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Edition 1.0 2012-02

# INTERNATIONAL STANDARD



Information technology – Implementation and operation of customer premises  
cabling –  
Part 2: Planning and installation

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## CONTENTS

FOREWORD.....	8
INTRODUCTION.....	10
1 Scope.....	13
2 Normative references .....	14
3 Terms, definitions and abbreviations .....	15
3.1 Terms and definitions .....	15
3.2 Abbreviations .....	21
3.3 Conventions .....	22
4 Conformance.....	22
5 Specification of installations .....	23
5.1 General.....	23
5.2 Installation specification .....	23
5.2.1 Requirements .....	23
5.2.2 Recommendations .....	25
5.3 Technical specification .....	25
5.3.1 General .....	25
5.3.2 Safety requirements .....	26
5.3.3 Security requirements.....	26
5.3.4 Performance and configuration Requirements.....	26
5.3.5 Environmental conditions.....	27
5.4 Scope of work .....	27
5.4.1 Pre-installation.....	27
5.4.2 Installation.....	28
5.4.3 Post-installation.....	29
5.5 Quality assurance .....	29
6 Quality planning .....	30
6.1 Quality plan .....	30
6.2 Sampling .....	31
6.2.1 Balanced cabling .....	31
6.2.2 Optical fibre cabling.....	33
6.3 Treatment of marginal results .....	34
6.3.1 Balanced cabling .....	34
6.3.2 Optical fibre cabling.....	34
6.4 Treatment of non-compliant results .....	35
6.5 Change control.....	35
7 Installation planning .....	35
7.1 General.....	35
7.2 Safety .....	35
7.2.1 General .....	35
7.2.2 Mains power cabling .....	35
7.2.3 Optical fibre cabling.....	35
7.3 Environment.....	36
7.4 Points of electrical contact.....	36
7.5 External service provision .....	36
7.5.1 Requirements .....	36

7.5.2	Recommendations .....	36
7.6	Pathways and pathway systems .....	36
7.6.1	General .....	36
7.6.2	Inside buildings .....	39
7.6.3	Outside buildings .....	42
7.7	Spaces .....	46
7.7.1	Requirements .....	46
7.7.2	Recommendations .....	48
7.8	Functional elements .....	50
7.8.1	Requirements .....	50
7.8.2	Recommendations .....	51
7.9	Segregation of information technology cabling and mains power cabling .....	52
7.9.1	General .....	52
7.9.2	Requirements .....	53
7.9.3	Recommendations .....	59
7.10	Cabling – Requirements .....	59
7.10.1	General .....	59
7.10.2	Unscreened cabling .....	59
7.10.3	Screened cabling .....	60
7.10.4	Optical fibre cabling .....	60
8	Installation practices .....	60
8.1	General .....	60
8.2	Safety .....	60
8.2.1	General .....	60
8.2.2	Mains power cabling .....	60
8.2.3	Functional bonding .....	60
8.2.4	Optical fibre cabling .....	60
8.2.5	Guards and signs .....	61
8.2.6	Enclosed spaces .....	61
8.2.7	Maintenance holes .....	61
8.2.8	Closures .....	61
8.3	Environment .....	61
8.3.1	Storage .....	61
8.3.2	Installation – Requirements .....	61
8.4	Component inspection and testing – Requirements .....	61
8.5	Pathways .....	62
8.5.1	Requirements .....	62
8.5.2	Inside buildings – Requirements .....	62
8.5.3	Outside buildings .....	62
8.6	Spaces .....	63
8.6.1	Requirements .....	63
8.6.2	Entrance facilities .....	63
8.6.3	Rooms and enclosures intended to contain distributors .....	63
8.6.4	Cabinets, frames and racks .....	63
8.6.5	Closures .....	63
8.6.6	Outlets .....	63
8.7	Pathway system installation .....	63
8.7.1	General .....	63
8.7.2	Inside buildings .....	64

