

# 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**



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# CONTENTS

FOREWORD.....	10
INTRODUCTION.....	12
1 Scope.....	13
2 Normative references .....	13
3 Terms, definitions and abbreviated terms .....	13
4 CPF 2: Overview of installation profiles .....	13
5 Installation profile conventions .....	14
6 Conformance to installation profiles.....	15
Annex A (normative) CP 2/1 (ControlNet™) specific installation profile.....	16
A.1 Installation profile scope.....	16
A.2 Normative references .....	16
A.3 Installation profile terms, definitions, and abbreviated terms.....	16
A.3.1 Terms and definitions.....	16
A.3.2 Abbreviated terms.....	16
A.3.3 Conventions for installation profiles .....	16
A.4 Installation planning .....	17
A.4.1 General.....	17
A.4.2 Planning requirements .....	18
A.4.3 Network capabilities.....	19
A.4.4 Selection and use of cabling components .....	25
A.4.5 Cabling planning documentation.....	43
A.4.6 Verification of cabling planning specification.....	43
A.5 Installation implementation .....	43
A.5.1 General requirements .....	43
A.5.2 Cable installation .....	43
A.5.3 Connector installation .....	45
A.5.4 Terminator installation .....	54
A.5.5 Device installation.....	54
A.5.6 Coding and labelling .....	56
A.5.7 Earthing and bonding of equipment and devices and shield cabling .....	57
A.5.8 As-implemented cabling documentation .....	58
A.6 Installation verification and installation acceptance test.....	58
A.6.1 General.....	58
A.6.2 Installation verification .....	58
A.6.3 Installation acceptance test.....	61
A.7 Installation administration.....	63
A.8 Installation maintenance and installation troubleshooting.....	63
A.8.1 General.....	63
A.8.2 Maintenance .....	63
A.8.3 Troubleshooting .....	63
A.8.4 Specific requirements for maintenance and troubleshooting.....	68
Annex B (normative) CP 2/2 (EtherNet/IP™) specific installation profile.....	69
B.1 Installation profile scope.....	69

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61784-5-2:2018  
http://standards.iteh.ai/en/standards/iec/61784-5-2-2018/7380bbe42ef8/iec-61784-5-2-2018

B.2	Normative references .....	69
B.3	Installation profile terms, definitions, and abbreviated terms .....	69
B.3.1	Terms and definitions.....	69
B.3.2	Abbreviated terms.....	69
B.3.3	Conventions for installation profiles .....	70
B.4	Installation planning .....	70
B.4.1	General.....	70
B.4.2	Planning requirements .....	71
B.4.3	Network capabilities.....	71
B.4.4	Selection and use of cabling components .....	76
B.4.5	Cabling planning documentation .....	92
B.4.6	Verification of cabling planning specification .....	92
B.5	Installation implementation .....	92
B.5.1	General requirements .....	92
B.5.2	Cable installation .....	92
B.5.3	Connector installation .....	93
B.5.4	Terminator installation .....	94
B.5.5	Device installation.....	94
B.5.6	Coding and labelling .....	94
B.5.7	Earthing and bonding of equipment and devices and shield cabling .....	94
B.5.8	As-implemented cabling documentation .....	96
B.6	Installation verification and installation acceptance test.....	96
B.6.1	General.....	96
B.6.2	Installation verification .....	96
B.6.3	Installation acceptance test.....	98
B.7	Installation administration .....	99
B.8	Installation maintenance and installation troubleshooting.....	99
Annex C	(normative) CP 2/3 (DeviceNet™) specific installation profile.....	100
C.1	Installation profile scope.....	100
C.2	Normative references .....	100
C.3	Installation profile terms, definitions, and abbreviated terms .....	100
C.3.1	Terms and definitions.....	100
C.3.2	Abbreviated terms.....	100
C.3.3	Conventions for installation profiles .....	100
C.4	Installation planning .....	101
C.4.1	General.....	101
C.4.2	Planning requirements .....	102
C.4.3	Network capabilities.....	103
C.4.4	Selection and use of cabling components .....	119
C.4.5	Cabling planning documentation .....	129
C.4.6	Verification of cabling planning specification .....	129
C.5	Installation implementation .....	129
C.5.1	General requirements .....	129
C.5.2	Cable installation .....	129
C.5.3	Connector installation .....	131

