



**SLOVENSKI STANDARD**  
**SIST EN 50174-3:2014/A1:2017**  
**01-julij-2017**

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**Informacijska tehnologija - Pokabljenje - 3. del: Načrtovanje inštalacij in tehnike dela zunaj zgradb - Dopnilo A1**

Information technology - Cabling installation - Part 3: Installation planning and practices outside buildings

Informationstechnik - Installation von Kommunikationsverkabelung - Teil 3: Installationsplanung und Installationspraktiken im Freien

Technologies de l'information - Installation de câblage - Partie 3: Planification et pratiques d'installation à l'extérieur des bâtiments

<https://standards.iteh.ai/catalog/standards/sist/b04d78fc-8f8e-43fa-b9cf-4fd4a90aa07/sist-en-50174-3-2014-a1-2017>

**Ta slovenski standard je istoveten z: EN 50174-3:2013/A1:2017**

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**ICS:**

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

**SIST EN 50174-3:2014/A1:2017**      **en**

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EUROPEAN STANDARD

EN 50174-3:2013/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2017

ICS 35.110

English Version

## Information technology - Cabling installation - Part 3: Installation planning and practices outside buildings

Technologies de l'information - Installation de câblage -  
Partie 3: Planification et pratiques d'installation à l'extérieur  
des bâtiments

Informationstechnik - Installation von  
Kommunikationsverkabelung - Teil 3: Installationsplanung  
und Installationspraktiken im Freien

This amendment A1 modifies the European Standard EN 50174-3:2013; it was approved by CENELEC on 2017-04-17. 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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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

EN 50174-3:2013/A1:2017 (E)

## European foreword

This document (EN 50174-3:2013/A1:2017) 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 at national level by publication of an identical national standard or by endorsement (dop) 2018-04-17
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-04-17

This document comes with:

- a new sub-clause 4.10 on planning of repair;
- modifications to the definitions used;
- technical and editorial corrections to Clauses 4, 5, 6, 7, Annex A and Annex B.

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.

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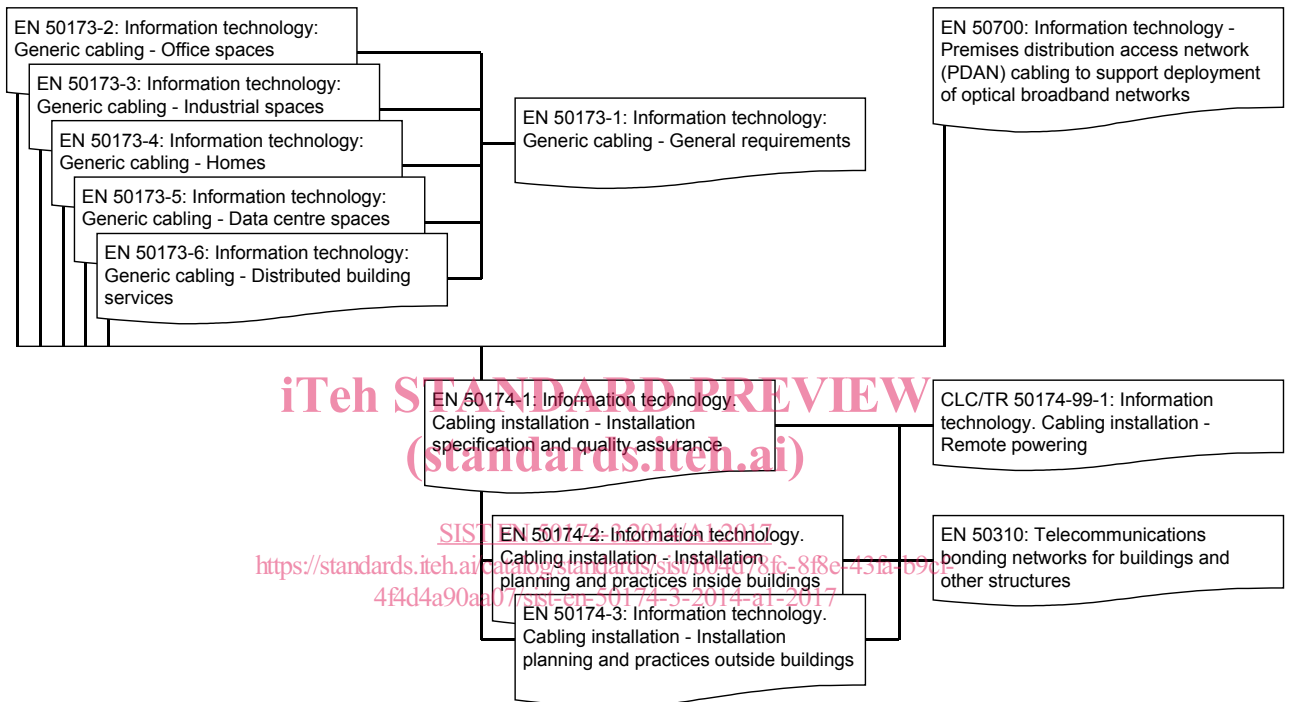
**Introduction**

**Replace** bullet 3 with “3) application dependent cabling design (e.g. EN 50700);

**Delete** bullet 4)

**Replace** bullet 5) with “4) bonding requirements (EN 50310) - the principles of which can be employed in installations outside buildings.