8.7.3	Outside buildings .....	64
8.8	Closure installation .....	64
8.9	Cable installation .....	65
8.9.1	Cable installation within pathway systems .....	65
8.9.2	General .....	65
8.9.3	Inside buildings .....	66
8.9.4	Cable installation in maintenance holes .....	66
8.9.5	Cable installation within closures – Requirements .....	67
8.10	Joining and terminating of cables .....	67
8.10.1	Requirements .....	67
8.10.2	Balanced cabling .....	68
8.10.3	Screened balanced cabling .....	68
8.10.4	Optical fibre cabling .....	68
8.11	Cords and jumpers .....	68
8.12	Surge protective devices .....	68
8.13	Acceptance .....	68
8.13.1	Inspection .....	68
8.13.2	Testing .....	69
9	Documentation and administration .....	69
9.1	Symbols and preparation of documents .....	69
9.2	Administration .....	69
9.2.1	General .....	69
9.2.2	Administration system .....	70
9.2.3	Identifiers – Requirements .....	72
9.2.4	Component labelling .....	72
9.2.5	Records .....	75
9.2.6	Cable administration system .....	79
9.2.7	Reports .....	82
10	Testing .....	82
10.1	General .....	82
10.1.1	Links and permanent links .....	82
10.1.2	Channels .....	83
10.1.3	Cabling interface adaptors .....	84
10.1.4	Calibration .....	84
10.1.5	Equipment protection .....	84
10.1.6	Measurement conditions .....	84
10.2	Test procedures for balanced cabling .....	85
10.2.1	General .....	85
10.2.2	Measurement of length-related parameters .....	85
10.2.3	Treatment of marginal test results .....	85
10.2.4	Treatment of unacceptable test results .....	85
10.2.5	Test result format .....	85
10.2.6	Test result documentation .....	86
10.3	Test procedures for optical fibre cabling .....	86
10.3.1	General .....	86
10.3.2	Treatment of unacceptable test results .....	86
10.3.3	Test result documentation .....	87
11	Inspection .....	87
11.1	General .....	87

11.2	Inspection Level 1 .....	87
11.3	Inspection Level 2 .....	88
11.4	Inspection Level 3 .....	88
11.5	Inspection documentation – Requirements .....	88
12	Operation .....	89
12.1	Standard operating procedure .....	89
12.1.1	Requirements .....	89
12.1.2	Recommendations .....	89
12.2	Cords and jumpers .....	89
12.3	Optical fibre adaptors .....	89
13	Maintenance .....	89
13.1	Approaches to maintenance .....	89
13.1.1	General .....	89
13.1.2	Requirements .....	90
13.2	Maintenance procedures .....	90
13.2.1	Requirements .....	90
13.2.2	Recommendations .....	90
14	Repair .....	91
Annex A (normative)	Optical fibre polarity maintenance: connecting hardware for multiple optical fibres .....	92
Annex B (normative)	Common infrastructures within multi-tenant premises .....	101
Annex C (normative)	Cabling in accordance with ISO/IEC 11801 .....	109
Annex D (normative)	Cabling in accordance with ISO/IEC 15018 .....	116
Annex E (normative)	Cabling in accordance with ISO/IEC 24764 .....	122
Annex F (normative)	Cabling in accordance with ISO/IEC 24702 .....	135
Annex G (normative)	Cabling in accordance with ISO/IEC TR 24704 .....	138
Bibliography	.....	139

Figure 1 – Schematic relationship between ISO/IEC 14763-2 and other relevant standards .....	12
Figure 2 – Quality assurance schematic .....	23
Figure 3 – Example of conformant and non-conformant bend radius management .....	40
Figure 4 – Example of use of curved corners in pathway systems .....	42
Figure 5 – Example of cabling installations outside buildings .....	43
Figure 6 – Dimensions of rooms intended to contain distributors .....	50
Figure 7 – Process of determining cable separation .....	54
Figure 8 – Flowchart for cable separation calculation .....	57
Figure 9 – Separation of mains power and information technology cables without dividers .....	58
Figure 10 – Separation of mains power and information technology cables with dividers .....	58
Figure 11 – Examples of cord and jumper labelling .....	74
Figure 12 – Cable administration database and possible linkages .....	80
Figure 13 – Basic cabling administration .....	80
Figure 14 – Examples of cabling permanent links .....	83
Figure 15 – Reference planes for link and channels (point-to-point) .....	83
Figure 16 – Example of a cabling channel .....	84

