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## Fastighetsnät för informationsöverföring – Generella kabelnät – Del 1: Allmänna fordringar

*Information technology –  
Generic cabling systems –  
Part 1: General requirements*

Som svensk standard gäller europastandarden EN 50173-1:2007. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50173-1:2007.

### Nationellt förord

Den svenska standarden innehåller två nationella informativa bilagor. Den första bilagan, NA, innehåller svenska termer som motsvarar de engelska termerna i standardens avsnitt 3. Den andra bilagan, NB, innehåller en återgivning av de kabelbeteckningar för balanserade koppelkablar som finns med som information i ISO/IEC 18801, second edition, 2002.

Tidigare fastställd svensk standard SS-EN 50173-1, utgåva 1, 2003 och SS-EN 50173-1 C1, utgåva 1, 2004, gäller ej fr o m 2010-05-01.

SS-EN 50173-1, utgåva 2, 2007 och SS-EN 50173-2, utgåva 1, 2007 ersätter tillsammans SS-EN 50173-1, utgåva 1, 2003 och SS-EN 50173-1 C1, utgåva 1, 2004.

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English version

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

Technologies de l'information -  
Systèmes de câblage générique -  
Partie 1: Exigences générales

Informationstechnik -  
Anwendungsneutrale  
Kommunikationskabelanlagen -  
Teil 1: Allgemeine Anforderungen

This European Standard was approved by CENELEC on 2007-04-11. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 215, *Electrotechnical aspects of telecommunication equipment*.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50173-1 on 2007-04-11.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2008-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-05-01

The previous editions of European Standards EN 50173:1995 and EN 50173-1:2002 have been developed to enable the application-independent cabling to support ICT applications in office premises. Their basic principles, however, are applicable to other types of applications and in other types of premises.

TC 215 has decided to establish relevant European Standards which address the specific requirements of these premises. In order to point out the commonalities of these cabling design standards, these EN are published as individual parts of the series EN 50173, thus also acknowledging that standards users recognize the designation “EN 50173” as a synonym for generic cabling design.

At the time of publication of this European Standard, series EN 50173 comprises the following standards:

EN 50173-1	Information technology – Generic cabling systems – Part 1: General requirements
EN 50173-2	Information technology – Generic cabling systems – Part 2: Office premises
EN 50173-3	Information technology – Generic cabling systems – Part 3: Industrial premises
EN 50173-4	Information technology – Generic cabling systems – Part 4: Homes
EN 50173-5	Information technology – Generic cabling systems – Part 5: Data centres

This European Standard, EN 50173-1, together with EN 50173-2:2007 supersedes EN 50173-1:2002. This standard contains those specifications of EN 50173-1:2002, which are common to generic cabling systems irrespective of the type of premises. This European Standard also

- introduces the concept of environmental classification (Subclause 5.1);
- specifies additional channels for balanced and optical fibre cabling media;
- specifies additional channels for coaxial cabling;
- specifies the minimum component requirements in support of these additional cabling channels;
- extends and amends the list of applications supported by generic cabling systems.

## Contents

<b>Introduction</b> .....	<b>9</b>
<b>1</b> <b>Scope and conformance</b> .....	<b>11</b>
1.1       Scope .....	11
1.2       Conformance .....	11
<b>2</b> <b>Normative references</b> .....	<b>11</b>
<b>3</b> <b>Definitions and abbreviations</b> .....	<b>16</b>
3.1       Definitions .....	16
3.2       Abbreviations .....	21
<b>4</b> <b>Structure of generic cabling</b> .....	<b>22</b>
4.1       General .....	22
4.2       Backbone functional elements .....	23
4.3       General structure and hierarchy of backbone cabling subsystems .....	23
4.4       Cabling subsystems .....	24
4.5       Accommodation of functional elements .....	25
4.6       Equipment Interfaces and test interfaces for backbone cabling .....	25
4.7       Dimensioning and configuring .....	26
<b>5</b> <b>Channel performance</b> .....	<b>27</b>
5.1       Environmental performance .....	27
5.2       Transmission performance .....	29
<b>6</b> <b>Reference implementations for backbone cabling</b> .....	<b>47</b>
6.1       General .....	47
6.2       Balanced cabling .....	47
6.3       Coaxial cabling .....	48
6.4       Optical fibre cabling .....	48
<b>7</b> <b>Cable requirements</b> .....	<b>50</b>
7.1       General .....	50
7.2       Operating environment .....	50
7.3       Balanced cables of Categories 5, 6, 7 and BCT-B .....	50
7.4       Other balanced cables .....	52
7.5       Hybrid and multi-unit cables .....	53
7.6       Coaxial cables .....	54
7.7       Optical fibre cables .....	55

