

SLOVENSKI STANDARD
SIST EN 50174-2:2009/A2:2014
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Informacijska tehnologija - Polaganje kablov - 2. del: Načrtovanje inštalacij in tehnike dela v stavbah - Dopolnilo A2

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

Informationstechnik - Installation von Kommunikationsverkabelung - Teil 2: Installationsplanung und Installationspraktiken in Gebäuden

Technologies de l'information - Installation de câblages - Partie 2: Planification et pratiques d'installation à l'intérieur des bâtiments

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Ta slovenski standard je istoveten z: EN 50174-2:2009/A2:2014

ICS:

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

SIST EN 50174-2:2009/A2:2014 **en**

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EUROPEAN STANDARD

EN 50174-2:2009/A2

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English Version

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

Technologies de l'information - Installation de câblages -
Partie 2: Planification et pratiques d'installation à l'intérieur
des bâtiments

Informationstechnik - Installation von
Kommunikationsverkabelung - Teil 2: Installationsplanung
und Installationspraktiken in Gebäuden

This amendment A2 modifies the European Standard EN 50174-2:2009; it was approved by CENELEC on 2014-08-26. 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

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Foreword

This document (EN 50174-2:2009/A2:2014) 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) 2015-08-26
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-08-26

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 amendment covers:

- a new Clause 12 on common pathways and spaces within multi-tenant buildings;
- a modified treatment of A.3 to ensure that it addresses the planning and installation of electrical isolation components internal to buildings (EN 50174-3 will include an Annex with the same topic for external to buildings);
- some technical and editorial changes to Clauses 3, 4, 5, 8 and 11.

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Introduction

Replace Figure 1 by the following figure:

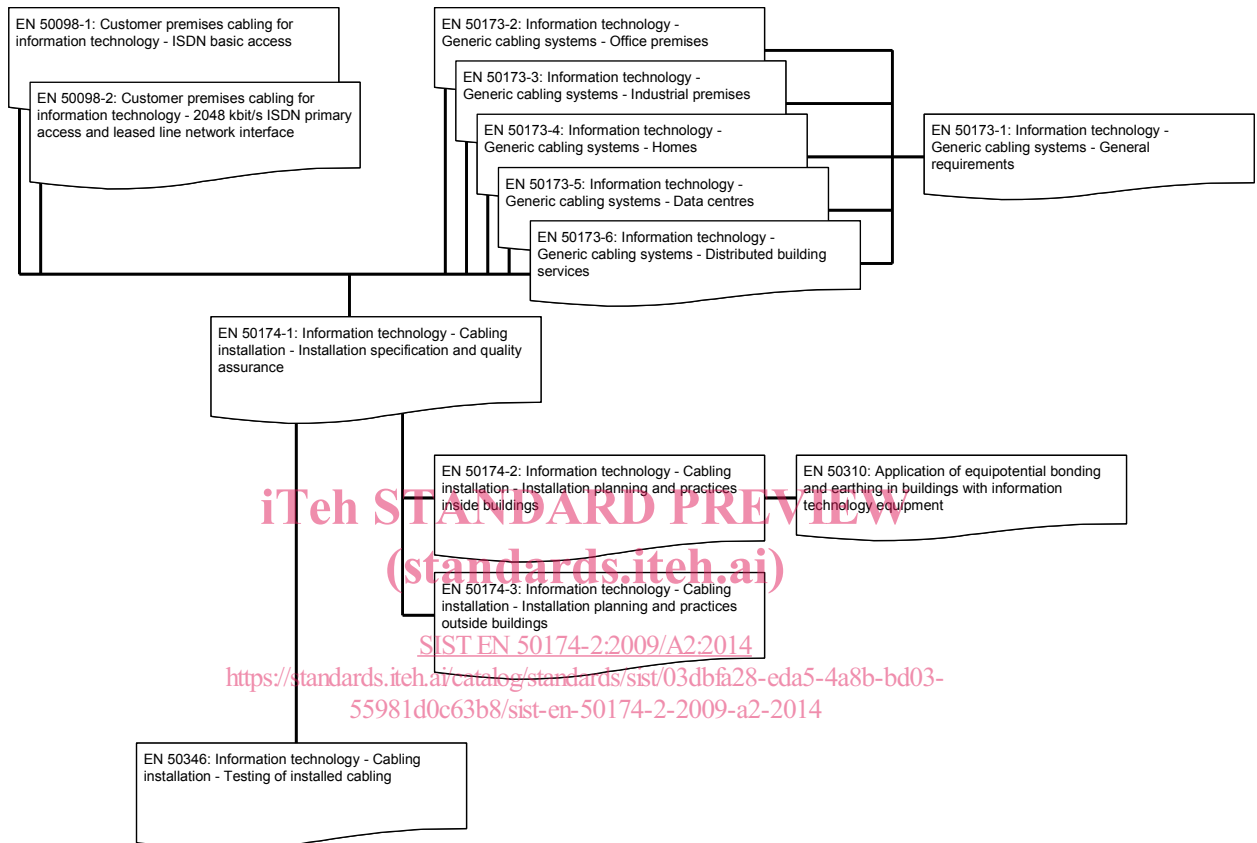


Figure 1 - Schematic relationship between the EN 50173 series and other relevant standards