Figure A.1 – Duplex connecting hardware plug .....	93
Figure A.2 – Duplex connecting adapter .....	93
Figure A.3 – Duplex patch cord .....	93
Figure A.4 – Views of crossover patch cords .....	94
Figure A.5 – Optical fibre sequences and adapter orientation in patch panel for the symmetrical position method .....	95
Figure A.6 – Optical fibre sequences and adapter orientation in patch panel for the reverse-pair position method .....	95
Figure A.7 – Array connector cable or patch cord (key-up to key-up) .....	97
Figure A.8 – Array adapter with aligned keyways .....	97
Figure A.9 – Transition assembly .....	98
Figure A.10 – Connectivity method for duplex signals .....	99
Figure A.11 – Connectivity method for parallel optics channels .....	100
Figure B.1 – Example of common pathways and spaces in a multi-tenant building .....	102
Figure B.2 – Example of a campus entrance facility .....	104
Figure B.3 – Example 1: Common equipment room .....	106
Figure B.4 – Example 1: Common telecommunications room .....	107
Figure B.5 – Example 2: Common telecommunications room .....	107
Figure C.1 – Connection of functional elements providing redundancy .....	110
Figure E.1 – Connection of functional elements providing redundancy .....	123
Figure E.2 – Example of layered cable trays with smaller width upper trays .....	126
Figure E.3 – Example of uncovered (accessible) row of floor tiles to provide access to lower tray .....	127
Figure E.4 – Dimensions of rooms intended to contain distributors .....	129
Figure E.5 – Example of "hot" aisles, "cold" aisles and cable pathway locations .....	131
Table 1 – Installed balanced cabling test parameters .....	31
Table 2 – Minimum sample sizes for alien (exogenous) crosstalk testing .....	33
Table 3 – Installed optical fibre cabling test parameters .....	33
Table 4 – Examples of pathway systems .....	37
Table 5 – Stacking height for non-continuous and interval support pathway systems .....	41
Table 6 – Design and planning of pathways outside buildings .....	43
Table 7 – Separation recommendations between metallic information technology cabling and specific EMI sources .....	53
Table 8 – Classification of information technology cables .....	55
Table 9 – Minimum separation S .....	55
Table 10 – Power cabling factor P .....	56
Table 11 – Level of installation complexity .....	70
Table 12 – Level of operational complexity .....	70
Table 13 – Minimum requirements of administration systems .....	71
Table 14 – Minimum requirements of operational administration systems .....	72
Table 15 – Labelling requirements .....	73
Table 16 – Labelling recommendations (additional) .....	74
Table 17 – Infrastructure records for spaces, cabinets, racks, frames and closures .....	76



Table 18 – Infrastructure records for cables and termination points .....	77
Table 19 – Infrastructure records .....	78
Table 20 – Infrastructure records for pathways and premises.....	79
Table 21 – Recommendations of installation administration systems.....	81
Table 22 – Recommendations of operational administration systems .....	81
Table A.1 – Optical fibre colour code scheme of IEC 60794-2 .....	92
Table B.1 – Summary of common spaces used to service a multi-tenant building.....	102
Table D.1 – Minimum requirements for dimensions of primary distribution spaces .....	118
Table D.2 – Requirements for dimensions of secondary distribution spaces .....	119
Table D.3 – Minimum dimensions of spaces allocated to junction boxes .....	120
Table D.4 – Recommendations for dimensions of primary distribution spaces .....	120
Table D.5 – Recommendations for dimensions of secondary distribution spaces.....	121
Table E.1 – Environmental requirements for data centres .....	124
Table F.1 – Risk elements for consideration in determining an appropriate maintenance approach.....	137

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# INFORMATION TECHNOLOGY – IMPLEMENTATION AND OPERATION OF CUSTOMER PREMISES CABLING –

## Part 2: Planning and installation

### FOREWORD

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International Standard ISO/IEC 14763-2 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This first edition supersedes Clauses 11 and 12 of ISO/IEC 11801, published in 2002, replaces ISO/IEC 14763-1, published in 1999, its Amendment 1 (2004), ISO/IEC TR 14763-2, published in 2000, ISO/IEC 18010, published in 2002, and its Amendment 1 (2005) and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

In addition to the supersession of parts of earlier standards and the incorporation of other standards, this standard provides much greater detail in all aspects of planning and installation with respect to ISO/IEC TR 14763-2 and provides clearly differentiated and directed requirements and recommendations.

