SLOVENSKI STANDARD
SIST EN 50700:2023

01-december-2023

Informacijska tehnologija - Okabljenje prostorov z distribucijskim dostopovnim omrežjem v podporo gradnji optičnih širokopasovnih omrežij

Information technology - Premises distribution access network (PDAN) cabling to support deployment of optical broadband networks

Informationstechnik - Standortverkabelung als Teil des optischen Zugangsnetzes von optischen Breitbandnetzen

Technologies de l'information - Câblage du réseau de distribution privé du réseau d'accès dans les locaux (PDAN) supportant le déploiement des réseaux optiques à large bande

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Ta slovenski standard je istoveten z: **EN 50700:2023**

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ICS:

35.110	Omreževanje	Networking

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50700

October 2023

ICS 35.110

Supersedes EN 50700:2014

English Version

Information technology - Premises distribution access network (PDAN) cabling to support deployment of optical broadband networks

Technologies de l'information - Câblage du réseau de distribution privé du réseau d'accès dans les locaux (PDAN) supportant le déploiement des réseaux optiques à large bande

Informationstechnik - Standortverkabelung als Teil des optischen Zugangsnetzes von optischen Breitbandnetzen

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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

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European foreword

This document (EN 50700:2023) 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) 2024-04-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-10-20

This document supersedes EN 50700:2014.

EN 50700:2023 includes the following significant technical changes with respect to EN 50700:2014:

a) Annex B to Annex D with example implementations of PDAN in multi-tenant premises, in privately managed real estate and in local to single subscriber premises, respectively, added;

b) editorial improvements as appropriate;

c) A-deviations for France updated, A-deviations for Finland and Spain added.

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Introduction

This document has been developed to enable the application of system-independent pre-cabling of multi-subscriber premises to enable the delivery of broadband telecommunication services.

Fibre to the home (FTTH) is the subject of standardization in the form of:

— Technical Reports such as CLC/TR 50510 which cover general concepts and system planning;

— component standards that support its implementation;

— installation standards such as the EN 50174 series.

FTTH is a general term applied to the provision of broadband optical networks to residential premises. Some premises accommodate multiple subscribers and these may be residential or commercial enterprises such as offices, data centres, industrial, retail or a mix of these subscriber types. These multi-subscriber premises may consist of one or more buildings.

Multi-subscriber premises also include areas of privately managed real estate comprising multiple individual premises which themselves can house single or multiple subscribers.

NOTE Annex D describes the connection of individual subscribers directly to FTTH networks using the terminology of this document.

The cabling specified in this document:

— constitutes the part of the broadband access network within multi-subscriber premises termed the premises distribution access network (PDAN); the access network serving single subscriber premises is not normatively addressed in this document;

— is intended to be pre-installed, in readiness for subsequent connection of the multi-subscriber premises, to an access provider's infrastructure to an access demarcation point (ADP) - enabling broadband content to be delivered by the service provider(s).

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Within premises, the importance of the information technology cabling infrastructure is similar to that of other fundamental building utilities such as heating, lighting and mains power. As with other utilities, interruptions to service can have a serious impact. Poor quality of service due to lack of design foresight, use of inappropriate components, incorrect installation, poor administration or inadequate support can disrupt service delivery.

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This document:

— allows access providers to be aware of the minimum implementation delivered to them when they reach such multi-subscriber premises;

— maximizes the opportunity for network evolution by either the access provider or the service providers using that access infrastructure.

This document specifies the cabling between the access demarcation point (ADP) and the subscriber interface (SI). The transmission performance of the premises cabling between the last operator connection point (LOC) and the ADP is not addressed although the requirements for its accommodation are provided by external reference to the EN 50174 series. The location of the LOC can be either outside the premises' boundary (see the schematic in Figure 1) or inside the premises, internal or external to a building (see the schematic in Figure 2).

