
Informacijska tehnologija - Kabelska inštalacija - 2. del: Načrtovanje inštalacij in tehnike dela v stavbah

Information technology - Cabling installation - Part 2: Installation planning and practices inside buildings

Informationstechnik - Installation von Kommunikationsverkabelung - Teil 2: Installationsplanung und Installationspraktiken in Gebäuden

Technologies de l'information - Installation de câblage - Partie 2 : Planification et pratiques d'installation à l'intérieur des bâtiments

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35.110	Omreževanje	Networking
91.140.50	Sistemi za oskrbo z elektriko	Electricity supply systems

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EUROPEAN STANDARD
NORME EUROPÉENNE
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**Information technology - Cabling installation - Part 2: Installation
planning and practices inside buildings**

Technologies de l'information - Installation de câblages -
Partie 2 : Planification et pratiques d'installation à l'intérieur
des bâtiments

Informationstechnik - Installation von
Kommunikationsverkabelung - Teil 2: Installationsplanung
und Installationspraktiken in Gebäuden

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2026-09-25.

It has been drawn up by CLC/TC 215.

If this draft becomes a European Standard, 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.

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

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Contents**Page**

1	European foreword.....	4
2	Introduction.....	9
3	1 Scope.....	11
4	2 Normative references.....	11
5	3 Terms, definitions and abbreviations	13
6	3.1 Terms and definitions	13
7	3.2 Abbreviations	15
8	4 Conformance	16
9	5 Requirements for planning installations of information technology cabling	16
10	5.1 General	16
11	5.2 Safety.....	17
12	5.3 Documentation.....	19
13	5.4 Pathways	19
14	5.5 Pathway systems	21
15	5.6 Cable management systems	24
16	5.7 Closures.....	29
17	5.8 Cabling.....	29
18	5.9 Filtering and electrical isolation components and surge protective devices.....	31
19	5.10 Spaces	31
20	5.11 Planning for repair.....	37
21	5.12 Planning and assessment of cabling in support of remote powering objectives	37
22	5.13 Microducts and micro optical fibre cabling	50
23	6 Requirements for the installation of information technology cabling.....	51
24	6.1 Safety.....	51
25	6.2 Installation practice	52
26	6.3 Surge protective devices	59
27	6.4 Labelling.....	60
28	6.5 Testing	60
29	6.6 Contractual acceptance	60
30	6.7 Operation	60
31	7 Segregation of metallic information technology cabling and power supply cabling	60
32	7.1 General	60
33	7.2 Requirements.....	61
34	8 Electricity distribution systems and lightning protection	71
35	8.1 Electricity distribution systems.....	71

36	8.2 Protection against lightning and induced overvoltages	72
37	9 Office (commercial) spaces.....	73
38	9.1 General	73
39	9.2 Office (commercial) spaces cabling design overview.....	73
40	9.3 Requirements for planning installations of information technology cabling	73
41	9.4 Requirements for installation of information technology cabling	75
42	9.5 Segregation of metallic information technology cabling and power supply cabling	75
43	10 Industrial spaces	75
44	10.1 General.....	75
45	10.2 Industrial premises cabling design overview	75
46	10.3 Requirements for planning installations of information technology cabling	75
47	10.4 Requirements for installation of information technology cabling	76
48	10.5 Segregation of metallic information technology cabling and power supply cabling.....	76
49	11 Homes.....	77
50	11.1 General.....	77
51	11.2 Home cabling design overview	77
52	11.3 Requirements for planning installations of information technology cabling	81
53	11.4 Requirements for installation of information technology cabling	86
54	11.5 Segregation of metallic information technology cabling and power supply cabling.....	86
55	12 Data centre spaces.....	86
56	12.1 General.....	86
57	12.2 Data centre cabling design and planning overview	87
58	12.3 Requirements for planning installations of information technology cabling	88
59	12.4 Requirements for installation of information technology cabling	92
60	12.5 Segregation of metallic information technology cabling and power supply cabling.....	92
61	13 Cabling for distributed building services	92
62	13.1 General.....	92
63	Planning installations for information technology cabling	93
64	Requirements for installation of information technology cabling.....	95
65	Segregation of metallic information technology cabling and power supply cabling.....	95
66	14 Common infrastructures within multi-tenant buildings	95
67	14.1 General.....	95
68	14.2 Pathways and spaces in common areas	96
69	14.3 Requirements for planning installations of information technology cabling	97
70	14.4 Requirements for the installation of information technology cabling	100
71	14.5 Segregation of metallic information technology cabling and power supply cabling.....	100
72	Annex A (informative) Application of responsibilities	101