The list of all currently available parts of the ISO/IEC 14763 series, under the general title *Information technology – Implementation and operation of customer premises cabling*, can be found on the IEC web site.

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

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## 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 organisation's effectiveness.

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

- a) design,
- b) specification – the detailed requirement for the cabling, including the planning of its accommodation and associated building services addressing safety and 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 International Standard supports the specification, implementation and operation of generic information technology cabling designed in accordance with the standards and associated documents developed by ISO/IEC JTC 1/SC 25 and addresses the following topics

- specification depending on the application, environment, building infrastructure and facilities, etc.,
- quality assurance,
- installation planning (including pathways and spaces) depending on the application, environment, building infrastructure and facilities, etc.,
- installation practice (including pathways and spaces),
- documentation and administration,
- testing,
- inspection,
- operation,
- maintenance and maintainability (based on any impact from planning and installation),
- repair and repairability (based on any impact from planning and installation).

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

The following normative Annexes support specific aspects of planning and installation

- Annex A: Optical fibre polarity,
- Annex B: Common infrastructures within multi-tenant premises.

The requirements and recommendations of the main body of this standard are premises-independent. The following normative Annexes include requirements for generic cabling in accordance with specific standards

- Annex C: Cabling in accordance with ISO/IEC 11801,
- Annex D: Cabling in accordance with ISO/IEC 15018,
- Annex E: Cabling in accordance with ISO/IEC 24764,
- Annex F: Cabling in accordance with ISO/IEC 24702,

- Annex G: Cabling in accordance with ISO/IEC TR 24704.

This standard sets out the responsibilities of information technology cabling installers and premises owners, and is intended to be referenced in relevant contracts. The owners may delegate selected responsibilities to designers, specifiers, operators and maintainers of installed information technology cabling.