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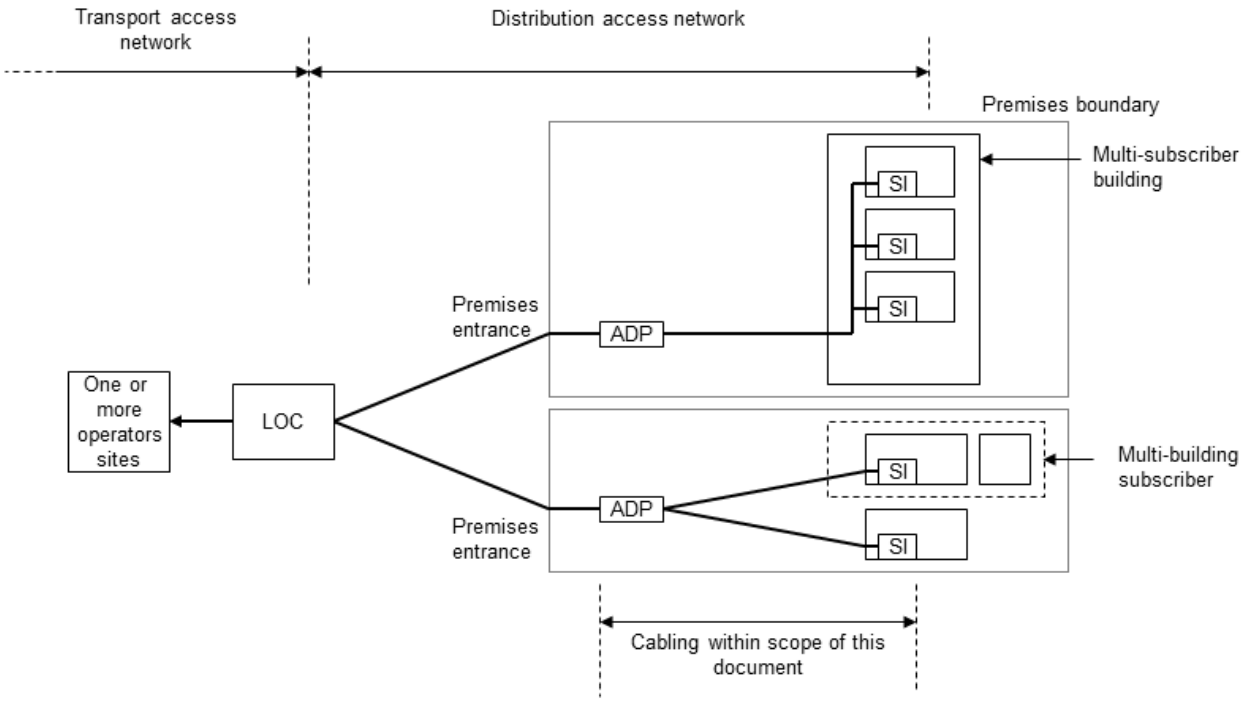

Figure 1 — Multi-subscriber PDAN cabling (LOC external to the premises)