73	Annex B (informative) Installation conditions	105
74	Annex C (normative) Additional information for remote powering installations on 4-pair cabling	
75	installations	106
76	C.1 General	106
77	C.2 Calculation of T_{global}	106
78	C.3 Remote powering installation of Category RP2	106
79	Annex D (informative) Equipment accommodation environments	109
80	Annex E (informative) Discrete values for cabling segregation	110
81	Annex F (normative) Additional information for remote powering installations of 1-pair cabling	
82	112	
83	F.1 General	112
84	F.2 Channel length due to voltage drop	112
85	F.3 Length scaling of 1-pair channel for application support	113
86	F.4 Heating of cord bundles	113
87	Annex G (informative) “Reaction to fire” performance of cables	114
88	G.1 Class designation	114
89	G.2 Application of cables of a given class designation	114
90	Annex H (normative) Requirements and recommendations for Planning the Installation of Micro	
91	ducts	116
92	H.1 General Requirements	116
93	H.2 Routing and Pathways	116
94	H.3 Mechanical Protection and Environmental Considerations	116
95	H.4 Reaction to fire	116
96	H.5 MOFC Installation within Microducts	117
97	H.6 Futureproofing, sustainability and scalability	117
98	H.7 Marking and Documentation	117
99	H.8 Testing and Verification	118
100	Bibliography	119
101	Figures	
102	Figure 1 — Schematic relationship between the EN 50174 series and other relevant documents	10
103	Figure 2 — Examples of pathway systems protruding through floors	20
104	Figure 3 — Examples of non-conformant and conformant bend limiting techniques	22
105	Figure 4 — Cable arrangement in a metallic section	26
106	Figure 5 — Example of layered cable trays with smaller width upper trays	27
107	Figure 6 — Example of accessible row of raised access floor panels to provide access to lower tray	28
108	Figure 7 — Examples of spaces	32

109	Figure 8 — Minimum dimensions for rooms housing cabling components only	34
110	Figure 9 — Minimum dimensions for rooms housing active equipment in addition to cabling	
111	components	35
112	Figure 10: 4-Pair remote powering compliance flowchart for new installations	39
113	Figure 11: 4-Pair remote powering compliance evaluation flowchart for existing installations	39
114	Figure 12: 1-Pair Remote powering compliance flowchart for new installations	44
115	Figure 13 — Separation of cable bundles to minimize heating	50
116	Figure 14 — Continuity of metallic cable management systems	54
117	Figure 15 — Interruption of metallic cable management systems at fire barriers	55
118	Figure 16 — Flowchart for segregation	63
119	Figure 18 — Minimum segregation distance of power supply and information technology cables	68
120	Figure 19 — Segregation distance of power supply and information technology cables without dividers	
121		68
122	Figure 20 — Segregation distance of power supply and information technology cables with dividers....	69
123	Figure 21 — Examples of crossings between technology cables and power supply cables	70
124	Figure 22 — Pathways within homes	78
125	Figure 23 — Example of primary distribution space	79
126	Figure 24 — Example of local distribution spaces, junction boxes and draw-boxes	80
127	Figure 25 — Example of infrastructure supporting star cabling topology	80
128	Figure 26 — Example of common pathways and spaces in a multi-tenant building	96
129	Figure B.1 — Illustration of installation environments	105
130	Tables	
131	Table 1 — Contextual relationship between EN 50174 series and other documents relevant for	
132	information technology cabling systems	10
133	Table 2 — Stacking height for typical distances /	23
134	Table 3 — Typical elements of information exchange	33
135	Table 4 — Example of channel length derating vs. temperature	40
136	Table 5 — Temperature changes for various 4-pair cable bundle sizes (Category RP3)	41
137	Table 6 — Reduction factors for rectangular cable groups	42
138	Table 7 — Relative length reduction of channel based on temperature	44
139	Table 8 — 1-pair channel length reduction for screened cables at 60°C	45
140	Table 9 — Temperature changes for various 1-pair cable bundle sizes	46
141	Table 10 — Precalculated setup to the maximum number of cables in a bundle	48
142	Table 11 — Segregation classification of information technology cables	63
143	Table 12 — Minimum segregation distance S when at least one of the power or the information	
144	technology cabling is in a solid metallic containment equivalent to a steel conduit	64
145	Figure 17 — Diagrams of types for metallic separation	65
146	Table 13 — Minimum segregation distance S	65
147	Table 16 — Minimum requirements for dimensions of primary distribution spaces	84
148	Table 18 — Minimum dimensions of spaces allocated to junction boxes	86
149	Table A.1 — Responsibilities template	101
150	Table A.2 — Example of completed responsibilities	103