<b>8</b>	<b>Connecting hardware requirements</b> .....	<b>58</b>
8.1	General requirements .....	58
8.2	Category 5, 6, 7 and BCT-B connecting hardware for balanced cabling .....	63
8.3	Category CCCB connecting hardware for balanced cabling .....	65
8.4	Category BCT-C connecting hardware for coaxial cabling.....	67
8.5	Optical fibre connecting hardware .....	69
8.6	Connecting hardware in accordance with EN 60603-7 series .....	71
8.7	Connecting hardware in accordance with EN 61076-3-104 .....	72
8.8	Connecting hardware in accordance with EN 61076-2-101 (Type D, 4 poles) .....	73
<b>9</b>	<b>Requirements for cords and jumpers</b> .....	<b>73</b>
9.1	General .....	73
9.2	Operating environment .....	73
9.3	Balanced cords.....	74
9.4	Coaxial cords .....	77
9.5	Optical fibre cords .....	77
	<b>Annex A (normative) Link performance limits</b> .....	<b>80</b>
	<b>Annex B (informative) Permanent link performance limits for maximum implementations (balanced and coaxial cabling)</b> .....	<b>89</b>
	<b>Annex C (informative) Class F channel and permanent link with two connections</b> .....	<b>93</b>
	<b>Annex D (normative) Electrical, mechanical and environmental requirements of balanced connecting hardware</b> .....	<b>94</b>
	<b>Annex E (informative) Electromagnetic characteristics of balanced cabling</b> .....	<b>105</b>
	<b>Annex F (informative) Supported Applications</b> .....	<b>106</b>
	<b>Annex G (informative) Introduction to environmental classification</b> .....	<b>114</b>
	<b>Bibliography</b> .....	<b>124</b>

### Figures

Figure 1 – Schematic relationship between the EN 50173 series and other relevant standards.....	9
Figure 2 – Structure of generic cabling .....	23
Figure 3 – Hierarchical structure of generic cabling .....	24
Figure 4 – Interconnect and cross-connect models.....	26
Figure 5 – Test and equipment interfaces for backbone cabling .....	26
Figure 6 – Backbone cabling model.....	47
Figure 7 – Pin grouping and pair assignments for EN 60603-7 series connecting hardware (front view of connector) .....	72

Figure 8 - Pin grouping and pair assignments for EN 61076-3-104 connecting hardware (front view of connector) ..... 72

Figure 9 – Four position jack pin and pair grouping assignments for EN 61076-2-101 connecting hardware (front view of connector) ..... 73

Figure A.1 – Link options ..... 80

Figure G.1 - Variation of the environment along a cabling channel ..... 114

Figure G.2 - The local environment ..... 115

Figure G.3 - Noise Ranges of Common Industrial Machine Devices ..... 121

Figure G.4 - Guidance on separation of cabling from noise sources ..... 123

**Tables**

Table 1 – Contextual relationship between EN 50173 series and other standards relevant for information technology cabling systems ..... 10

Table 2 – Channel environments ..... 27

Table 3 – Details of Environmental Classification ..... 28

Table 4 – Formulae for return loss limits for a channel ..... 30

Table 5 – Return loss limits for a channel at key frequencies ..... 30

Table 6 – Formulae for insertion loss limits for a channel ..... 31

Table 7 – Insertion loss limits for a channel at key frequencies ..... 31

Table 8 – Formulae for NEXT limits for a channel ..... 32

Table 9 – NEXT limits for a channel at key frequencies ..... 32

Table 10 – Formulae for PSNEXT limits for a channel ..... 33

Table 11 – PSNEXT limits for a channel at key frequencies ..... 33

Table 12 – ACR limits for a channel at key frequencies ..... 34

Table 13 – PSACR limits for a channel at key frequencies ..... 34

Table 14 – Formulae for ELFEXT limits for a channel ..... 35

Table 15 – ELFEXT limits for a channel at key frequencies ..... 35

Table 16 – Formulae for PSELFEXT limits for a channel ..... 36

Table 17 – PSELFEXT limits for a channel at key frequencies ..... 36

Table 18 – d.c. loop resistance limits for a channel ..... 36

Table 19 – d.c. loop resistance unbalance limits for a channel ..... 37

Table 20 – Formulae for propagation delay limits for a channel ..... 38

Table 21 – Propagation delay limits for a channel at key frequencies ..... 38

Table 22 – Delay skew limits for a channel ..... 38

Table 23 – Formulae for TCL limits for an unscreened cabling channel ..... 39

Table 24 – TCL limits for an unscreened cabling channel at key frequencies ..... 40

