



SLOVENSKI STANDARD

SIST EN 61784-5-2:2014

01-april-2014

Nadomešča:

SIST EN 61784-5-2:2012

Industrijska komunikacijska omrežja - Profili - 5-2. del: Inštalacija procesnih vodil - Inštalacijski profili za CPF 2 (IEC 61784-5-2:2013)

Industrial communication networks - Profiles -- Part 5-2: Installation of fieldbuses - Installation profiles for CPF 2

Industrielle Kommunikationsnetze - Profile -- Teil 5-2: Feldbusinstallation - Installationsprofile für die Kommunikationsprofilfamilie 2

Réseaux de communication industriels - Profils -- Partie 5-2: Installation des bus de terrain - Profils d'installation pour CPF 2

Ta slovenski standard je istoveten z: EN 61784-5-2:2013

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.40	Transportni sloj	Transport layer

SIST EN 61784-5-2:2014

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61784-5-2:2014

<https://standards.iteh.ai/catalog/standards/sist/d58b8c74-e729-4109-b67f-696e046a1cb7/sist-en-61784-5-2-2014>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61784-5-2

December 2013

ICS 25.040.40; 35.100.40

Supersedes EN 61784-5-2:2012

English version

**Industrial communication networks -
Profiles -
Part 5-2: Installation of fieldbuses -
Installation profiles for CPF 2
(IEC 61784-5-2:2013)**

Réseaux de communication industriels -
Profils -
Partie 5-2: Installation des bus de terrain -
Profils d'installation pour CPF 2
(CEI 61784-5-2:2013)

Industrielle Kommunikationsnetze -
Profile -
Teil 5-2: Feldbusinstallation -
Installationsprofile für die
Kommunikationsprofilfamilie 2
(IEC 61784-5-2:2013)

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

This European Standard was approved by CENELEC on 2013-10-14. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CENELEC

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 65C/738/FDIS, future edition 3 of IEC 61784-5-2, prepared by SC 65C "Industrial networks" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61784-5-2:2013.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-07-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-10-14

This document supersedes EN 61784-5-2:2012.

EN 61784-5-2:2013 includes the following significant technical changes with respect to EN 61784-5-2:2012:

- updates pertaining to current installation practices;
- addition of new technology that has become recently available;
- errors have been corrected;
- improved alignment with EN 61918.

This standard is to be used in conjunction with EN 61918:2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61784-5-2:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61158 Series	NOTE	Harmonized as EN 61158 Series (not modified).
IEC/TR 61158-1	NOTE	Harmonized as CLC/TR 61158-1.
IEC 62026-3	NOTE	Harmonized as EN 62026-3.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Annex ZA of EN 61918:2013 applies, except as follows:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
<i>Addition to Annex ZA of EN 61918:2013:</i>				
IEC 61918	2013	Industrial communication networks - Installation of communication networks in industrial premises	EN 61918	2013

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61784-5-2:2014

<https://standards.iteh.ai/catalog/standards/sist/d58b8c74-e729-4109-b67f-696e046a1cb7/sist-en-61784-5-2-2014>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61784-5-2:2014](#)

<https://standards.iteh.ai/catalog/standards/sist/d58b8c74-e729-4109-b67f-696e046a1cb7/sist-en-61784-5-2-2014>



IEC 61784-5-2

Edition 3.0 2013-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Industrial communication networks – Profiles –
Part 5-2: Installation of fieldbuses – Installation profiles for CPF 2

Réseaux de communication industriels – Profils –
Partie 5-2: Installation des bus de terrain – Profils d'installation pour CPF 2