C.5.4	Terminator installation .....	144
C.5.5	Device installation.....	146
C.5.6	Coding and labelling .....	150
C.5.7	Earthing and bonding of equipment and devices and shield cabling .....	150
C.5.8	As-implemented cabling documentation .....	151
C.6	Installation verification and installation acceptance test.....	151
C.6.1	General.....	151
C.6.2	Installation verification .....	151
C.6.3	Installation acceptance test.....	154
C.7	Installation administration.....	155
C.8	Installation maintenance and installation troubleshooting.....	155
C.8.1	General.....	155
C.8.2	Maintenance .....	155
C.8.3	Troubleshooting .....	155
C.8.4	Specific requirements for maintenance and troubleshooting.....	155
Annex D (informative)	Additional information .....	159
D.1	Network validation check sheet for CP 2/3 (DeviceNet) .....	159
Bibliography	.....	163
Figure 1	– Standards relationships.....	12
Figure A.1	– Interconnection of CPF 2 networks.....	17
Figure A.2	– Overview of CPF 2/1 networks.....	18
Figure A.3	– Drop cable requirements.....	20
Figure A.4	– Placement of BNC/TNC plugs.....	20
Figure A.5	– Placement of terminators.....	21
Figure A.6	– Extending a network using repeaters .....	21
Figure A.7	– Extending a network using active star topology.....	21
Figure A.8	– Links.....	22
Figure A.9	– Extending the network beyond 99 nodes.....	22
Figure A.10	– Maximum allowable taps per segment.....	31
Figure A.11	– Example of repeaters in star configuration .....	32
Figure A.12	– Repeater in parallel.....	33
Figure A.13	– Repeater in combination series and parallel.....	34
Figure A.14	– Ring repeater.....	34
Figure A.15	– Installing bulkheads .....	35
Figure A.16	– Coaxial BNC and TNC terminators.....	36
Figure A.17	– Terminator placement in a segment .....	36
Figure A.18	– RC Shield Termination in Active Devices .....	38
Figure A.19	– Redundant network icons.....	39
Figure A.20	– Redundant coax media .....	39
Figure A.21	– Redundant fibre media.....	39
Figure A.22	– Repeater in series versus length difference for coax media.....	40
Figure A.23	– Repeater in series versus length difference for fibre media .....	41
Figure A.24	– Example of redundant coax network with repeaters.....	41
Figure A.25	– Example of improper redundant node connection.....	42

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Figure A.26 – Example tool kit for installing BNC connectors .....	46
Figure A.27 – Calibration of coaxial stripper.....	46
Figure A.28 – Coax PVC strip length detail (informative).....	47
Figure A.29 – Memory cartridge and blade.....	48
Figure A.30 – Cable position.....	48
Figure A.31 – Locking the cable.....	48
Figure A.32 – Stripping the cable .....	49
Figure A.33 – Install the crimp ferrule .....	49
Figure A.34 – Cable preparation for PVC type cables (informative).....	50
Figure A.35 – Cable preparation for FEP type cables (informative) .....	50
Figure A.36 – Strip guides .....	50
Figure A.37 – Using the flare tool.....	51
Figure A.38 – Expanding the shields.....	51
Figure A.39 – Install the centre pin .....	51
Figure A.40 – Crimping the centre pin.....	52
Figure A.41 – Installing the connector body .....	52
Figure A.42 – Installing the ferrule .....	52
Figure A.43 – Crimp tool.....	53
Figure A.44 – Sealed IP65/67 cable.....	54
Figure A.45 – Terminator placement.....	54
Figure A.46 – Mounting the taps .....	55
Figure A.47 – Mounting the tap assembly using the universal mounting bracket .....	56
Figure A.48 – Mounting the tap using tie wraps or screws.....	56
Figure A.49 – Redundant network icons.....	57
Figure A.50 – Network test tool.....	59
Figure A.51 – Shorting the cable to test for continuity .....	60
Figure A.52 – Testing fibre segments.....	62
Figure A.53 – Multi-fibre backbone cable housing .....	64
Figure A.54 – Repeater adapter module.....	64
Figure A.55 – Short and medium distance fibre module LEDs .....	66
Figure A.56 – Long and extra long repeater module LEDs .....	67
Figure B.1 – Interconnection of CPF 2 networks .....	70
Figure B.2 – Redundant linear bus.....	72
Figure B.3 – Peer-to-peer connections.....	72
Figure B.4 – Mated connections.....	75
Figure B.5 – The 8-way modular sealed jack & plug (plastic housing) .....	82
Figure B.6 – The 8-way modular sealed jack & plug (metal housing).....	82
Figure B.7 – M12-4 connectors .....	83
Figure B.8 – Example of a metallic shell M12-8 X-coding connectors .....	84
Figure B.9 – Simplex LC connector .....	85
Figure B.10 – Duplex LC connector .....	85
Figure B.11 – IP65/67 sealed duplex LC connector.....	85
Figure B.12 – IP65/67 sealed duplex SC-RJ connector .....	86

