



SLOVENSKI STANDARD
SIST EN 50173-3:2008/A1:2011
01-marec-2011

**Informacijska tehnologija - Univerzalni sistemi polaganja kablov - 3. del:
Industrijska okolja - Dopnilo A1**

Information technology - Generic cabling systems -- Part 3: Industrial premises

Informationstechnik - Anwendungsneutrale Kommunikationskabelanlagen -- Teil 3:
Industriell genutzte Standorte

Technologies de l'information - Systèmes de câblage générique -- Partie 3: Bâtiments du
secteur industriel

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[SIST EN 50173-3:2008/A1:2011](https://standards.it.ch.at/catalog/standards/sist/cb5bc13a-f8a7-4795-9778-c158585800e9/sist-en-50173-3-2008-a1-2011)

Ta slovenski standard je istoveten z: EN 50173-3:2007/A1:2010

ICS:

33.040.50	Vodi, zveze in tokokrogi	Lines, connections and circuits
35.110	Omreževanje	Networking

SIST EN 50173-3:2008/A1:2011 **en,fr,de**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50173-3/A1

December 2010

ICS 35.110

English version

**Information technology -
Generic cabling systems -
Part 3: Industrial premises**

Technologies de l'information -
Systèmes de câblage générique -
Partie 3: Bâtiments du secteur industriel

Informationstechnik -
Anwendungsneutrale
Kommunikationskabelanlagen -
Teil 3: Industriell genutzte Standorte

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This amendment A1 modifies the European Standard EN 50173-3:2007; it was approved by CENELEC on 2010-12-01. 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This amendment was prepared by the Technical Committee CENELEC TC 215, Electrotechnical aspects of telecommunication equipment.

The text of the draft was submitted to the formal vote and was approved by CENELEC as amendment A1 to EN 50173-3:2007 on 2010-12-01.

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

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) 2011-12-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2013-12-01

This standard introduces several changes in order to align the standard with the changes resulting from the introduction of new Channel classes and component Categories in EN 50173-1:201X. Furthermore, it updates requirements for optical fibre connecting hardware.

For the convenience of the reader of this standard, the pertinent tables are reproduced in total, with grey shading of new table cells. Where modifications to text apply to single expressions or a few words only, this is indicated by underlining.

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Text of A1 to EN 50173-3:2007

General change

Replace all occurrences of “EN 50173-1:2007” **with** “EN 50173-1:201X” (in addition to the changes indicated below).

Introduction

Replace Figure 2 with:

In addition, a number of Technical Reports have been developed to support or extend the application of these standards, including:

- CLC/TR 50173-99-1, *Cabling guidelines in support of 10 GBASE-T*;
- CLC/TR 50173-99-2, *Information technology – Implementation of BCT applications using cabling in accordance with EN 50173-4*.