**Replace** Figure 1 by the following figure:



**Replace** Table 1 by the following Table

Building design phase	Generic cabling design phase	Specification phase	Installation phase	Operation phase
EN 50310	EN 50173-2	EN 50174-1	EN 50174-2 EN 50174-3 EN 50310	EN 50174-1
	EN 50173-3	Planning phase		
	EN 50173-4			
	EN 50173-5	EN 50174-2 EN 50174-3 EN 50310		
	EN 50173-6			
	(these ENs reference general requirements of EN 50173-1)			

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## 2 Normative references

**Update** title of EN 50310: “Telecommunications bonding networks for buildings and other structures”

**Delete** EN 50346

**Delete** EN 60950 (all parts)

**Delete** EN 60950-1

**Add** EN 13501-6, *Fire classification of construction products and building elements. Classification using data from reaction to fire tests on electric cables*

**Add** EN 61300-3-35, *Fibre optic connecting devices and passive components. Basic test and measurements procedures. Examinations and measurements. Fibre optic connector endface visual and automated inspection*

**Add** EN 62368-1, *Audio/video, information and communication technology equipment – Part 1: Safety requirements (IEC 62368-1:2014, modified)*

**Add** EN 62368-3, *Audio/video, information and communication technology equipment – Safety – Part 3: DC power transfer through information technology communication cabling (IEC 62368-3)*

## 3 Terms, definitions and abbreviations

### 3.1 Terms and definitions

**Insert** new definition 3.1.8 and **renumber** the following ones accordingly:

#### 3.1.8

##### **extraneous-conductive-part**

conductive part not forming part of the electrical installation and liable to introduce an electric potential, generally the electric potential of a local earth

[SOURCE: IEC 60050-826:2004, 826-12-11, IEC 60050-195:1998, 195-06-11]

**Amend** existing definition **3.1.11** to read

“vault/chamber as part of an underground conduit system and used to facilitate placing, connectorisation, and maintenance of cables as well as the placing of associated equipment, in which it is expected that a person will enter to perform work”

**Delete** existing definition 3.1.12 “rural area”

**Amend** definition **3.1.14** to read

“use of electrically conductive barriers or physical separation to prevent electromagnetic interference between external noise sources, including power supply cabling, and information technology cabling

[SOURCE: EN 50174-2:2009/A2:2014, 3.1.28 modified – deleted the word “earthed”]

**Insert** new definition 3.1.17 and **renumber** the following one accordingly:

### 3.1.17

#### **subscriber**

identifiable entity, and the space allocated to that entity, within the premises that may require a future direct connection to the access network

[SOURCE: EN 50700:2014, 3.1.22 – modified: added “and the space allocated to that entity”]

**Delete** existing definition 3.1.18 “urban area”

## 4 **Requirements for planning installations of information technology cabling**

### 4.1.2 **Power supply cabling**

**Amend** title to read “Low voltage power supply cabling”.

### 4.1.4 **Transmission and terminal equipment**

**Replace** 1<sup>st</sup> paragraph with:

“Information technology cabling shall be connected to equipment that incorporates safe signal circuitry complying with the SELV circuit and the TNV requirements as defined in the EN 60950 series and EN 62368-1. Where equipment provides direct current (DC) power transfer over the information technology cabling it shall comply with EN 62368-3.”

### 4.1.5 **Cells and batteries**

**Delete** this subclause and **renumber** the following ones accordingly.

### 4.1.7 **Closures**

**Replace** sub-clause with:

“Where both information technology cabling and power supply cabling are contained within a closure any conductive material of the closure or internal barriers shall be treated in accordance with HD 384/HD 60364 series and/or local regulations as appropriate.

In addition:

a) a barrier (either conducting or non-conducting) shall be present between the two cable types which shall meet a minimum of IP20 as specified in EN 60529;

b) covers on the closure shall allow separate access to the information technology cabling and the power supply cabling and shall be retained such that the use of a tool is necessary to gain access thereby preventing inadvertent connection between the power supply and the information technology cabling;

c) the entry for the information technology cables shall be separately removable.”

## 4.3 **Pathways**

### 4.3.1.1 **Requirements**

**Insert** after paragraph 1:

The external surfaces of existing piping systems shall not be used for the installation of pathways systems or the direct attachment of cables.

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#### 4.3.7.2 Pathways shared with overhead power supply infrastructures

##### 4.3.7.2.2 Requirements

Amend bullet c) to read:

c) the requirements for earthing systems, aerial to underground junctions and aerial connections.