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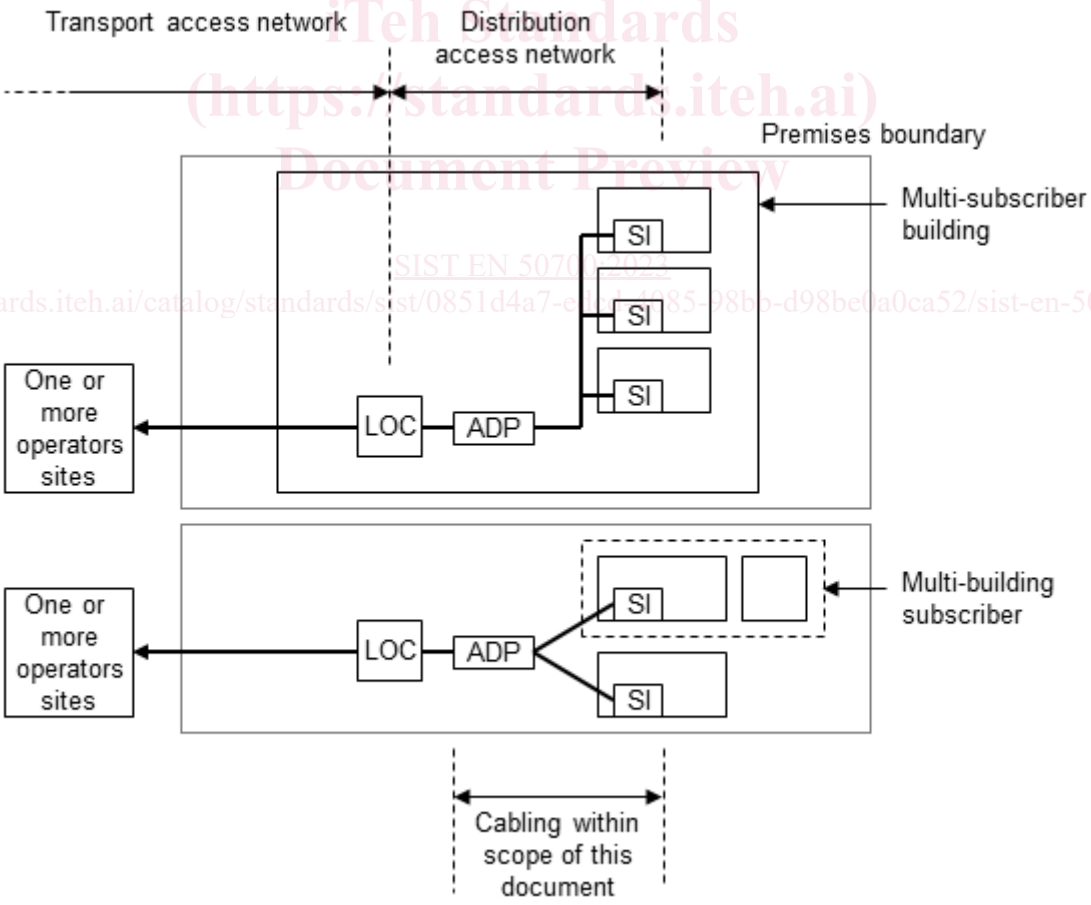

Figure 2 — Example of multi-subscriber PDAN cabling (LOC internal to the premises)

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Where the subscribers' premises are homes, the design of generic cabling beyond the SI is specified in EN 50173-4. CLC/TR 50173-99-2 and CLC/TR 50173-99-3 provide additional information in relation to cabling design within homes. For other types of subscribers, the design of generic cabling beyond the SI is specified in other documents in the EN 50173 series.

This document provides:

a) access providers with an application independent optical fibre cabling subsystem;

b) an open market for cabling components;

c) building professionals (for example, architects) with guidance for the accommodation of cabling and interfaces before specific requirements are known; i.e. in the initial planning either for construction or refurbishment.

This document specifies multi-vendor cabling, and is related to:

— standards for cabling components developed by Technical Committees of CENELEC and/or IEC;

— standards for the quality assurance and installation of information technology cabling (EN 50174 series) and testing of installed cabling (ISO/IEC 14763-3);

— applications developed by ETSI and Study Groups of ITU-T.

Figure 3 and Table 1 show the schematic and contextual relationships between the standards produced by TC 215 for information technology cabling, namely:

1) the EN 50173 series where this standard interfaces to the subscriber;

2) installation (EN 50174 series).