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

XH

ICS 25.040.40; 35.100.40

ISBN 978-2-8322-1060-4

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	9
INTRODUCTION.....	11
1 Scope.....	12
2 Normative references	12
3 Terms, definitions and abbreviated terms	12
4 CPF 2: Overview of installation profiles	12
5 Installation profile conventions	13
6 Conformance to installation profiles.....	14
Annex A (normative) CP 2/1 (ControlNet™) specific installation profile	15
A.1 Installation profile scope.....	15
A.2 Normative references	15
A.3 Installation profile terms, definitions, and abbreviated terms.....	15
A.3.1 Terms and definitions	15
A.3.2 Abbreviated terms	15
A.3.3 Conventions for installation profiles.....	15
A.4 Installation planning	16
A.4.1 General.....	16
A.4.2 Planning requirements.....	17
A.4.3 Network capabilities	18
A.4.4 Selection and use of cabling components.....	24
A.4.5 Cabling planning documentation.....	41
A.4.6 Verification of planning specification.....	41
A.5 Installation implementation	41
A.5.1 General requirements.....	41
A.5.2 Cable installation.....	41
A.5.3 Connector installation.....	43
A.5.4 Terminator installation.....	53
A.5.5 Device installation	53
A.5.6 Coding and labelling.....	55
A.5.7 Earthing and bonding of equipment and devices and shield cabling.....	56
A.5.8 As-implemented cabling documentation.....	57
A.6 Installation verification and installation acceptance test.....	57
A.6.1 General	57
A.6.2 Installation verification.....	57
A.6.3 Installation acceptance test	60
A.7 Installation administration.....	62
A.8 Installation maintenance and installation troubleshooting	62
A.8.1 General	62
A.8.2 Maintenance.....	62
A.8.3 Troubleshooting	62
A.8.4 Specific requirements for maintenance and troubleshooting	67
Annex B (normative) CP 2/2 (EtherNet/IP™) specific installation profile.....	68
B.1 Installation profile scope.....	68
B.2 Normative references	68

B.3 Installation profile terms, definitions, and abbreviated terms	68
B.3.1 Terms and definitions	68
B.3.2 Abbreviated terms	68
B.3.3 Conventions for installation profiles	68
B.4 Installation planning	69
B.4.1 General	69
B.4.2 Planning requirements	70
B.4.3 Network capabilities	70
B.4.4 Selection and use of cabling components	74
B.4.5 Cabling planning documentation	86
B.4.6 Verification of cabling planning specification	87
B.5 Installation implementation	87
B.5.1 General requirements	87
B.5.2 Cable installation	87
B.5.3 Connector installation	88
B.5.4 Terminator installation	89
B.5.5 Device installation	89
B.5.6 Coding and labelling	89
B.5.7 Earthing and bonding of equipment and devices and shield cabling	89
B.5.8 As-implemented cabling documentation	91
B.6 Installation verification and installation acceptance test	91
B.6.1 General	91
B.6.2 Installation verification	91
B.6.3 Installation acceptance test	93
B.7 Installation administration	94
B.8 Installation maintenance and installation troubleshooting	94
Annex C (normative) CP 2/3 (DeviceNet™) specific installation profile	95
C.1 Installation profile scope	95
C.2 Normative references	95
C.3 Installation profile terms, definitions, and abbreviated terms	95
C.3.1 Terms and definitions	95
C.3.2 Abbreviated terms	95
C.3.3 Conventions for installation profiles	95
C.4 Installation planning	96
C.4.1 General	96
C.4.2 Planning requirements	97
C.4.3 Network capabilities	98
C.4.4 Selection and use of cabling components	112
C.4.5 Cabling planning documentation	121
C.4.6 Verification of cabling planning specification	121
C.5 Installation implementation	121
C.5.1 General requirements	121
C.5.2 Cable installation	121
C.5.3 Connector installation	124
C.5.4 Terminator installation	136
C.5.5 Device installation	138
C.5.6 Coding and labelling	141