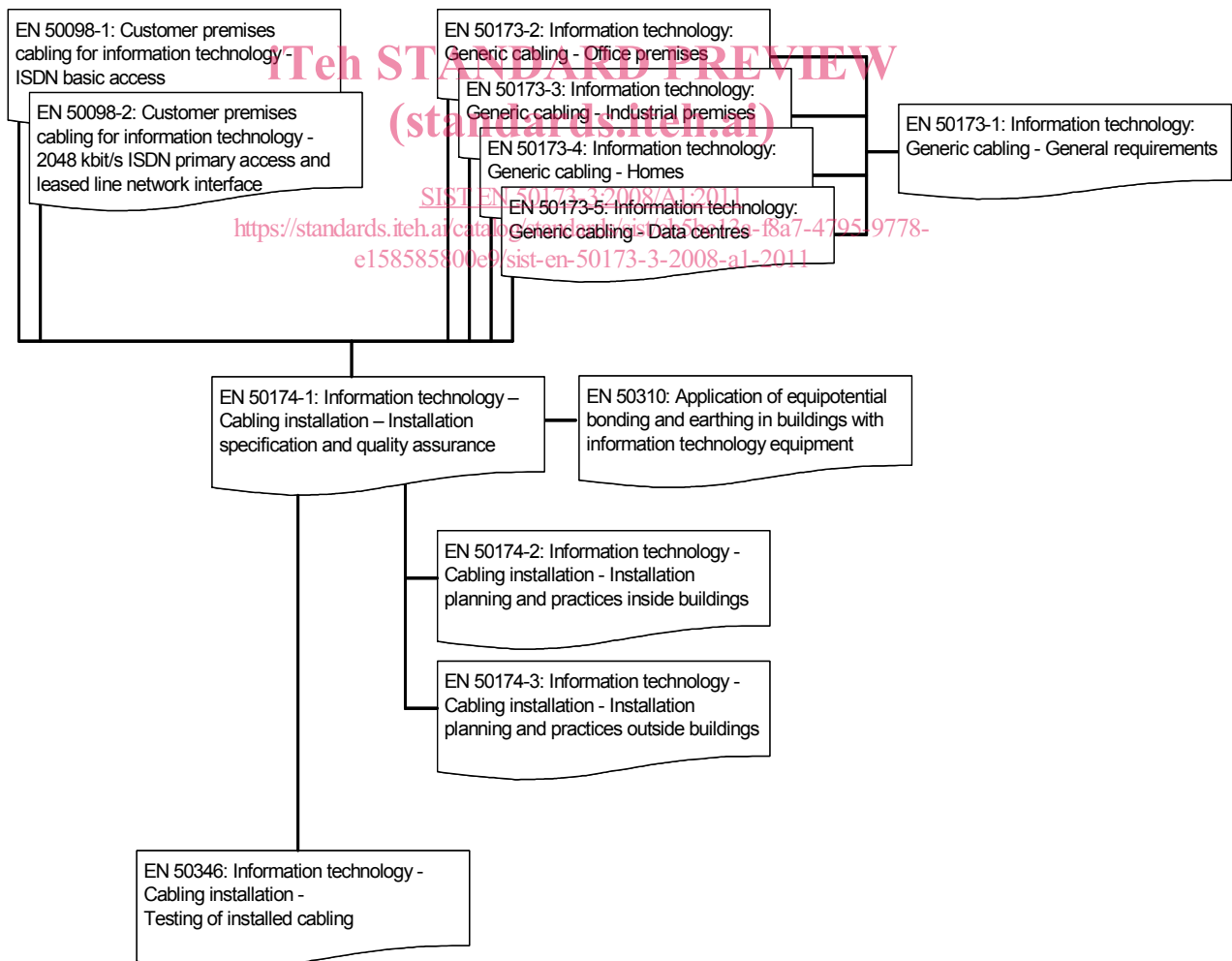


Figure 2 – Schematic relationship between the EN 50173 series and other relevant standards

Replace Table 1 with:

Table 1 – Contextual relationship between EN 50173 series and other standards relevant for information technology cabling systems

Building design phase	Generic cabling design phase	Specification phase	Installation phase	Operation phase
EN 50310	EN 50173 series except EN 50173-4	EN 50174-1		EN 50174-1
6. Bonding networks	4: Structure 5: Channel performance 7: Cable requirements 8: Connecting hardware requirements 9: Requirements for cords and jumpers A: Link performance limits	4 Requirements for specifying installations of information technology cabling 5: Requirements for installers of information technology cabling		4: Requirements for specifying installations of information technology cabling
		Planning phase		
	and EN 50173-4	EN 50174-2	EN 50174-2	
	4 and 5: Structure 6: Channel performance 8: Cable requirements 9: Connecting hardware requirements 10: Requirements for cords and jumpers A: Link performance limits	4: Requirements for planning installations of information technology cabling 6: Segregation of metallic information technology cabling and power supply cabling 7: Electricity distribution systems and lightning protection	5: Requirements for the installation of information technology cabling 6: Segregation of metallic information technology cabling and power supply cabling 8: Office (commercial) premises 9: Industrial premises 10: Homes 11: Data centres	
		and EN 50174-3	and EN 50174-3	
		and (for equipotential bonding) EN 50310	and (for equipotential bonding) EN 50310	
			and EN 50346	
			4: General requirements 5: Test parameters for balanced cabling 6: Test parameters for optical fibre cabling	

1.2 Conformance

In the English version **replace** bullet d), second sub-bullet, **with**:

attachment of appropriate components to a link design meeting the prescribed performance Class of Annex A. Channel performance shall be ensured where a channel is created by adding more than one cord to either end of a link meeting the requirements of Annex A;

In all versions, replace text starting from “In addition the following requirements ...” up to and including bullet h) **by**:

In addition the requirements of the EN 50174 series of standards shall be met.

The test parameters to be measured and the sampling levels to be applied for a particular installation shall be defined in the installation specification and quality plans for that installation prepared in accordance with EN 50174-1.

The treatment of measured results that fail to meet the requirements of this clause, or lie within the relevant measurement accuracy, shall be clearly documented within a quality plan as described in EN 50174-1.

Delete the sentence “Neither this standard nor EN 50174-1 specify the test and sampling levels to be adopted”.

Delete the last paragraph, which starts with “Specifications marked “ffs” (for further study) ...”.

2 Normative references

Update the reference to EN 50173-1:2007 to read “EN 50173-1:201X”.

Update the title of EN 50174-1 to read “*Information technology – Cabling installation – Part 1: Installation specification and quality assurance*”.