151	Table C.1 — Temperature changes for remote power installations of Category RP2.....	107
152	Table D.1 — Equipment environmental specifications.....	109
153	Table E.1 — Minimum segregation discrete values for cable swith classification “a”	110
154	Table E.2 — Minimum segregation discrete values for cable swith classification “b”	110
155	Table E.3 — Minimum segregation discrete values for cable swith classification “c”	111
156	Table E.4 — Minimum segregation discrete values for cable with classification “d”	111
157	Table G.1 — Class designations and their foundation standards	115

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European foreword

This document (prEN 50174-2:2026) has been prepared by Technical Committee CLC/TC 215, "Electrotechnical aspects of telecommunication equipment".

This document is currently submitted to the Enquiry.

This document supersedes EN 50174-2:2018.

prEN 50174-2:2026 includes the following significant technical changes with respect to EN 50174-2:

- a) the conformance requirements (previously subclause 1.2) have been moved into a new Clause 4 and the existing clause numbers were updated accordingly;
- b) terms, definitions and abbreviations updated;
- c) requirements for planning the installation of IT cabling (former Clause 4) revised, in particular, the former 4.11 has been extended to cover remote powering requirements for 1-pair cabling;
- d) requirements for the installation of IT cabling (former Clause 5) revised and former 5.2 on documentation deleted;
- e) requirements for the segregation of IT cabling and power cabling (former Clause 6) revised and restructured;
- f) requirements for office (commercial) spaces (former Clause 8) mostly transferred to new Clauses 5 and 6;
- g) specific requirements for industrial spaces, homes, data centre spaces and distributed building services (former Clauses 9, 10, 11 and 12) updated;
- h) Information in Annex D updated;
- i) Annex E on discrete values for cabling segregation added;
- j) Annex F on remote powering of 1-pair cabling added;
- k) Annex G on reaction of cables to fire added ;
- l) Annex H on planning of the installation of micro ducts added.

EN 50174 comprises four parts:

- EN 50174-1, Information technology — Cabling installation — Part 1: Installation 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 (the present document);
- EN 50174-4, Information technology — Cabling installation — Part 4: Testing of installed optical fibre cabling.

There are specific requirements for cabling systems that are in accordance with the design requirements of the EN 50173 series. However, the four parts also apply to cabling systems of any design including those in accordance with standards such as EN 50700.

prEN 50174-2:2026

193 This part, EN 50174-2, is concerned with the planning and installation of information technology cabling using
194 metallic cabling and optical fibre cabling inside buildings. It provides guidance as to the responsibilities of those
195 involved and is intended to be referenced in relevant contracts.

