

English version

**Information technology -
Implementation of BCT applications using cabling
in accordance with EN 50173-4**

Technologies de l'information -
Mise en oeuvre des applications
BCT utilisant un câblage réalisé
selon la EN 50173-4

Informationstechnik -
Realisierung von RuK-Netzanwendungen
mit Verkabelung nach EN 50173-4

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CENELEC

European Committee for Electrotechnical Standardization
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Foreword

This Technical Report was prepared by the Technical Committee CENELEC TC 215, Electrotechnical aspects of telecommunication equipment, in cooperation with experts from CENELEC TC 209/WG 4, System performance requirements.

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Introduction

EN 50173-4 specifies generic cabling in homes, installed to support one or more of the following groups of applications and based upon balanced and coaxial cabling as appropriate:

- a) Information and Communication Technologies (ICT);
- b) Broadcast and Communication Technologies (BCT);
- c) Command, Controls and Communications in Buildings (CCCB).

EN 50173-4 also provides requirements for backbone cabling subsystems within premises containing multiple homes by reference to:

- 1) EN 50173-1 for cabling to support ICT applications;
- 2) standards of the EN 50083 and EN 60728 series to support BCT applications.

EN 50083 and EN 60728 standards deal with cable networks including equipment and associated methods of measurement for headend reception, processing and distribution of television signals, sound signals and their associated data signals and for processing, interfacing and transmitting all kinds of signals for interactive services using all applicable transmission media including community antenna television (CATV) and master antenna television/satellite master antenna television (MATV/SMATV) networks.

This Technical Report describes the following:

- the functional elements and structure of the cabling, external to homes, supporting community antenna television (CATV) and master antenna television/satellite master antenna television (MATV/SMATV) networks in accordance with EN 60728-1;
- the location and accommodation of the home network interface (HNI) in accordance with EN 60728-1;
- requirements for additional cabling performance requirements (i.e. insertion loss slope between 47 MHz and 862 MHz) and necessary amendments of the reference implementations of generic cabling within the home in accordance with EN 50173-4 in order to support the CATV, MATV/SMATV networks in accordance with EN 60728-1.

1 Scope

This Technical Report describes the following:

- a) the functional elements and structure of the cabling, external to homes, supporting community antenna television (CATV) and master antenna television/satellite master antenna television (MATV/SMATV) networks in accordance with EN 60728-1;
- b) the location and accommodation of the home network interface (HNI) in accordance with EN 60728-1;
- c) requirements for additional cabling performance requirements (i.e. insertion loss slope between 47 MHz and 862 MHz) and necessary amendments of the reference implementations of generic cabling within the home in accordance with EN 50173-4 in order to support the CATV, MATV/SMATV networks in accordance with EN 60728-1.

Safety (electrical safety and protection, optical power, fire, etc.) and electromagnetic compatibility (EMC) requirements are outside the scope of this Technical Report and are covered by standards and regulations. However information given in this Technical Report may be of assistance in meeting these standards and regulations.

2 Normative references

The following referenced documents are indispensable for the application 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 50173-1:2007 *Information technology – Generic cabling systems – Part 1: General requirements*

EN 50173-4 *Information technology – Generic cabling systems – Part 4: Homes*

EN 50174 series *Information technology – Cabling installation*

EN 60728-1:2008, *Cable networks for television signals, sound signals and interactive services – Part 1: System performance of forward paths* (IEC 60728-1:2007)

EN 60728-1-1:2010, *Cable networks for television signals, sound signals and interactive services – Part 1-1: RF cabling for two way home networks* (IEC 60728-1-1:2010)

EN 60728-5, *Cable networks for television signals, sound signals and interactive services – Part 5: Headend equipment* (IEC 60728-5:2007)

EN 60728-11, *Cable networks for television signals, sound signals and interactive services – Part 11: Safety* (IEC 60728-11:2005, modified)

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this document the following definitions apply in addition to those of EN 50173-1 and EN 50173-4.

3.1.1

branch feeder

feeder used for connecting a distribution point to a building network interface (BNI) or home network interface (HNI), as appropriate

3.1.2

building network

network for transmission of television signal, sound signals and interactive services inside a multi-dwelling building (excluding the home networks within the dwellings)

3.1.3

building network interface

interface between external network and the building network within a multi-dwelling building for the network for the transmission of television signal, sound signals and interactive services

NOTE This point is also called "transfer point" or "external network interface".

3.1.4

community antenna television

system which is designed to provide sound and television signals received by terrestrial, satellite antennas or provided by locally generated sources to the outlets of a large group of buildings