Replace Table 1 with the following Table:

Table 1 — Contextual relationship between EN 50174 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 6. Earthing networks	EN 50173 series except EN 50173-4 4: Structure 5: Channel performance 7: Cable requirements 8: Connecting hardware requirements 9: Requirements for cords and jumpers A: Link performance limits and EN 50173-4 4 and 5: Structure 6: Channel performance 8: Cable requirements 9: Connecting hardware requirements 10: Requirements for cords and jumpers A: Link performance limits	EN 50174-1 4: Requirements for specifying installations of information technology cabling 5: Requirements for installers of information technology cabling		EN 50174-1 4: Requirements for specifying installations of information technology cabling
		Planning phase EN 50174-2 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 and EN 50174-3 and (for equipotential bonding) EN 50310	EN 50174-2 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 12: Common infra-structures within multi-tenant premises and EN 50174-3 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	

2 Normative references

Amend reference to EN 50173-1:2007 to read EN 50173-1:2011.

Amend reference to EN 50491-6-1 to read:

EN 50491-6-1, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 6-1: HBES installations - Installation and planning*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

Amend the 1st sentence as follows:

For the purposes of this document, the terms and definitions given in EN 50174-1, EN 50310 and the following apply.

Replace all occurrences of “NOTE” with “Note 1 to entry:”

Delete the following definitions and renumber all definitions accordingly (done in this Amendment as applicable):

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3.1.1
bonding network

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3.1.4
common bonding network

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3.1.15
isolated bonding network

3.1.18
meshed bonding network

3.1.24
primary distribution space

3.1.26
resistibility

Insert the following new definitions:

3.1.1
access provider

operator or another entity providing the means to enable external telecommunications service provision to a subscriber

[SOURCE: EN 50700:2014, 3.1.1; EN 50174-3:2014, 3.1.2]

3.1.2
access provider space

location of access provider transmission and support equipment

Replace the existing definition 3.1.5 **with** the following one:

**3.1.5
data centre**

structure, or group of structures, dedicated to the centralized accommodation, interconnection and operation of information technology and network telecommunications equipment providing data storage, processing and transport services together with all the facilities and infrastructures for power distribution and environmental control together with the necessary levels of resilience and security required to provide the desired service availability

[SOURCE: EN 50600-1:2012, 3.1.9]

Replace the existing definition 3.1.9 **with** the following one (now 3.1.10):

**3.1.10
entrance room**

space within, or at the boundary of, a building housing the demarcation point where facilities owned by access and/or service providers interface with the premises cabling

Note 1 to entry: For generic cabling in accordance with EN 50173-5, the demarcation point is the external network interface (ENI) and the data centre cabling at that point is the network access cabling.

Insert the following new definitions and renumber where appropriate

**3.1.6
distribution space**

space within a home that corresponds to the installation space IS4 or IS5 of EN 50491-6-1 and that may house the home distributor (secondary home distributor) of EN 50173-4 and associated equipment

**3.1.14
hand hole**

point of access to a pathway that is too small for a person to enter to perform work but that allows the routing of cables during the cable installation process such that bending and pulling requirements are met

**3.1.19
maintenance hole (telecommunications)**

vault/chamber located in the ground earth as part of an underground conduit system and used to facilitate placing, connectorization, 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

Replace the existing definition 3.1.20 **with** the following one:

**3.1.21
multi-tenant building**

building which is designed to accommodate more than one tenant each of which has their own tenant entrance facility but share building entrance facilities (BEF) and associated distribution spaces

Insert the following new definitions:

**3.1.25
primary building distribution space**

space accommodating the main point of distribution of any common cabling infrastructure within multi-tenant buildings

**3.1.27
secondary building distribution space**

space accommodating optional points of distribution, additional to the main point of distribution, of any common cabling infrastructure within multi-tenant buildings

3.1.30**service provider**

the operator of any service that furnishes telecommunications content (transmissions) delivered over access provider facilities

Note 1 to entry: The access provider and the service provider can be a single entity

[SOURCE: EN 50700:2014, 3.1.20; EN 50174-3:2014, 3.1.15]

3.1.31**service provider space**

location of service provider transmission and support equipment

3.1.33**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, 3.1.21]

3.1.35**tenant entrance facility**

facility that provides all necessary mechanical and electrical services for the entry of telecommunications cables into a tenants space and which may allow for transition from external to internal cable

4 Requirements for planning installations of information technology cabling

4.1.5 Cells and batteries

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Amend the paragraph as follows: [SIST EN 50174-2:2009/A2:2014](https://standards.iteh.ai/catalog/standards/sist/03dbfa28-eda5-4a8b-bd03-11e110000000/EN-50174-2-2009-A2-2014)

[https://standards.iteh.ai/catalog/standards/sist/03dbfa28-eda5-4a8b-bd03-](https://standards.iteh.ai/catalog/standards/sist/03dbfa28-eda5-4a8b-bd03-11e110000000/EN-50174-2-2009-A2-2014)

If cells and batteries that produce gases and fumes (e.g. lead-acid batteries that produce hydrogen and oxygen) are to be installed, provision shall be made for the necessary ventilation (see EN 60079-10-1:2009, Clause 6) and recommended environmental conditions. Local regulations shall be complied with.