C.5.7 Earthing and bonding of equipment and devices and shield cabling.....	141
C.5.8 As-implemented cabling documentation.....	142
C.6 Installation verification and installation acceptance test.....	142
C.6.1 General.....	142
C.6.2 Installation verification.....	142
C.6.3 Installation acceptance test.....	145
C.7 Installation administration.....	146
C.8 Installation maintenance and installation troubleshooting.....	146
C.8.1 General.....	146
C.8.2 Maintenance.....	146
C.8.3 Troubleshooting.....	146
C.8.4 Specific requirements for maintenance and troubleshooting.....	146
Annex D (informative) Additional information.....	150
D.1 Network validation check sheet for CP 2/3 (DeviceNet).....	150
Bibliography.....	154
Figure 1 – Standards relationships.....	11
Figure A.1 – Interconnection of CPF 2 networks.....	16
Figure A.2 – Overview of CPF 2/1 networks.....	17
Figure A.3 – Drop cable requirements.....	19
Figure A.4 – Placement of BNC/TNC plugs.....	19
Figure A.5 – Placement of terminators.....	20
Figure A.6 – Extending a network using repeaters.....	20
Figure A.7 – Extending a network using active star topology.....	21
Figure A.8 – Links.....	21
Figure A.9 – Extending the network beyond 99 nodes.....	22
Figure A.10 – Maximum allowable taps per segment.....	30
Figure A.11 – Example of repeaters in star configuration.....	31
Figure A.12 – Repeaters in parallel.....	32
Figure A.13 – Repeaters in combination series and parallel.....	33
Figure A.14 – Ring repeater.....	33
Figure A.15 – Installing bulkheads.....	34
Figure A.16 – Coaxial BNC and TNC terminators.....	35
Figure A.17 – Terminator placement in a segment.....	35
Figure A.18 – Redundant network icons.....	37
Figure A.19 – Redundant coax media.....	38
Figure A.20 – Redundant fibre media.....	38
Figure A.21 – Repeaters in series versus length difference for coax media.....	39
Figure A.22 – Repeaters in series versus length difference for fibre media.....	39
Figure A.23 – Example of redundant coax network with repeaters.....	40
Figure A.24 – Example of improper redundant node connection.....	40
Figure A.25 – Example tool kit for installing BNC connectors.....	44
Figure A.26 – Calibration of coaxial stripper.....	45
Figure A.27 – Coax PVC strip length detail (informative).....	45

Figure A.28 – Memory cartridge and blade.....	46
Figure A.29 – Cable position.....	47
Figure A.30 – Locking the cable.....	47
Figure A.31 – Stripping the cable.....	47
Figure A.32 – Install the crimp ferrule.....	48
Figure A.33 – Cable preparation for PVC type cables (informative).....	48
Figure A.34 – Cable preparation for FEP type cables (informative).....	49
Figure A.35 – Strip guides.....	49
Figure A.36 – Using the flare tool.....	50
Figure A.37 – Expanding the shields.....	50
Figure A.38 – Install the centre pin.....	50
Figure A.39 – Crimping the centre pin.....	51
Figure A.40 – Installing the connector body.....	51
Figure A.41 – Installing the ferrule.....	51
Figure A.42 – Crimp tool.....	52
Figure A.43 – Sealed IP65/67 cable.....	53
Figure A.44 – Terminator placement.....	53
Figure A.45 – Mounting the taps.....	54
Figure A.46 – Mounting the tap assembly using the universal mounting bracket.....	55
Figure A.47 – Mounting the tap using tie wraps or screws.....	55
Figure A.48 – Redundant network icons.....	56
Figure A.49 – Network test tool.....	58
Figure A.50 – Shorting the cable to test for continuity.....	59
Figure A.51 – Testing fibre segments.....	61
Figure A.52 – Multi-fibre backbone cable housing.....	63
Figure A.53 – Repeater adapter module.....	63
Figure A.54 – Short and medium distance fibre module LEDs.....	65
Figure A.55 – Long and extra long repeater module LEDs.....	66
Figure B.1 – Interconnection of CPF 2 networks.....	69
Figure B.2 – Redundant linear bus.....	71
Figure B.3 – Peer to peer connections.....	71
Figure B.4 – Mated connections.....	74
Figure B.5 – The 8-way modular sealed jack & plug (plastic housing).....	78
Figure B.6 – The 8-way modular sealed jack & plug (metal housing).....	79
Figure B.7 – M12-4 connectors.....	79
Figure B.8 – Simplex LC connector.....	80
Figure B.9 – Duplex LC connector.....	80
Figure B.10 – IP65/67 sealed duplex LC connector.....	81
Figure B.11 – IP65/67 sealed duplex SC-RJ connector.....	81
Figure B.12 – M12-4 to 8-way modular bulkhead.....	83
Figure B.13 – The 8-way modular sealed jack & plug (plastic housing).....	88
Figure B.14 – The 8-way modular sealed jack & plug (metal housing).....	89
Figure B.15 – M12-4 connectors.....	89