Replace the reference to EN 61754-20 with:

EN 61754-20:201X, *Fibre optic connector interfaces – Part 20: Type LC connector family* (IEC 61754-20:201X)

Add the following references:

4.6.2 Channels and links

Delete in the 1st paragraph “between specific test interfaces”

5.3.2.1 Floor and intermediate cabling

Replace 1st paragraph **with**:

Floor and intermediate cabling shall be designed to provide a channel performance as required from Classes D or higher as specified in EN 50173-1:201X, taking into consideration the requirements for application support over the lifetime of the cabling.

5.3.2.2 Backbone cabling

Replace 1st paragraph **with**:

Backbone cabling shall be designed to provide channel performance as required from Classes A or higher as specified in EN 50173-1:201X.

5.3.3 *Optical fibre cabling*

Replace text in 5.3.3 **with:**

Cabling shall be designed using the cabled optical fibre Categories referenced in 7.3 to provide channel performance as required from the following Classes as specified in EN 50173-1:

- OF-25;
- OF-50;
- OF-100;
- OF-200;
- OF-300;
- OF-500;
- OF-2000;
- OF-5000;
- OF-10000.

6.2.2.1 *Component choice*

Replace 2nd paragraph **with:**

Using the models of 6.2.2.2:

- a) Category 5 components provide Class D balanced cabling performance;
- b) Category 6 components provide Class E balanced cabling performance;
- c) Category 6_A components provide Class E_A balanced cabling performance;
- d) Category 7 components provide Class F balanced cabling performance;
- e) Category 7_A components provide Class F_A balanced cabling performance.

6.2.2.2 Dimensions

Replace Figure 11 with:

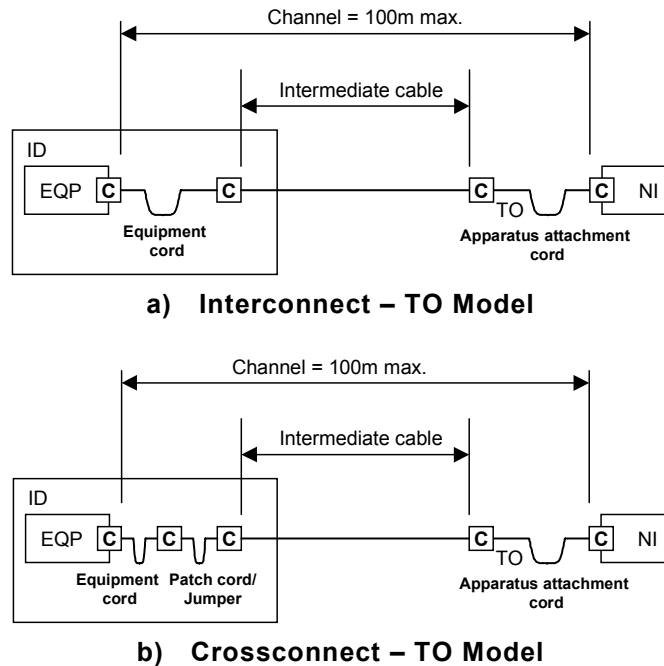


Figure 11 – Intermediate cabling models
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Replace Table 2 with:

SIST EN 50173-3:2008/A1:2011

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Table 2 – Intermediate channel length equations

Model	Figure	Implementation equations		
		Class D	Class E	Class E _A
Interconnect – TO	11a	$I = 109 - F \times X$	$I = 107 - 3^a - F \times X$	$I = 107 - 3^a - F \times X$
Cross-connect – TO	11b	$I = 107 - F \times X$	$I = 106 - 3^a - F \times X$	$I = 106 - 3^a - F \times X$
		Class F	Class F _A	
Interconnect – TO	11a	$I = 107 - 2^a - F \times X$	$I = 107 - 2^a - F \times X$	
Cross-connect – TO	11b	$I = 106 - 3^a - F \times X$	$I = 106 - 3^a - F \times X$	
<p><i>I</i> maximum length of the fixed intermediate cable (m)</p> <p><i>F</i> combined length of patch cords, jumpers, equipment and apparatus attachment cords (m)</p> <p><i>X</i> ratio of flexible cable insertion loss (dB/m) to fixed horizontal cable insertion loss (dB/m) - see Clause 9</p> <p>^a This length reduction is to provide an allocated margin to accommodate insertion loss deviation.</p> <p>For operating temperatures above 20 °C, <i>I</i> should be reduced by 0,2 % per °C for screened cables and 0,4 % per °C (20 °C to 40 °C) and 0,6 % per °C (> 40 °C to 60 °C) for unscreened cables. Manufacturers'/suppliers' information shall be consulted where the intended operating temperature exceeds 60 °C.</p>				

Insert the following NOTE after the 3rd indent (which reads “the individual length of patch cords or jumpers shall not exceed 5 m”):

NOTE Channel and permanent link performance requirements are based on assumptions regarding the minimum length and insertion loss of cords.