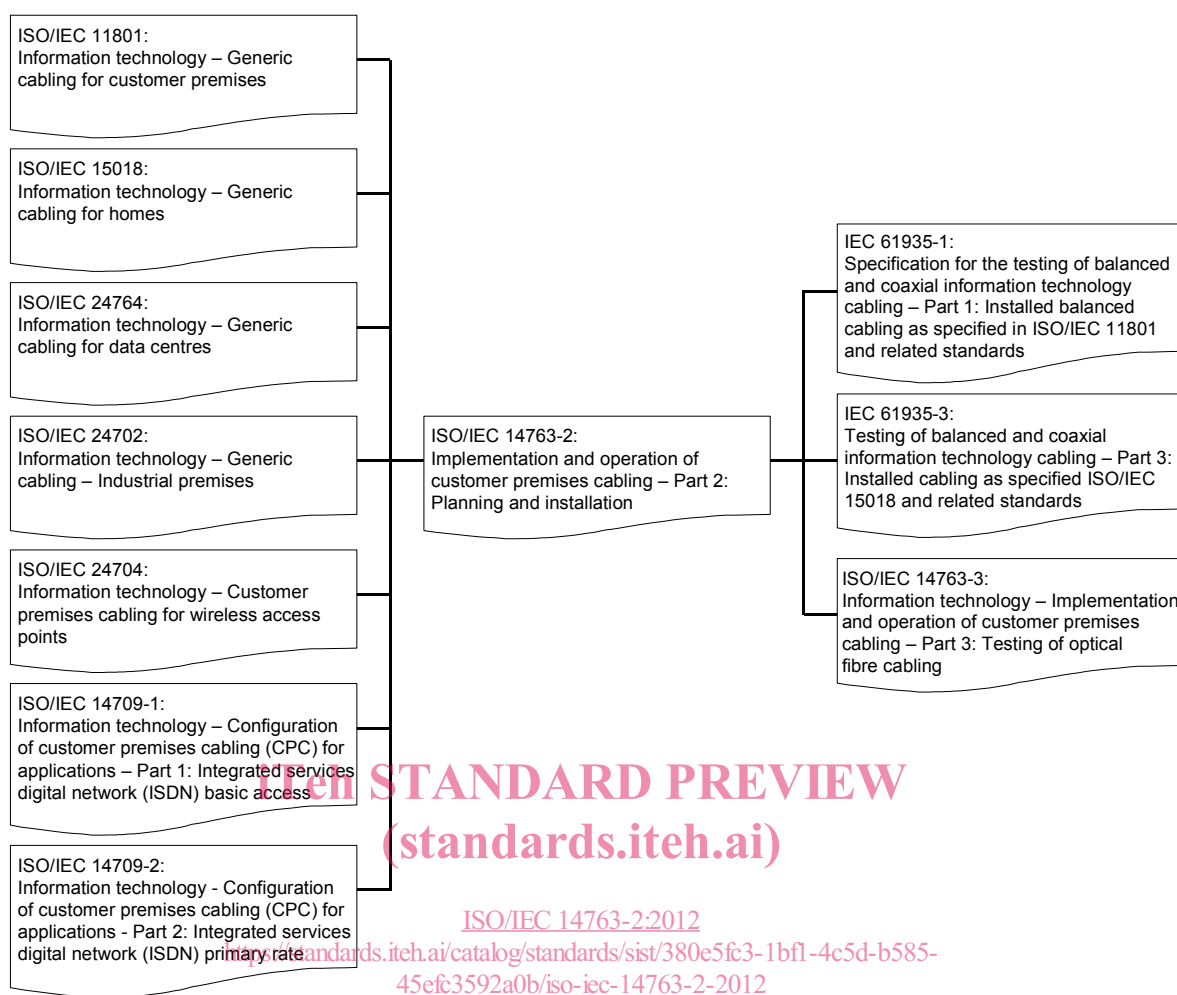
This standard is also relevant to

- architects, building designers and builders,
- main contractors,
- designers, suppliers, installers, inspectors (auditors), building managers, maintainers and owners of information technology cabling,
- public network providers and local service providers,
- end users.

This International Standard is one of a number of documents prepared in support of international standards and technical reports for cabling design produced by ISO/IEC JTC 1/SC 25. Figure 1 shows the inter-relationship between these standards and technical reports.

Users of this standard should be familiar with the applicable cabling design standard.

NOTE Telecommunications infrastructure affects raw material consumption. The infrastructure design and installation methods also influence product life and sustainability of electronic equipment life cycling. These aspects of telecommunications infrastructure impact our environment. Since building life cycles are typically planned for decades, technological electronic equipment upgrades are necessary. The telecommunications infrastructure design and installation process magnifies the need for sustainable infrastructures with respect to building life, electronic equipment life cycling and considerations of effects on environmental waste. Telecommunications designers are encouraged to research local building practices for a sustainable environment and conservation of fossil fuels as part of the design process.



**Figure 1 – Schematic relationship between ISO/IEC 14763-2 and other relevant standards**

# INFORMATION TECHNOLOGY – IMPLEMENTATION AND OPERATION OF CUSTOMER PREMISES CABLING –

## Part 2: Planning and installation

### 1 Scope

This part of ISO/IEC 14763 specifies requirements for the planning, installation and operation of cabling and cabling infrastructures (including cabling, pathways, spaces, earthing and bonding) in support of generic cabling standards and associated documents.

The following aspects are addressed

- specification of the installation,
- quality assurance,
- installation planning,
- installation practice,
- documentation,
- administration,
- testing,
- inspection,
- operation,
- maintenance,
- repair.

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The requirements of Clauses 5 to 14 of this standard are premises-independent and may be amended by the requirements of premises-specific Annexes.

This part of ISO/IEC 14763 excludes

- specific requirements applicable to other cabling systems (e.g. mains power cabling); however, it takes account of the effects other cabling systems may have on the installation of information technology cabling (and vice versa) and gives general advice,
- those aspects of installation associated with the transmission of signals in free space between transmitters, receivers or their associated antenna systems (e.g. wireless, radio, microwave or satellite).

This standard is applicable to certain hazardous environments but does not exclude additional requirements which are applicable in particular circumstances (e.g. electricity supply and electrified railways).

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