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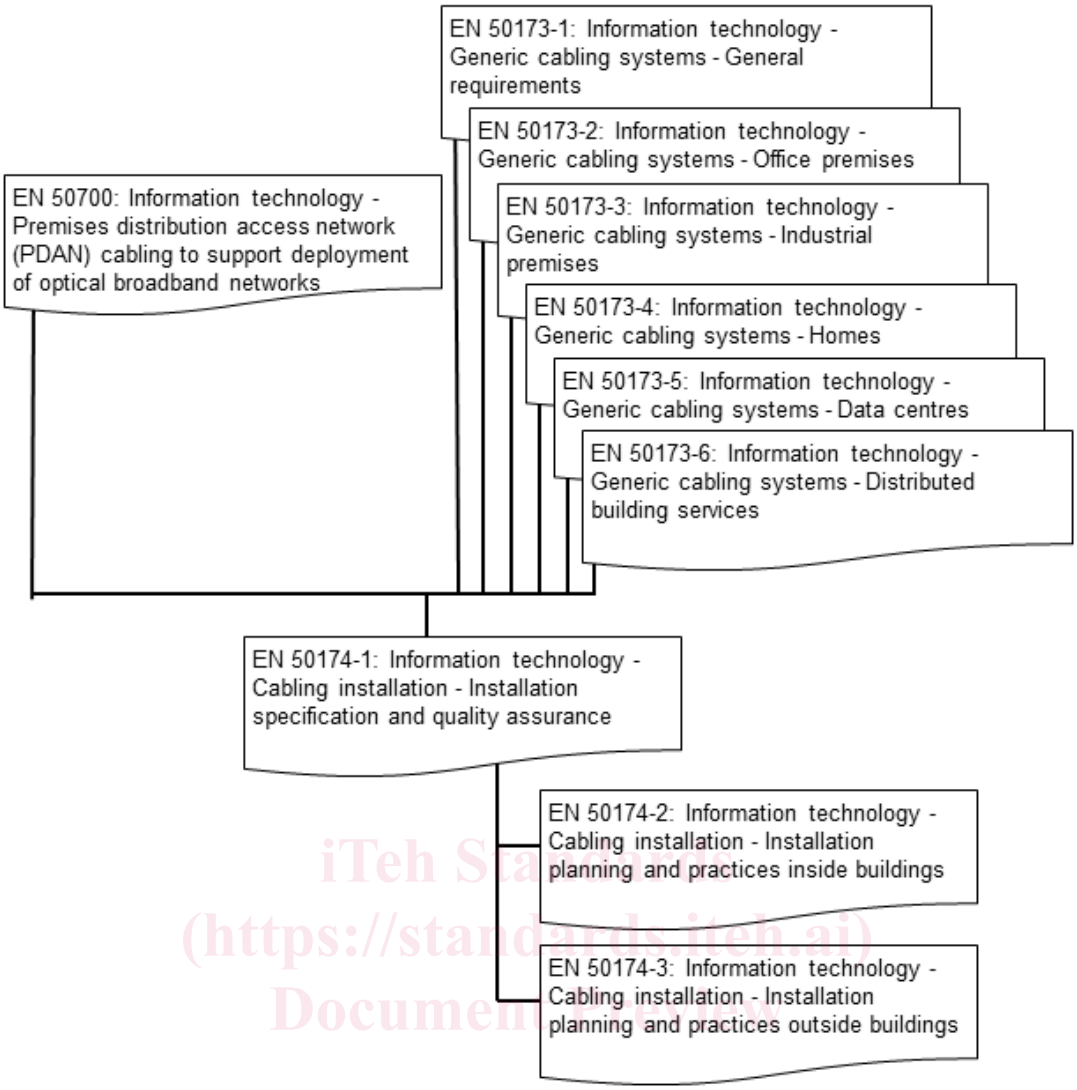

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Figure 3 — Schematic relationship between EN 50700 and other relevant TC 215 standards

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Table 1 — Contextual relationship between EN 50700 and other relevant TC 215 standards

<table>
<tr><th>PDAN cabling design phase</th><th>Specification phase</th><th>Installation phase</th><th>Operation phase</th></tr>
<tr><td rowspan="3">EN 50700
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6: PDAN cabling performance
7: Implementation options
8: Cable requirements
9: Connecting hardware requirements</td><td>EN 50174-1
4 Requirements for specifying installations of information technology cabling
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4: Requirements for specifying installations of information technology cabling</td></tr>
<tr><td>Planning phase</td></tr>
<tr><td>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
8: Office (commercial) premises
9: Industrial premises
10: Homes
11: Data centres
12: Multi-tenant pathways and spaces

and
EN 50174-3
4. Requirements for planning installations of information technology cabling
5. Requirements for the installation of information technology cabling
6. Segregation
7. Additional installation practices for specific sites and services</td><td>EN 50174-2
5: Requirements for the installation of information technology cabling
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