ICS 35.110 SLOVENSKÁ TECHNICKÁ NORMA Január 2023

| STN | **Informačná technika<br>Generické káblové systémy<br>Časť 20: Alternatívne konfigurácie kabeláže** | **STN<br>EN 50173-20<br><br>36 7253** |
|---|---|---|

Information technology - Generic cabling systems - Part 20: Alternative cabling configurations

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/22

Obsahuje: EN 50173-20:2022

**136120**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 50173-20

October 2022

ICS 35.110

English Version

# Information technology - Generic cabling systems - Part 20: Alternative cabling configurations

Technologies de l'information - Systèmes de câblage générique - Partie 20: Configurations alternatives de câblage

Informationstechnik - Anwendungsneutrale Kommunikationskabelanlagen - Teil 20: Alternative Verkabelungskonfigurationen

This European Standard was approved by CENELEC on 2022-10-17. 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 CEN-CENELEC Management Centre 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 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.


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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**



Ref. No. EN 50173-20:2022 E

**Contents** Page

**Figures**



**Tables**

# European foreword

This document (EN 50173-20:2022) 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) | 2023-10-17 |
| • latest date by which the national standards conflicting with this document have to be withdrawn | (dow) | 2025-10-17 |

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

# Introduction

This document contains requirements for cabling configurations which use cabling components meeting the requirements of EN 50173-1 but in configurations that do not conform to the structure of generic cabling in the premises-specific documents EN 50173-2 to EN 50173-6.

These configurations are described as:

a) direct attach cabling;

b) end-to-end (E2E) links;

c) modular plug terminated links (MPTL).

The configurations of this document do not replace the generic cabling solutions of EN 50173-2, EN 50173-3, EN 50173-4, EN 50173-5 and EN 50173-6.

The transmission performance of these configurations implemented using balanced cabling components is specified in terms of Class in order to indicate their ability to support the relevant applications of EN 50173-1.

The transmission performance of these configurations implemented using optical fibre cabling components is not specified and refers the application support parameters of EN 50173-1.

Remote powering is covered in EN 50174-1 (Planning) and in EN 50174-2 (installation).

The cabling configurations of this document are passive systems and cannot be tested for EMC compliance individually. Application-specific equipment, designed for one or more cabling media, is required to meet relevant EMC standards on those media. Care should be taken that the installation of any of those media in a cabling system does not degrade the characteristics of the cabling. The installation methods of EN 50174 series should be used to minimise the effect of electromagnetic disturbances.

Figure 1 and Table 1 show the schematic and contextual relationships between the standards produced by TC 215 for information technology cabling, namely:

1) this and other parts of the EN 50173 series;

2) installation (EN 50174 series);

3) bonding (EN 50310).