Amend last paragraph to read:

“Where an earthing system exists on a supporting structure then, unless technical and contractual agreement for joint use has been obtained, it shall be dedicated to only one of the following applications:”

#### 4.3.7.3 The provision of a parallel earthing conductor (PEC)

##### 4.3.7.3.2 Requirements

Replace sub-clause to read:

“A PEC shall be connected to an earthing system at least at one point. The planning of any additional connections shall be in accordance with the HD 384/HD 60364 series and/or local regulations as appropriate.

An information technology cable screen shall not be used where a PEC is required to withstand large currents (e.g. for lightning protection or as power fault current return).”

##### 4.3.7.3.3 Recommendations (standards.iteh.ai)

Replace “parallel earthing conductor” with “PEC”

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#### 4.4 Pathway systems

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##### 4.4.1.2 Requirements

Replace 5<sup>th</sup> paragraph (including the 3 bullets) with the following:

“Pathways, entry points to the pathways and the pathway systems selected shall ensure cables are able to be installed and, where appropriate, fixed in accordance with the applicable minimum bend radius (during installation, during operation – static and during operation – dynamic) without introducing deformation of the cable sheath or applying compressive loads exceeding that specified for the cable. These requirements apply in three dimensions. This can be achieved by the use of pre-fabricated curved corners, drop-outs, radius limiters or other means as shown in Figure 4.

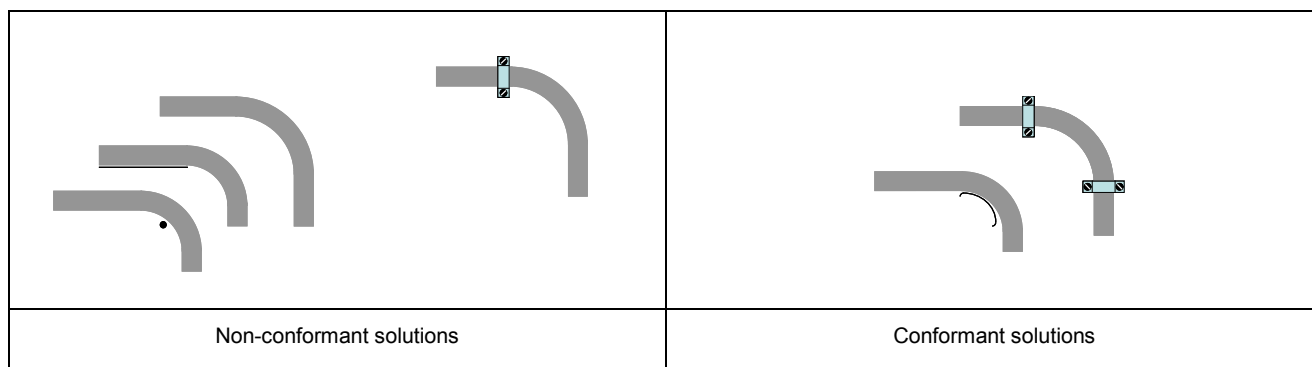


Figure 4 – Examples of non-conformant and conformant bend limiting techniques”

Renumber the following Figures accordingly (both in text and figure captions).



**Replace** 7<sup>th</sup> and 8<sup>th</sup> paragraph with the following:

NOTE 1 Pathway systems that do not allow such an approach can restrict the type and use of cables installed in the pathways and cable management systems selected.

NOTE 2 For cables with additional protection, minimum bend radius can be greater than specified above.”

#### **4.5 Pathway systems other than for core and access networks**

##### **4.5.1.2 Requirements**

**Insert** text after 1<sup>st</sup> paragraph:

“Conductive pathway systems in close proximity to HV power supply cabling shall be protected from electrical hazards by means of protective earthing and/or sectioning.”

##### **4.5.4.2 Pathway systems on overhead power supply infrastructures**

###### **4.5.4.2.1 General**

**Amend** 2<sup>nd</sup> paragraph to read:

“Components of the pathway systems can include:”

**Amend** bullet g) to read:

g) fittings to allow electrostatic discharge of the information technology cable sheath at each end of the pathway.

###### **4.5.4.2.2 Requirements for metallic information technology cables**

**Replace** bullet b) and last paragraph to read:

“b) connected to the earthing system of power supply system; this connection also includes that of extraneous-conductive-parts of the cables.

The earthing at the ends of the shared routes of extraneous-conductive-parts (e.g. armouring, strain relief members of optical fibre cables) that are part of the information technology cable construction shall be in accordance with local regulations. Where no local regulation exists the default procedure is to earth the conductive parts at one end and insulate them at the other. In all cases the procedures used shall be documented.”

#### **4.9 Spaces and structures other than for core and access networks**

##### **4.9.3 Telecommunication cabinets**

###### **4.9.3.1 Requirements**

**Amend** to read:

“The design of the telecommunications cabinets shall consider any requirements for the accommodation of climate control equipment, electrical connections (including uninterruptible power supplies) and alarms systems to advise of unauthorised access.”