Figure B.16 – Earthing of cable shield	91
Figure C.1 – Interconnection of CPF 2 networks	96
Figure C.2 – Connection to generic cabling.....	97
Figure C.3 – DeviceNet cable system uses a trunk/drop line topology.....	98
Figure C.4 – Measuring the trunk length	100
Figure C.5 – Measuring the trunk and drop length.....	101
Figure C.6 – Measuring drop cable in a network with multiports	101
Figure C.7 – Removable device using open-style connectors	102
Figure C.8 – Fixed connection using open-style connector.....	102
Figure C.9 – Open-style connector pin out.....	102
Figure C.10 – Open-style connector pin out 10 position	103
Figure C.11 – Power supply sizing example	106
Figure C.12 – Current limit for thick cable for one power supply.....	107
Figure C.13 – Current limit for thick cable and two power supplies.....	108
Figure C.14 – Worst case scenario	109
Figure C.15 – Example using the lookup method	109
Figure C.16 – One power supply end connected	111
Figure C.17 – Segmenting power in the power bus	112
Figure C.18 – Segmenting the power bus using power taps	112
Figure C.19 – Thick cable construction	122
Figure C.20 – Cable Type I construction	123
Figure C.21 – Thin cable construction	123
Figure C.22 – Flat cable construction	123
Figure C.23 – Cable preparation	124
Figure C.24 – Connector assembly	125
Figure C.25 – Micro connector pin assignment.....	125
Figure C.26 – Mini connector pin assignment.....	125
Figure C.27 – Preparation of cable end.....	126
Figure C.28 – Shrink wrap installation.....	126
Figure C.29 – Wire preparation	126
Figure C.30 – Open-style connector (female).....	127
Figure C.31 – Open-style (male plug)	127
Figure C.32 – Flat cable.....	128
Figure C.33 – Aligning the cable	128
Figure C.34 – Closing the assembly.....	129
Figure C.35 – Proper orientation of cable.....	129
Figure C.36 – Locking the assembly	129
Figure C.37 – Driving the IDC contacts in to the cable	130
Figure C.38 – End cap placement	130
Figure C.39 – End cap seated.....	131
Figure C.40 – End cap installation on alternate side of cable	131
Figure C.41 – Flat cable IDC connectors.....	132
Figure C.42 – Installing the connectors	132