NOTE EN 60079-10-1 is being revised (currently circulated for CENELEC enquiry) and will contain more detailed requirements regarding ventilation, once finalized.

4.1.6 Cable management systems

Replace the subclause as follows:

4.1.6 Pathways and pathway systems

The selection of pathways and pathway systems shall enable the installation of fire barriers, where required.

4.1.7 Closures

Replace the 2nd paragraph with the following one:

Alternatively, a single overall cover is allowed provided that the power supply cabling remains protected to prevent electric shock after removal of the cover.

4.1.8.2 External cables containing flammable materials

Replace the text by the following:

Information technology cables that do not comply with the minimum recommended performance requirements of EN 60332-1-2 shall be either:

a) terminated in an entrance facility which is outside the external fire barrier of the building;

or

b) terminated inside the building, within 2 m (unless an alternative distance is specified by local regulations) of the point of internal penetration of the external fire barrier or any length exceeding 2 m is installed within trunking or conduit that is considered as a fire barrier in accordance with local fire regulations.”

NOTE This also applies where the cable has to pass through a space between two external fire barriers within a building.

4.4 Pathway systems

4.4.1 Requirements

Amend the 1st paragraph as follows:

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). This may be achieved by the use of pre-fabricated curved corners, drop-outs, radius limiters or other means. Where multiple cable types (and bundled or dual/shot-gun types) are involved, the largest minimum bend radius shall apply.

Replace NOTE 2 as follows:

NOTE 2 This protrusion aids in preventing poured concrete and other constructions debris from entering the pathway during construction, protects cabling from mechanical damage and protects cabling and fire-stop materials from water and other liquid spills.

4.6 Closures

Insert the following text before the 1st paragraph:

The closures shall be large enough to allow management of the cable and cable elements to be accommodated, taking into account the bend radius requirements defined in the instructions provided by the telecommunications cable manufacturer and/or supplier. Where instructions are not available, the radius applied to cable elements shall be the minimum of 30 mm or that of the cable, whichever is the greater.

Insert after subclause 4.7 the following new subclause and **renumber** existing subclause 4.8 into 4.9:

4.8 Filtering and electrical isolation components and surge protective devices

See A.3.

Amend 4.9 (former 4.8) to read:

Requirements and recommendations for the spaces in different types of premises are found in Clauses 8, 9, 10, 11 and 12.

Insert new subclause 4.10:

4.10 Planning for repair

The planning of the installation should take into account the procedures to be applied following damage to the installed cabling - which is assumed to occur during the lifetime of an installation.

Planning options which address the practicality of repairs include:

- a) the provision of resilience by means of cabling redundancy which affects the timescale within which a repair may need to be effected;
- b) the selection of pathway and pathway systems and/or the installation of service loops to simplify the repair process;
- c) the sub-division of the fixed cabling to introduce cable sections to simplify replacement of such sections taking account of predicted operational access restrictions;
- d) the allocation of performance margin to allow for the chosen repair procedures;
- e) the maintenance of service provision by means of temporary repairs which precede the final corrective action.

Where damage occurs, corrective actions include one or more of the following procedures:

- repair of damaged components;
- replacement of damaged components;
- installation of additional components to provide the required function.

The selection of the appropriate procedure shall take into account:

- 1) the available margin between the initial (i.e. pre-damaged) performance of the cabling and the requirements of the service provided over the cabling;
- 2) the objectives of the user for the transmission performance of the cabling i.e. to maintain of the initial performance (perhaps to support network evolution) or to allow for gradual degradation during repair(s) subject to the available margin;
- 3) financial constraints taking into account the available margin and the objectives of the user;
- 4) the media and type of cables to be repaired;
- 5) practicality constraints;
- 6) time constraints which may be affected by a range of factors including the practicality constraints;

The user should ensure that documentation exists which defines contingency planning, procedures for fault analysis and for initiating, monitoring and recording all repairs undertaken.

5 Requirements for the installation of information technology cabling

5.3.2 Pathways

Replace the existing 5th and 6th paragraphs (amended within A1) with:

Where it is necessary, and relevant permission has been obtained, to open:

- a) ceiling tiles, floor covers or trunking covers, only the minimum number shall be removed and these shall be replaced on completion of works;
- b) fire barriers and gas seals, they shall be opened only when necessary and resealed on completion of works.