Table 25 – Formulae for ELTCTL limits for an unscreened cabling channel ..... 41

Table 26 – ELTCTL limits for an unscreened cabling channel at key frequencies ..... 41

Table 27 – Formulae for coupling attenuation limits for a screened cabling channel ..... 42

Table 28 – Coupling attenuation limits for a screened cabling channel at key frequencies ..... 42

Table 29 – Return loss limits for a Class BCT-C channel.....	43
Table 30 – Formulae for insertion loss limits for a channel .....	43
Table 31 – Insertion loss limits for a channel at key frequencies.....	44
Table 32 – d.c. loop resistance limits for a channel.....	44
Table 33 – Screening attenuation limits for a channel.....	44
Table 34 – Attenuation limits for optical fibre cabling channels .....	46
Table 35 – Backbone channel equations .....	48
Table 36 – Channel length equations for optical fibre cabling .....	49
Table 37 – Balanced cable standards.....	51
Table 38 – Environmental performance specifications for balanced cables (in addition to IEC 61156-5-1 and IEC 61156-6-1).....	51
Table 39 – Coupling attenuation limits for Category BCT-B cables.....	51
Table 40 – Electrical performance requirements for Category CCCB cable .....	52
Table 41 – Mechanical performance requirements for Category CCCB cable .....	53
Table 42 – Electrical performance requirements for Category BCT-C cable .....	54
Table 43 – Mechanical performance requirements for Category BCT-C cable.....	55
Table 44 – Multimode optical fibre cable performance requirements .....	55
Table 45 – Environmental performance specifications for optical fibre cables (in addition to EN 60794-2 or EN 60974-3).....	56
Table 46 – Singlemode optical fibre cable (Category OS1) performance requirements .....	56
Table 47 – Singlemode optical fibre cable (Category OS2) performance requirements .....	56
Table 48 – Optical fibre cable performance requirements.....	57
Table 49 – Environmental performance specifications for balanced cabling connecting hardware.....	60
Table 50 – Environmental performance specifications for coaxial cabling connecting hardware .....	61
Table 51 – Environmental performance specifications for optical fibre cabling connecting hardware .....	62
Table 52 – Mechanical characteristics of connecting hardware intended for use with balanced cabling of Category 5, 6, 7 and BCT-B .....	64
Table 53 – Backwards compatibility matrix .....	65
Table 54 – Mechanical characteristics of connecting hardware intended for use with balanced cabling of Category CCCB.....	66
Table 55 – Electrical performance of connecting hardware of Category CCCB .....	67
Table 56 – Formulae for return loss limits for BCT-C connecting hardware .....	68
Table 57 – Return loss limits for BCT-C connecting hardware at key frequencies .....	68
Table 58 – Formulae for insertion loss limits for BCT-C connecting hardware .....	68
Table 59 – Insertion loss limits for BCT-C connecting hardware at key frequencies .....	68
Table 60 – Screening attenuation limits for BCT-C connecting hardware .....	69
Table 61 – Mechanical and optical characteristics of all-silica optical fibre connecting hardware.....	70
Table 62 – EN 60603-7 series connecting hardware .....	71
Table 63 – Environmental performance specifications for balanced cords (in addition to EN 61935-2-X) .....	75
Table 64 – Return loss requirements for cords .....	75
Table 65 – Informative values of NEXT at key frequencies for Category 5, 6 and 7 cords .....	77
Table 66 – Environmental performance specifications for optical fibre cords (in addition to EN 61753-X).....	78