196 It does not cover those aspects of installation associated with the transmission of signals in free space between
197 transmitters, receivers or their associated antenna systems (e.g. wireless, radio, microwave or satellite).

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198 Introduction

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

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

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

211 EN 50174 series is in four parts and addresses the specification, installation, operational aspects of information
 212 technology cabling and the testing of installed optical fibre cabling. The EN 50173 series and other application
 213 standards cover design issues.

214 EN 50174-1, EN 50174-2 and EN 50174-3 are intended to be used by the personnel directly involved in the
 215 planning aspects (of the specification phase) and the installation phase. EN 50174-2 is applicable inside
 216 buildings and EN 50174-3 is applicable outside buildings. EN 50174-4 is applicable for testing of installed
 217 optical fibre cabling.

218 EN 50174 series is also relevant to:

- 219 • architects, building designers and builders;
- 220 • main contractors;
- 221 • designers, suppliers, installers, inspectors (auditors), maintainers and owners of information technology
 222 cabling;
- 223 • public network providers and local service providers;
- 224 • end users.

225 This part, EN 50174-2, contains requirements and recommendations relating to the installation planning and
 226 practices by defining:

- 227 i) planning strategy (road map) and guidance depending on the application, electromagnetic environment,
 228 building infrastructure and facilities, etc.;
- 229 ii) planning and installation requirements for metallic and optical fibre information technology cabling
 230 depending on the application, electromagnetic environment, remote powering, building infrastructure and
 231 facilities, etc.;
- 232 iii) the practices and procedures to be adopted to ensure that the cabling is installed in accordance with the
 233 specification.
- 234 iv) the practices and procedure involved in the methodology for the assessment of spaces in support of
 235 remote powering objectives, in accordance with the regulations and specifications.

