6.3.2.2 ICT channel performance

6.3.3 BCT channel performance

Renumber to read:

6.3.2.3 BCT channel performance

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6.3.4 CCCB channel performance

Renumber to read:

6.3.2.4 CCCB channel performance

Insert new subclause 6.3.3:

6.3.3 Optical fibre cabling channels

Cabling shall be designed using the cabled optical fibre Categories referenced in Clause 8 to provide channel performance of:

- a) Class OF-25 - using cabled plastic fibre of Category OP1;

NOTE 1 The supported emerging application HS-BASE-P described in ETSI TS 105 175-1-1 is specified to deliver 1 Gbit/s over this channel Class.

- b) Class OF-100 - using cabled optical fibre of at least Category OM3;
- c) Class OF-300 – using cabled optical fibre Category OS1 or OS2.

NOTE 2 The length of the channel is limited to 100 m as specified in Table 2.

These channels are specified in EN 50173-1:2011 for the following parameters:

- d) channel attenuation;
- e) propagation delay.

7 Reference implementations in homes

7.1 General

Insert new subclause 7.2 headings after 2nd paragraph:

7.2 Balanced and coaxial cabling channels

7.2.1 General implementations

Insert the remainder of existing 7.1.

7.2 Dimensions for ICT and BCT channels

Renumber and amend to read:

7.2.2 ICT and BCT channels

7.3 Dimensions for CCCB channels

Renumber and amend to read:

7.2.3 CCCB channels

Insert new subclause 7.3.

7.3 Optical fibre cabling

7.3.1 General

Optical fibre channels shall be comprised of components that comply with Clauses 8, 9 and 10. The optical fibres are defined in terms of physical construction (core/cladding diameter) and their transmission performance Category within a cable.

Within the reference implementations of this clause, the optical fibres used in each cabling channel shall have the same physical construction specification and the cabled optical fibres shall be of the same category. When more than one physical construction or cabled optical fibre category is used in a cabling subsystem the cabling shall be marked to allow each cabling type to be clearly identified.

7.3.2 Component choice

The selection of optical fibre components shall be determined by the channel lengths required and the applications to be supported. Refer to EN 50173-1:2011, Annex F, for guidance.

7.3.3 Maximum channel lengths

The models of Figure 13 are applicable to home or secondary home optical fibre cabling. It should be noted that the connection systems used to terminate fixed optical cabling may contain mated connections and splices (permanent or re-useable) and that cross-connects may comprise re-useable splices.