Table A.1 – Formulae for return loss limits for a link .....	81
Table A.2 – Formulae for insertion loss limits for a link .....	82
Table A.3 – Formulae for NEXT limits for a link .....	83
Table A.4 – Formulae for PSNEXT limits for a link.....	83
Table A.5 – Formulae for ELFEXT limits for a link .....	84
Table A.6 – Formulae for PSELFEXT limits for a link.....	85
Table A.7 – Direct current (d.c.) loop resistance limits for a link.....	85
Table A.8 – d.c. resistance unbalance limits for a link.....	86
Table A.9 – Propagation delay formulae for a link .....	87
Table A.10 – Delay skew formulae for a link.....	87
Table B.1 – Return loss limits for a permanent link at key frequencies .....	89
Table B.2 – Insertion loss limits for a permanent link at key frequencies .....	89
Table B.3 – NEXT limits for a permanent link at key frequencies.....	90
Table B.4 – PSNEXT limits for a permanent link at key frequencies .....	90
Table B.5 – ACR limits for a permanent link at key frequencies.....	90
Table B.6 – PSACR limits for a permanent link at key frequencies .....	90
Table B.7 – ELFEXT limits for a permanent link at key frequencies.....	91
Table B.8 – PSELFEXT limits for a permanent link at key frequencies .....	91
Table B.9 – Direct current (d.c.) loop resistance limits for a permanent link.....	91
Table B.10 – Propagation delay limits for a permanent link at key frequencies.....	92
Table B.11 – Delay skew limits for a permanent link.....	92
Table C.1 – ACR and PSACR values for 2 connection Class F cabling at key frequencies .....	93
Table D.1 – Formulae for return loss limits for connecting hardware .....	94
Table D.2 – Minimum return loss for connecting hardware at key frequencies.....	94
Table D.3 – Formulae for insertion loss limits for connecting hardware .....	95
Table D.4 – Maximum insertion loss for connecting hardware at key frequencies.....	95
Table D.5 – Formulae for NEXT limits for connecting hardware.....	95
Table D.6 – Minimum NEXT for connecting hardware at key frequencies.....	95
Table D.7 – Formulae for PSNEXT limits for connecting hardware.....	96
Table D.8 – Minimum PSNEXT for connecting hardware at key frequencies .....	96
Table D.9 – Formulae for FEXT limits for connecting hardware .....	96
Table D.10 – Minimum FEXT for connecting hardware at key frequencies .....	96
Table D.11 – Formulae for PSFEXT limits for connecting hardware .....	97
Table D.12 – Minimum PSFEXT for connecting hardware at key frequencies .....	97
Table D.13 – Limits for propagation delay for connecting hardware.....	97
Table D.14 – Limits for delay skew for connecting hardware .....	97
Table D.15 – Maximum input to output resistance .....	98
Table D.16 – Maximum input to output resistance unbalance .....	98
Table D.17 – Minimum current carrying capacity .....	98
Table D.18 – Formulae for transfer impedance for connecting hardware.....	99

Table D.19 – Maximum transfer impedance for connecting hardware at key frequencies .....	99
Table D.20 – Formulae for Transverse Conversion Loss (TCL) limits for connecting hardware .....	99
Table D.21 – Minimum TCL for connecting hardware at key frequencies .....	99
Table D.22 – Coupling attenuation limits for BCT-B connecting hardware .....	100
Table D.23 – Minimum insulation resistance.....	100
Table D.24 – Minimum d.c. voltage proof .....	100
Table D.25 – Test group P.....	101
Table D.26 – Test group AP .....	102
Table D.27 – Test group BP .....	103
Table D.28 – Test group CP .....	103
Table D.29 – Test group DP .....	104
Table F.1 – Supported ICT applications using balanced cabling.....	107
Table F.2 – Modular connector pin assignment for ICT applications.....	108
Table F.3 – Supported BCT applications using coaxial cabling.....	109
Table F.4 – Supported generic ICT applications and maximum channel lengths with all-silica multimode fibres .....	110
Table F.5 – Supported generic ICT applications and maximum channel lengths with all-silica singlemode fibres .....	111
Table F.6 – Supported data centre applications and maximum channel lengths with all-silica multimode fibres .....	112
Table F.7 – Supported data centre applications and maximum channel lengths with singlemode fibres .....	112
Table F.8 –Supported process monitoring and control applications and maximum channel lengths with all-silica multimode optical fibres .....	113
Table F.9 – Supported process monitoring and control applications and maximum channel lengths with all-silica singlemode optical fibres .....	113
Table F.10 – Supported process monitoring and control applications and maximum channel lengths with plastic optical fibres .....	113
Table G.1 – Derivation of boundaries for mechanical criteria in Table 3 .....	116
Table G.2 – Derivation of boundaries for ingress protection criteria in Table 3 .....	116
Table G.3 – Derivation of boundaries for climatic and chemical criteria in Table 3.....	117
Table G.4 – Derivation of boundaries chemical criteria in Table 3 .....	119
Table G.5 – Derivation of boundaries for electromagnetic criteria in Table 3 .....	120
Table G.6 – Guidance for the classification of electromagnetic environments.....	122
Table G.7 – Coupling mechanisms for common noise sources.....	122