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

prEN 50174-2:2026

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

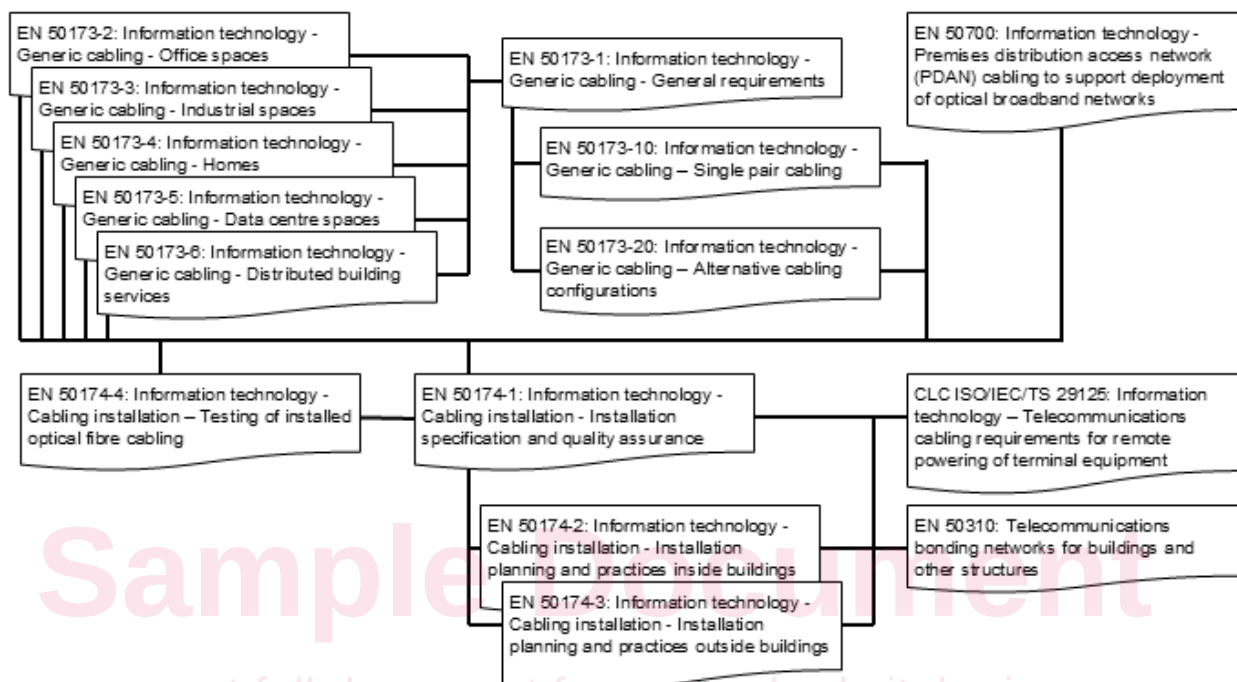


Figure 1 — Schematic relationship between the EN 50174 series and other relevant documents

Table 1 — Contextual relationship between EN 50174 series and other documents 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 50174–1	EN 50174–2 EN 50174–3 EN 50174-4 EN 50310	EN 50174–1 EN 50174-4
	EN 50173–3	Planning phase		
	EN 50173–4	EN 50174–2 EN 50174–3 EN 50174-4 EN 50310		
	EN 50173–5			
	EN 50173–6			
	(these ENs reference general requirements of EN 50173–1)			
	EN 50173-10			
EN 50173-20				

1 Scope

This document specifies requirements for the following aspects of information technology cabling:

a) planning;

b) installation practice.

This document is applicable to all types of information technology cabling inside buildings (and can be applied to cabling that is defined as part of the building) including generic cabling systems designed in accordance with the EN 50173 series.

NOTE Planning and installation of certain types of application-specific cabling can be supplemented by other standards e.g. EN 63044–6 for Home Building Electronics System (HBES) and Building Automation and Control Systems (BACS).

The requirements of Clauses 5, 6 and 7 of this document are premises-independent unless amended by the requirements of premises-specific clauses.

This document:

1) contains requirements and recommendations for satisfactory installation and operation of information technology cabling;

2) describes the methodology for the assessment of spaces, pathways (and pathway systems) and cabling (either installed or planned) in support of remote powering objectives;

3) excludes specific requirements applicable to other cabling systems (e.g. power supply cabling); however, it takes account of the effects other cabling systems have on the installation of information technology cabling (and vice versa) and gives general advice;

4) excludes those aspects of installation associated with the transmission of signals in free space between transmitters, receivers or their associated antenna systems.

This document is applicable to certain hazardous environments. It does not exclude additional requirements which are applicable in particular circumstances, defined by e.g. electricity supply and electrified railways.

Safety (electrical safety and protection, optical power, fire protection, etc.) and electromagnetic compatibility (EMC) requirements are outside the scope of this document and are covered by other standards and regulations. However, information given in this document can be of assistance in meeting these 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 13501-6, *Fire classification of construction products and building elements – Part 6: Classification using data from reaction to fire tests on electric cables*

EN 50173 (all parts), *Information technology - Generic cabling systems*

prEN 50174-1:2026, *Information technology – Cabling installation – Part 1: Installation specification and quality assurance*

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

EN 50174-4, *Information technology - Cabling installation - Part 4: Testing of installed optical fibre cabling*

