

<b>STN</b>	<b>Informačné technológie Inštalácia káblových rozvodov Časť 4: Skúšanie inštalovaného optickovláknového káblového rozvodu</b>	<b>STN EN 50174-4</b>  36 9071
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Information technology - Cabling installation - Part 4: Testing of installed optical fibre cabling

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

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**Information technology - Cabling installation - Part 4: Testing of installed optical fibre cabling**

Technologies de l'information - Installation de câblage -  
Partie 4: Essais d'une installation de câblage à fibres  
optiques

Informationstechnik - Installation von  
Kommunikationsverkabelung - Teil 4: Messung von  
installierter Lichtwellenleiterverkabelung

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**EN 50174-4:2025 (E)**

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## European foreword

This document (EN 50174-4:2025) has been prepared by Technical Committee CLC/TC 215, “Electrotechnical aspects of telecommunication equipment”. It is based on ISO/IEC 14763-3:2024.

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) 2026-12-31
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2028-12-31

EN 50174 comprises four parts. All for parts support the specification, implementation, operation and qualification of information technology cabling. There are specific requirements for cabling systems that are in accordance with the design requirements of the EN 50173 series. However, the three parts also apply to cabling systems of any design including those in accordance with standards such as EN 50700.

This part, EN 50174-4, is concerned with the measurement and visual inspection of installed optical fibre cabling.

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.

This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

## EN 50174-4:2025 (E)

### Introduction

The importance of services delivered by information technology cabling infrastructure is similar to that of utilities such as heating, lighting and electricity supplies. As with those utilities, interruptions to service can have a serious impact. Poor quality of service due to lack of planning, use of inappropriate components, incorrect installation, poor administration or inadequate support can threaten an organization's effectiveness.

There are four phases in the successful implementation of information technology cabling. These are:

- a) design;
- b) specification – the detailed requirement for the cabling, including the planning of its accommodation and associated building services addressing specific environments (e.g. electromagnetic) together with the quality assurance requirements to be applied;
- c) installation – in accordance with the requirements of the specification;
- d) operation – the management of connectivity and the maintenance of transmission performance during the life of the cabling.

This European Standard is in four parts and addresses the specification, installation, operational aspects and measurement of installed cabling. The EN 50173 series and other application standards cover design issues.

This document details the inspection and test procedures for optical fibre cabling designed in accordance with premises cabling standards including the EN 50173 series and installed in accordance with the requirements and recommendations of EN 50174-2 and EN 50174-3. This document has been prepared in support of EN 50173 series.

Users of this document should be familiar with relevant premises cabling standards and the other documents of the EN 50174 series.

EN 50174-1 is used during the specification phase. EN 50174-2 and EN 50174-3 are intended to be used by the personnel directly involved in the planning aspects (of the specification phase) and installation phase. EN 50174-2 is applicable inside buildings and EN 50174-3 is applicable outside buildings.

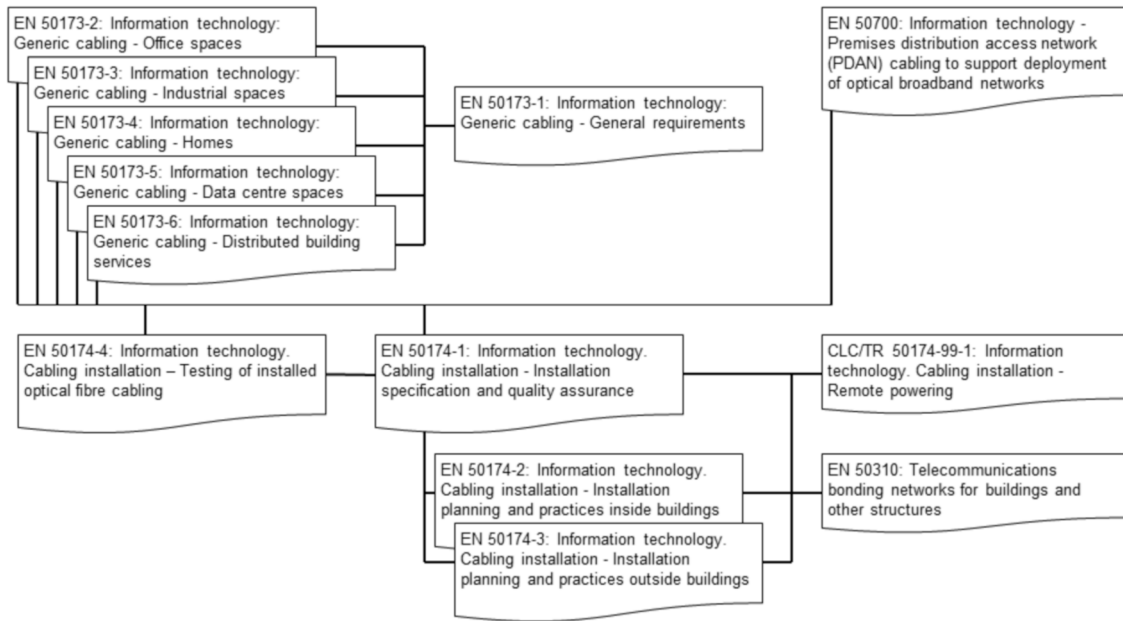
This European Standard is also relevant to:

- main contractors;
- designers, suppliers, installers, inspectors (auditors), maintainers and owners of information technology cabling;
- end users.

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

- 1) this and other parts of the EN 50174 series;
- 2) generic cabling design (EN 50173 series);
- 3) application dependent cabling design (e.g. EN 50700);
- 4) bonding requirements (EN 50310).

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**Figure 1 — Schematic relationship between the EN 50174 series and other relevant standards**

**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	EN 50173-2 EN 50173-3 EN 50173-4 EN 50173-5 EN 50173-6 EN 50173-20 (these ENs reference general requirements of EN 50173-1)	EN 50174-1	EN 50174-2 EN 50174-3 EN 50174-4 EN 50310 EN 50697	EN 50174-1

The quality plan for each installation will define the acceptance tests and sampling levels selected for that installation. Requirements and recommendations for the development of a quality plan are given in EN 50174-1.

## EN 50174-4:2025 (E)

### 1 Scope

This document specifies systems and methods for the inspection and testing of installed optical fibre cabling designed in accordance with premises cabling standards including the EN 50173 series. The test methods refer to existing standards-based procedures where they exist.

### 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, *Information technology - Generic cabling systems - Part 1: General requirements*

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

EN 60825-2, *Safety of laser products - Part 2: Safety of optical fibre communication systems (OFCS) (IEC 60825-2)*

EN IEC 61280-1-3, *Fibre optic communication subsystem test procedures - Part 1-3: General communication subsystems - Measurement of central wavelength, spectral width and additional spectral characteristics (IEC 61280-1-3)*

EN IEC 61280-1-4, *Fibre optic communication subsystem test procedures - Part 1-4: General communication subsystems - Light source encircled flux measurement method (IEC 61280-1-4)*

EN IEC 61280-4-1, *Fibre-optic communication subsystem test procedures - Part 4-1: Installed cabling plant - Multimode attenuation measurement (IEC 61280-4-1)*

EN IEC 61280-4-5, *Fibre-optic communication subsystem test procedures - Part 4-5: Installed cabling plant - Attenuation measurement of MPO terminated fibre optic cabling plant using test equipment with MPO interfaces (IEC 61280-4-5)*

EN IEC 61300-3-35, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-35: Examinations and measurements - Visual inspection of fibre optic connectors and fibre-stub transceivers (IEC 61300-3-35)*

EN 61300-3-42, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-42: Examinations and measurements - Attenuation of single mode alignment sleeves and or adaptors with resilient alignment sleeves (IEC 61300-3-42)*

EN 61755-2-4, *Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres - Non-angled for reference connection applications (IEC 61755-2-4)*

EN 61755-2-5, *Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 2-5: Connection parameters of non-dispersion shifted single-mode physically contacting fibres - Angled for reference connection applications (IEC 61755-2-5)*

EN IEC 61755-3-1, *Fibre optic connector optical interfaces - Part 3-1: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia PC ferrule, single mode fibre (IEC 61755-3-1)*

EN IEC 61755-3-2, *Fibre optic connector optical interfaces - Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres (IEC 61755-3-2)*

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EN 61755-3-31, *Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 3-31: Connector parameters of non-dispersion shifted single mode physically contacting fibres - Angled polyphenylene sulphide rectangular ferrules (IEC 61755-3-31)*

EN IEC 62614-1, *Fibre optics - Multimode launch conditions - Part 1: Launch condition requirements for measuring multimode attenuation*

IEC 60050-731, *International Electrotechnical Vocabulary (IEV) - Part 731: Optical fibre communication*

IEC/TR 61282-14, *Fibre optic communication system design guidelines - Part 14: Determination of the uncertainties of attenuation measurements in fibre plants*

IEC PAS 63267-3-31, *Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces – Part 3-31: End face geometry – Flat PC PPS rectangular ferrule multimode fibres*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**