## Introduction

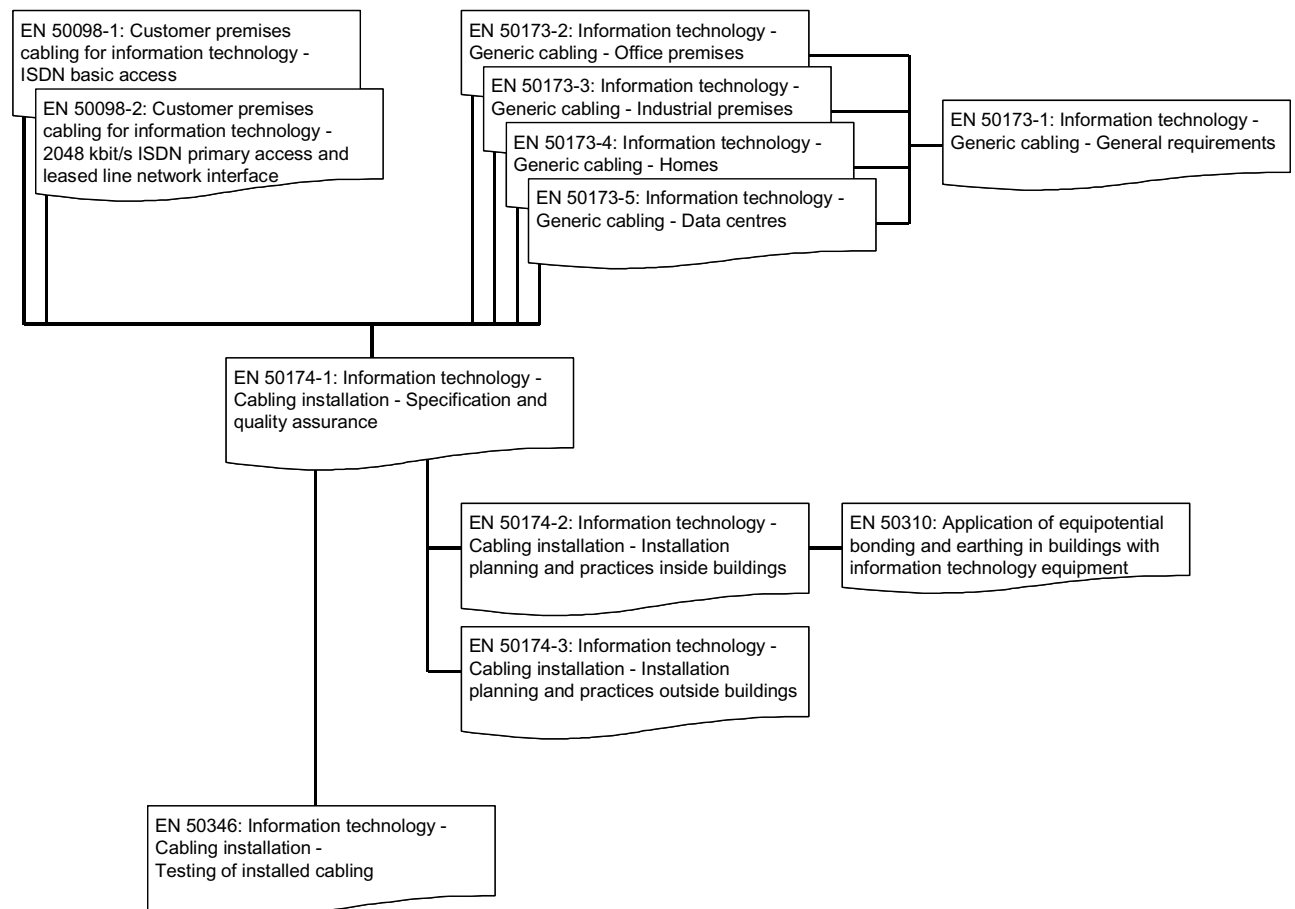
This European Standard contains general requirements in support of the other standards in the EN 50173 series.