- 287 EN 50288 (all parts), *Multi-element metallic cables used in analogue and digital communication and control*
- 288 EN 50310, *Telecommunications bonding networks for buildings and other structures*
- 289 EN 50600-2-4, *Information technology - Data centre facilities and infrastructures - Part 2-4:*
290 *Telecommunications cabling infrastructure*
- 291 EN 50600-2-5, *Information technology - Data centre facilities and infrastructures - Part 2-5: Security systems*
- 292 EN 60079-0, *Explosive atmospheres – Part 0: Equipment – General requirements (IEC 60079-0:2004)*
- 293 EN 60079-14, *Explosive atmospheres - Part 14: Electrical installations design, selection and erection (IEC*
294 *60079 14)*
- 295 EN 60079-17, *Explosive atmospheres - Part 17: Electrical installations inspection and maintenance (IEC*
296 *60079 17)*
- 297 EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*
- 298 EN 60825-2, *Safety of laser products - Part 2: Safety of optical fibre communication systems (OFCS) (IEC*
299 *60825 2)*
- 300 EN IEC 61084-1, *Cable trunking systems and cable ducting systems for electrical installations - Part 1: General*
301 *requirements*
- 302 EN IEC 61084, 2-x (all parts) *Cable trunking systems and cable ducting systems for electrical installations (IEC*
303 *61084)*
- 304 EN 61386-1, *Conduit systems for cable management - Part 1: General requirements (IEC 61386 1)*
- 305 EN IEC 61386-2X, (all parts), *Conduit systems for cable management – Part 2X: Particular requirements*
306 *(IEC 61386-2X all parts)*
- 307 EN 61534 (all parts), *Powertrack systems (IEC 61534 all parts)*
- 308 EN 61537, 1 *Cable management – Cable tray systems and cable ladder systems (IEC 61537)*
- 309 EN IEC 61643-(all parts), 2 *Low voltage surge protective devices (IEC 61643 all parts)*
- 310 EN IEC 61784-3, *Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General*
311 *rules and profile definitions (IEC 61784 3)*
- 312 EN IEC 61918, *Industrial communication networks - Installation of communication networks in industrial*
313 *premises (IEC 61918)*
- 314 EN IEC 62305-4, *Protection against lightning - Part 4: Electrical and electronic systems within structures (IEC*
315 *62305 4)*
- 316 EN IEC 62368-3, *Audio/video, information and communication technology equipment - Part 3: Safety aspects*
317 *for DC power transfer through communication cables and ports (IEC 62368 3)*

¹ Under revision. Currently, FprEN IEC 61537, as amended by FprEN IEC 61537/FprAA, is awaiting publication.

² Some documents are still published as EN 61643-X.

318 EN IEC 63044-6:2021, *Home and building electronic systems (HBES) and building automation and control*
 319 *systems (BACS) - Part 6: Requirements for planning and installation*

320 HD 60364 (all parts), *Low-voltage electrical installations (IEC 60364 series)*

321 **3 Terms, definitions and abbreviations**

322 **3.1 Terms and definitions**

323 For the purposes of this document, the terms and definitions given in EN 50174-1, EN 50310 and the following
 324 apply.

325 Where the cabling is designed in accordance with documents in the EN 50173 series, the additional definitions
 326 of those documents are applicable.

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

328 — IEC Electropedia: available at <http://www.electropedia.org/>

329 — ISO Online browsing platform: available at <http://www.iso.org/obp>

330 **3.1.1**

331 **catenary wire**

332 wire hung at a specific tension between supporting structures for information technology cabling

333 [SOURCE: prEN 50174-3:2026, 3.1.6]

334 **3.1.2**

335 **closed pathway system**

336 cable management system which does not allow installation of cables by laying without tensile load

337 **3.1.3**

338 **data centre**

339 structure, or group of structures, dedicated to the centralized accommodation, interconnection and operation
 340 of information technology and network telecommunications equipment providing data storage, processing and
 341 transport services together with all the facilities and infrastructures for power distribution and environmental
 342 control together with the necessary levels of resilience and security required to provide the desired service
 343 availability

344 Note 1 to entry: A structure can consist of multiple buildings and/or spaces with specific functions to support the primary
 345 function.

346 Note 2 to entry: The boundaries of the structure or space considered the data centre which includes the information and
 347 communication technology equipment and supporting environmental controls can be defined within a larger structure or
 348 building.

349 [SOURCE: prEN 50600-1:2026, 3.1.8]

350 **3.1.4**

351 **distribution space**

352 space that can house a distributor of EN 50173 series together with associated equipment

353 **3.1.5**

354 **distributor**

355 functional element enabling the termination and connection of cabling subsystems to other cabling subsystems
 356 or transmission equipment

357 [SOURCE: EN 50173-1:2018, 3.1.39]