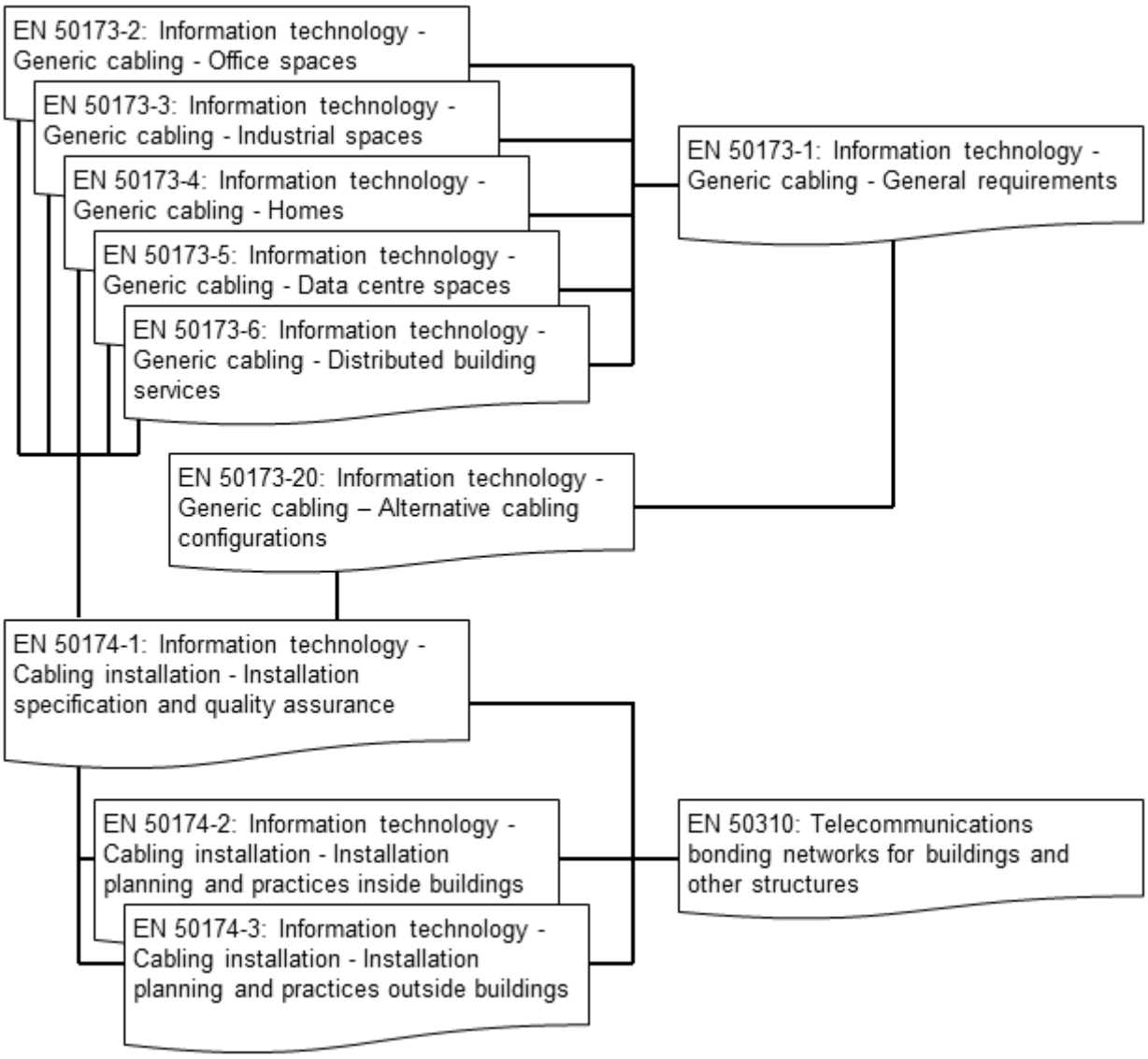


**Figure 1 — Schematic relationship between the EN 50173 series and other relevant standards**

**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-XX** | **EN 50174-1**<br>**Planning phase**<br>**EN 50174-2**<br>**EN 50174-3**<br>**EN 50310** | **EN 50174-2**<br>**EN 50174-3**<br>**EN 50310** | **EN 50174-1** |

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*;

— 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*.

In addition, a number of cabling design standards have been developed using components of EN 50173-1 (e.g. EN 50098 series and EN 50700).

# 1 Scope

This document specifies:

a) configurations of cabling which use components meeting the requirements of EN 50173-1 but do not conform to the structure of generic cabling specified in the premises-specific documents EN 50173-2 to EN 50173-6;

b) channel transmission and environmental performance requirements including those by reference to EN 50173-1.

NOTE The configurations of this document do not replace the generic cabling solutions of EN 50173-2, EN 50173-3, EN 50173-4, EN 50173-5 and EN 50173-6.

Test procedures to verify conformance of the balanced cabling configurations to the cabling transmission performance requirements of this document are provided in EN 50697.

Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations.

# 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 50173-1:2018, *Information technology — Generic cabling systems — Part 1: General requirements*

EN 50174-1:2018, *Information technology — Cabling installation — Part 1: Installation specification and quality assurance*[1]

EN 50174 (series), *Information technology — Cabling installation*

EN 50310, *Telecommunications bonding networks for buildings and other structures*

EN 50697, *Information technology — Measurement of end-to-end links, modular plug terminated links and direct attach cabling*

EN 60603-7(series), *Connectors for electronic equipment — Part 7: Detail specification for 8-way, shielded, free and fixed connectors*



[1] As impacted by EN 50174-1:2018/A1:2020.