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



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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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

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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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- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2025-10-17

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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).

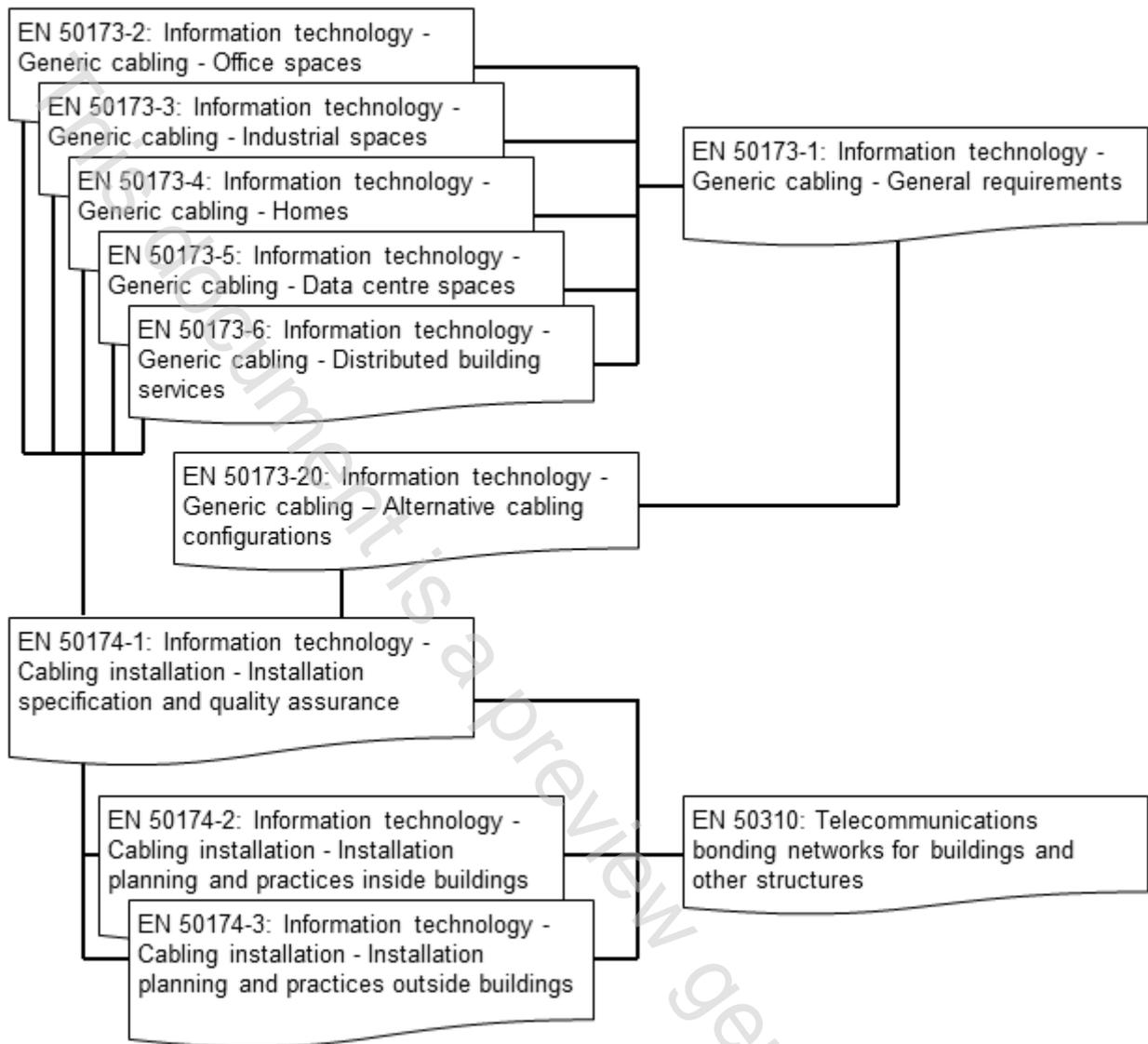


Figure 1 — Schematic relationship between the EN 50173 series and other relevant standards

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	EN 50174-2 EN 50174-3 EN 50310	EN 50174-1
		Planning phase		
		EN 50174-2 EN 50174-3 EN 50310		

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*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document the terms and definitions of EN 50173-1 and EN 50174-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

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