

INTERNATIONAL STANDARD



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

IT-Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO/IEC 14763-2:2019](https://standards.iteh.ai/catalog/standards/iso/7579a681-f3d3-447c-9120-8a28546b826b/iso-iec-14763-2-2019)

<https://standards.iteh.ai/catalog/standards/iso/7579a681-f3d3-447c-9120-8a28546b826b/iso-iec-14763-2-2019>





THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2019 ISO/IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about ISO/IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

Document Preview

[ISO/IEC 14763-2:2019](https://standards.iteh.ai/catalog/standards/iso/7579a681-f3d3-447c-9120-8a28546b826b/iso-iec-14763-2-2019)

<https://standards.iteh.ai/catalog/standards/iso/7579a681-f3d3-447c-9120-8a28546b826b/iso-iec-14763-2-2019>

INTERNATIONAL STANDARD



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

<https://standards.iteh.ai>
Document Preview

[ISO/IEC 14763-2:2019](https://standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/iso/7579a681-f3d3-447c-9120-8a28546b826b/iso-iec-14763-2-2019>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 35.200

ISBN 978-2-8322-7698-3

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	9
INTRODUCTION.....	11
1 Scope.....	13
2 Normative references	14
3 Terms, definitions and abbreviated terms	15
3.1 Terms and definitions.....	15
3.2 Abbreviated terms.....	20
3.3 Conventions.....	21
4 Conformance.....	21
5 Specification of installations	21
5.1 General.....	21
5.2 Installation specification.....	22
5.2.1 Requirements	22
5.2.2 Recommendations	23
5.3 Technical specification.....	24
5.3.1 General	24
5.3.2 Notification of hazards	24
5.3.3 Security requirements.....	25
5.3.4 Performance and configuration – Requirements.....	25
5.3.5 Environmental conditions.....	27
5.4 Scope of work.....	28
5.4.1 Pre-installation	28
5.4.2 Installation.....	29
5.4.3 Post-installation.....	30
5.5 Quality assurance	30
6 Quality planning.....	30
6.1 Quality plan	30
6.2 Specification of cabling components	31
6.3 Sampling.....	32
6.3.1 Balanced cabling	32
6.3.2 Optical fibre cabling.....	34
6.4 Treatment of marginal results.....	36
6.4.1 Balanced cabling	36
6.4.2 Optical fibre cabling.....	36
6.5 Treatment of non-compliant results	36
6.6 Change control	36
7 Installation planning.....	36
7.1 General.....	36
7.2 Safety	37
7.2.1 General	37
7.2.2 Low voltage power supply cabling.....	37
7.2.3 Telecommunications cables fire performance	37
7.2.4 Optical fibre cabling.....	37
7.2.5 Transmission and terminal equipment.....	37
7.3 Environment.....	37
7.4 Points of electrical contact	38

7.5	External service provision	38
7.5.1	Requirements	38
7.5.2	Recommendations	38
7.6	Pathways and pathway systems	38
7.6.1	General	38
7.6.2	Inside buildings	42
7.6.3	Outside buildings	49
7.7	Spaces	61
7.7.1	Requirements	61
7.7.2	Recommendations	66
7.8	Functional elements	68
7.8.1	Requirements	68
7.8.2	Recommendations	70
7.9	Segregation of telecommunications cabling and power supply cabling inside buildings	70
7.9.1	General	70
7.9.2	Requirements	72
7.9.3	Recommendations	78
7.10	Segregation of underground telecommunications cabling and power supply cabling outside buildings	78
7.10.1	General	78
7.10.2	Power supply cabling \leq AC 1 000 V RMS or DC 1 500 V	78
7.10.3	Power supply cabling $>$ AC 1 000 V RMS or DC 1 500 V	79
7.10.4	Earthing systems	80
7.10.5	Other infrastructures	81
7.11	Segregation of aerial telecommunications cabling	82
7.11.1	General	82
7.11.2	Overhead power supply infrastructures	82
7.11.3	Sharing of infrastructures carrying \leq 1 000 V AC (1 500 V DC)	84
7.11.4	Sharing of infrastructures carrying $>$ 1 000 V AC (1 500 V DC)	86
7.12	Planning for repair	86
7.13	Cabling – Requirements	87
7.13.1	General	87
7.13.2	Unscreened cabling	87
7.13.3	Screened cabling	87
7.13.4	Optical fibre cabling	87
7.14	Planning and assessment of cabling in support of remote powering objectives	88
7.14.1	General	88
7.14.2	Remote powering installations of Category RP3	88
7.14.3	Connecting hardware	92
8	Installation practices	93
8.1	General	93
8.2	Safety	93
8.2.1	General	93
8.2.2	Power supply cabling	93
8.2.3	Telecommunications cables fire performance	93
8.2.4	Optical fibre cabling	93
8.2.5	Guards and signs	94