It should be noted that generic cabling is a passive system 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 system. The installation methods of EN 50174 series should be used to minimise the effect of electromagnetic disturbances. For EMC requirements of BCT cabling see EN 50083-8.

Series EN 50174 and EN 50310 specify requirements for earthing and equipotential bonding.

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) application dependent cabling design (e.g. EN 50098 series);
- 3) installation (EN 50174 series);
- 4) testing of installed cabling (EN 50346);
- 5) equipotential bonding requirements (EN 50310).



NOTE For the purposes of the standards in the EN 50173 and EN 50174 series the term "information technology" includes ICT, BCT and CCCB applications

**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
<b>EN 50310</b>  5.2: Common bonding network (CBN) within a building  6.3: AC distribution system and bonding of the protective conductor (TN-S)	<b>EN 50173 series except EN 50173-4</b>  4: Structure 5: Channel performance 7: Cable requirements 8: Connecting hardware requirements 9: Requirements for cords and jumpers A: Link performance limits  <b>and EN 50173-4</b>  4 and 5: Structure 6: Channel performance 8: Cable requirements 9: Connecting hardware requirements 10: Requirements for cords and jumpers A: Link performance limits	<b>EN 50174-1</b>  4: Requirements for installers  5: Requirements for premises owners		<b>EN 50174-1</b>  5: Requirements for premises owners
		<b>Planning phase</b>		
		<b>EN 50174-2</b>  5: Requirements for planning installations of information technology cabling 6: Segregation of metallic information technology and mains power cabling 7: Additional considerations	<b>EN 50174-2</b>  4: Requirements for installers of information technology cabling  6: Segregation of metallic information technology and mains power cabling	
		<b>and EN 50174-3</b>  <b>and (for equipotential bonding) EN 50310</b>  5.2: Common bonding network (CBN) within a building  6.3: AC distribution system and bonding of the protective conductor (TN-S)	<b>and EN 50174-3</b>  <b>and (for equipotential bonding) EN 50310</b>  5.2: Common bonding network (CBN) within a building  6.3: AC distribution system and bonding of the protective conductor (TN-S)	
			<b>and EN 50346</b>  4: General requirements 5: Test parameters for balanced cabling 6: Test parameters for optical fibre cabling	

# 1 Scope and conformance

## 1.1 Scope

This European Standard specifies:

- a) the structure and configuration of the backbone cabling subsystems of generic cabling systems within the types of premises defined by the other standards in the EN 50173 series;
- b) channel performance requirements in support of the standards in the EN 50173 series;
- c) link performance requirements in support of the standards in the EN 50173 series;
- d) backbone cabling reference implementations in support of the standards in the EN 50173 series;
- e) component performance requirements in support of the standards in the EN 50173 series.

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

## 1.2 Conformance

This European Standard does not contain specific conformance requirements. The other standards in the EN 50173 series incorporate the requirements of this standard as part of their individual conformance requirements.

# 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 50083 (series), *Cable networks for television signals, sound signals and interactive services*

NOTE EN 50083 series is gradually replaced by EN 60728 series

EN 50117-1, *Coaxial cables – Part 1: Generic specification*

EN 50174-1, *Information technology – Cabling installation – Part 1: Specification and quality assurance*

EN 50174-2, *Information technology – Cabling installation – Part 2: Installation planning and practices inside buildings*

EN 50174-3, *Information technology – Cabling installation – Part 3: Installation planning and practices outside buildings*

EN 50288-1, *Multi-element metallic cables used in analogue and digital communication and control – Part 1: Generic specification*

EN 50288-2-1, *Multi-element metallic cables used in analogue and digital communication and control – Part 2-1: Sectional specification for screened cables characterized up to 100 MHz – Horizontal and building backbone cables*

EN 50288-2-2, *Multi-element metallic cables used in analogue and digital communication and control – Part 2-2: Sectional specification for screened cables characterized up to 100 MHz – Work area and patch cord cables*

EN 50288-3-1, *Multi-element metallic cables used in analogue and digital communication and control – Part 3-1: Sectional specification for unshielded cables characterized up to 100 MHz - Horizontal and building backbone cables*