Figure C.43 – Cable wiring to open-style terminals	133
Figure C.44 – Auxiliary power cable profile	133
Figure C.45 – Pin out auxiliary power connectors.....	134
Figure C.46 – Power supply cable length versus wire size	135
Figure C.47 – Sealed terminator	137
Figure C.48 – Open-style terminator	137
Figure C.49 – Open-style IDC terminator	137
Figure C.50 – Sealed terminator IDC cable	138
Figure C.51 – Direct connection to the trunk	138
Figure C.52 – Wiring of open-style connector.....	139
Figure C.53 – Wiring of open-style 10-position connector	139
Figure C.54 – Diagnostic temporary connections	139
Figure C.55 – Thick cable preterminated cables (cord sets)	140
Figure C.56 – Thin cable preterminated cables (cord sets).....	141
Table A.1 – Basic network characteristics for copper cabling not based on Ethernet.....	22
Table A.2 – Allowable fibre lengths	23
Table A.3 – RG6 coaxial electrical properties.....	25
Table A.4 – RG6 coaxial physical parameters	25
Table A.5 – Cable type selection.....	26
Table A.6 – Information relevant to optical fibre cables	27
Table A.7 – Copper connectors for ControlNet.....	27
Table A.8 – Fibre connectors for fieldbus systems.....	28
Table A.9 – Relationship between FOC and fibre types (CP 2/1).....	29
Table A.10 – Parameters for Coaxial RG6 Cables.....	42
Table A.11 – Bend radius for coaxial cables outside conduit	42
Table A.12 – Parameters for silica optical fibre cables	42
Table A.13 – Parameters for hard clad silica optical fibre.....	43
Table A.14 – Test matrix for BNC/TNC connectors.....	59
Table A.15 – Wave length and fibre types	62
Table A.16 – LED status table.....	64
Table A.17 – Repeater adapter and module diagnostic	64
Table A.18 – Repeater adapter indicator diagnostic	64
Table A.19 – Repeater module indicator	65
Table A.20 – Short and medium distance troubleshooting chart	65
Table A.21 – Long and extra long troubleshooting chart.....	67
Table B.1 – Network characteristics for balanced cabling based on Ethernet	72
Table B.2 – Network characteristics for optical fibre cabling.....	72
Table B.3 – Fibre lengths for 1 mm POF A4a.2 POF 0.5 NA	73
Table B.4 – Fibre lengths for 1 mm POF A4d POF 0.3 NA	74
Table B.5 – Information relevant to copper cable: fixed cables.....	75
Table B.6 – Information relevant to copper cable: cords.....	75
Table B.7 – TCL limits for unshielded twisted-pair cabling	76

Table B.8 – ELTCTL limits for unshielded twisted-pair cabling	76
Table B.9 – Coupling attenuation limits for screened twisted-pair cabling.....	76
Table B.10 – Information relevant to optical fibre cables	77
Table B.11 – Connectors for balanced cabling CPs based on Ethernet	78
Table B.12 – Industrial EtherNet/IP 8-way modular connector parameters	78
Table B.13 – Industrial EtherNet/IP M12-4 D-coding connector parameters	79
Table B.14 – Optical fibre connecting hardware	80
Table B.15 – Relationship between FOC and fibre types (CP2/2).....	81
Table B.16 – Connector insertion loss.....	82
Table B.17 – Parameters for balanced cables	87
Table B.18 – Parameters for silica optical fibre cables	87
Table B.19 – Parameters for POF optical fibre cables	88
Table C.1 – Basic network characteristics for copper cabling not based on Ethernet.....	99
Table C.2 – Cable trunk and drop lengths for CP 2/3	99
Table C.3 – Summary of available current for trunk cables (CP 2/3).....	103
Table C.4 – Permissible current for thin cable drop lines of various lengths	104
Table C.5 – Power supply specification for DeviceNet.....	104
Table C.6 – Power supply tolerance stack up for DeviceNet.....	105
Table C.7 – Current versus cable length for one power supply thick cable	107
Table C.8 – Current versus length for two power supplies	108
Table C.9 – Definition of equation variables	110
Table C.10 – Information relevant to copper cable: fixed cables.....	113
Table C.11 – Information relevant to copper cable: cords	113
Table C.12 – DeviceNet cables and connector support cross reference	114
Table C.13 – DeviceNet cable profiles	114
Table C.14 – Copper connectors for non-Ethernet based fieldbus	117
Table C.15 – Additional connectors for CP 2/3 (DeviceNet)	117
Table C.16 – Parameters for balanced cables.....	122
Table C.17 – Wire colour code and function.....	127
Table C.18 – Auxiliary power cable colour code	133
Table C.19 – Auxilliary power supply requirements	134
Table C.20 – Signal wire verification	143
Table C.21 – Shield to earth	144
Table C.22 – Connector pin out	145

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INDUSTRIAL COMMUNICATION NETWORKS –
PROFILES –**
**Part 5-2: Installation of fieldbuses –
Installation profiles for CPF 2**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61784-5-2 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2010. This edition constitutes a technical revision.

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

- updates pertaining to current installation practices;
- addition of new technology that has become recently available;
- errors have been corrected;
- improved alignment with IEC 61918.