8.2.6	Enclosed spaces	94
8.2.7	Maintenance holes.....	94
8.2.8	Closures	94
8.3	Environment.....	94
8.3.1	Storage.....	94
8.3.2	Installation – Requirements	94
8.4	Component inspection and testing – Requirements	94
8.5	Pathways	95
8.5.1	Requirements	95
8.5.2	Recommendations	96
8.6	Spaces	96
8.6.1	Requirements	96
8.6.2	Recommendations	97
8.7	Pathway system installation	97
8.7.1	General	97
8.7.2	Inside buildings	98
8.7.3	Outside buildings.....	98
8.8	Closure installation	98
8.9	Cable installation	99
8.9.1	Cable installation within pathway systems	99
8.9.2	Inside buildings	100
8.9.3	Cable installation in maintenance holes.....	101
8.9.4	Cable installation within closures – Requirements.....	102
8.10	Jointing and terminating of cables.....	102
8.10.1	Requirements	102
8.10.2	Balanced cabling	103
8.10.3	Screened balanced cabling.....	103
8.10.4	Optical fibre cabling.....	103
8.11	Cords and jumpers.....	103
8.12	Surge protective devices.....	103
8.13	Acceptance	104
8.13.1	Inspection.....	104
8.13.2	Testing	104
9	Documentation and administration	104
9.1	Symbols and preparation of documents.....	104
9.1.1	Requirements	104
9.1.2	Recommendations	104
9.2	Administration.....	104
9.2.1	General	104
9.2.2	Administration system.....	105
9.2.3	Identifiers – Requirements	109
9.2.4	Component labelling	109
9.2.5	Records.....	112
9.2.6	Cable administration system.....	116
9.2.7	Reports.....	119
10	Testing	119
10.1	General.....	119
10.1.1	Links and permanent links	119
10.1.2	Channels	120

iTech Standards
<http://standards.it-echnology.com/standards/iso/7579a681-13d5-447c-9120-8a28546b826b/iso-iec-14763-2-2019>
 Document Preview

<https://standards.it-echnology.com/standards/iso/7579a681-13d5-447c-9120-8a28546b826b/iso-iec-14763-2-2019>

10.1.3	Cabling interface adapters	121
10.1.4	Calibration	121
10.1.5	Equipment protection	121
10.1.6	Measurement conditions	122
10.2	Test procedures for balanced cabling.....	122
10.2.1	General	122
10.2.2	Measurement of length-related parameters.....	122
10.2.3	Treatment of marginal test results.....	122
10.2.4	Treatment of unacceptable test results	122
10.2.5	Test result format	122
10.2.6	Test result documentation.....	123
10.3	Test procedures for optical fibre cabling.....	123
10.3.1	General	123
10.3.2	Treatment of unacceptable test results	123
10.3.3	Test result documentation.....	124
11	Inspection.....	124
11.1	General.....	124
11.2	Inspection Level 1.....	124
11.3	Inspection Level 2.....	125
11.4	Inspection Level 3.....	125
11.5	Inspection documentation – Requirements	125
12	Operation	126
12.1	Connection of equipment	126
12.2	Standard operating procedure	126
12.2.1	Requirements	126
12.2.2	Recommendations	126
12.3	Cords and jumpers.....	126
12.4	Optical fibre adapters.....	126
13	Maintenance.....	127
13.1	Approaches to maintenance.....	127
13.1.1	General	127
13.1.2	Requirements	127
13.2	Maintenance procedures.....	127
13.2.1	Requirements	127
13.2.2	Recommendations	127
14	Repair	128
Annex A (normative)	Optical fibre polarity maintenance: connecting hardware for multiple optical fibres	129
Annex B (normative)	Common infrastructures within multi-tenant premises.....	143
Annex C (normative)	Cabling in accordance with ISO/IEC 11801-2.....	151
Annex D (normative)	Cabling in accordance with ISO/IEC 11801-3.....	153
Annex E (normative)	Cabling in accordance with ISO/IEC 11801-4.....	156
Annex F (normative)	Cabling in accordance with ISO/IEC 11801-5.....	162
Annex G (normative)	Cabling in accordance with ISO/IEC 11801-6.....	166
Annex H (informative)	Equipment accommodation environments.....	168
Annex I (normative)	Information for remote powering.....	169
Bibliography	173

<https://standards.iteh.ai/>
 Document Preview

<https://standards.iteh.ai/standards/iso/7579a681-f3d3-447c-9120-8a28546b826b/iso-iec-14763-2-2019>