Figure B.13 – M12-4 to 8-way modular bulkhead .....	88
Figure B.14 – The 8-way modular sealed jack & plug (plastic housing) .....	93
Figure B.15 – The 8-way modular sealed jack & plug (metal housing) .....	93
Figure B.16 – M12-4 connectors .....	94
Figure B.17 – Earthing of cable shield .....	96
Figure C.1 – Interconnection of CPF 2 networks .....	101
Figure C.2 – Connection to generic cabling .....	102
Figure C.3 – DeviceNet cable system uses a trunk/drop line topology .....	104
Figure C.4 – Measuring the trunk length .....	106
Figure C.5 – Measuring the trunk and drop length .....	106
Figure C.6 – Measuring drop cable in a network with multiports .....	107
Figure C.7 – Removable device using open-style connectors .....	107
Figure C.8 – Fixed connection using open-style connector .....	108
Figure C.9 – Open-style connector pin out .....	108
Figure C.10 – Open-style connector pin out 10 position .....	108
Figure C.11 – Power Bus Current derate as a function of temperature differential .....	111
Figure C.12 – Power supply sizing example .....	112
Figure C.13 – Current limit for thick cable for one power supply .....	113
Figure C.14 – Example of a continuous power bus .....	114
Figure C.15 – Current limit for thick cable and two power supplies common V+ .....	115
Figure C.16 – Worst-case scenario .....	116
Figure C.17 – Example using the lookup method .....	116
Figure C.18 – One power supply end connected .....	118
Figure C.19 – Segmenting power in the power bus .....	119
Figure C.20 – Segmenting the power bus using power taps .....	119
Figure C.21 – Thick cable construction .....	130
Figure C.22 – Cable Type I construction .....	130
Figure C.23 – Thin cable construction .....	131
Figure C.24 – Flat cable construction .....	131
Figure C.25 – Cable preparation .....	132
Figure C.26 – Connector assembly .....	132
Figure C.28 – M12 connector pin assignment .....	133
Figure C.29 – Mini connector pin assignment .....	133
Figure C.30 – Preparation of cable end .....	134
Figure C.31 – Shrink wrap installation .....	134
Figure C.32 – Wire preparation .....	134
Figure C.33 – Open-style connector (female) .....	135
Figure C.34 – Open-style (male plug) .....	135
Figure C.35 – Flat cable .....	136
Figure C.36 – Aligning the cable .....	136
Figure C.37 – Closing the assembly .....	137
Figure C.38 – Proper orientation of cable .....	137
Figure C.39 – Locking the assembly .....	137

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Figure C.40 – Driving the IDC contacts in to the cable .....	138
Figure C.41 – End cap placement .....	138
Figure C.42 – End cap seated .....	139
Figure C.43 – End cap installation on alternate side of cable .....	139
Figure C.44 – Flat cable IDC connectors .....	140
Figure C.45 – Installing the connectors .....	140
Figure C.46 – Cable wiring to open-style terminals .....	141
Figure C.47 – Auxiliary power cable profile .....	141
Figure C.48 – Pin out auxiliary power connectors .....	142
Figure C.49 – Power supply cable length versus wire size .....	143
Figure C.50 – Sealed terminator .....	145
Figure C.51 – Open-style terminator .....	145
Figure C.52 – Open-style IDC terminator .....	145
Figure C.53 – Sealed terminator IDC cable .....	146
Figure C.54 – Direct connection to the trunk .....	147
Figure C.55 – Wiring of open-style connector .....	147
Figure C.56 – Wiring of open-style 10-position connector .....	147
Figure C.57 – Diagnostic temporary connections .....	148
Figure C.58 – Thick cable preterminated cables (cord sets) .....	149
Figure C.59 – Thin cable preterminated cables (cord sets) .....	149
<p>IEC 61784-5-2:2018  <a href="https://standards.iteh.ai/catalog/standards/sist/4c9fcca2-6319-480a-812e-15605c4261dc/iec-61784-5-2:2018">https://standards.iteh.ai/catalog/standards/sist/4c9fcca2-6319-480a-812e-15605c4261dc/iec-61784-5-2:2018</a>            ITeH STANDARD PREVIEW            (standards.iteh.ai)</p>	
Table A.1 – Basic network characteristics for balanced cabling not based on Ethernet .....	23
Table A.2 – Network characteristics for optical fibre cabling .....	24
Table A.3 – RG6 coaxial electrical properties .....	26
Table A.4 – RG6 coaxial physical parameters .....	26
Table A.5 – Cable type selection .....	27
Table A.6 – Information relevant to optical fibre cables .....	28
Table A.7 – Copper connectors for ControlNet .....	29
Table A.8 – Optical fibre connecting hardware .....	29
Table A.9 – Relationship between FOC and fibre types (CP 2/1) .....	30
Table A.10 – Parameters for coaxial RG6 cables .....	44
Table A.11 – Bend radius for coaxial cables outside conduit .....	44
Table A.12 – Parameters for silica optical fibre cables .....	44
Table A.13 – Parameters for hard clad silica optical fibre .....	45
Table A.14 – Test matrix for BNC/TNC connectors .....	60
Table A.15 – Wavelength and fibre types .....	63
Table A.16 – LED status table .....	65
Table A.17 – Repeater adapter and module diagnostic .....	65
Table A.18 – Repeater adapter indicator diagnostic .....	65
Table A.19 – Repeater module indicator .....	66
Table A.20 – Short and medium distance troubleshooting chart .....	67
Table A.21 – Long and extra long troubleshooting chart .....	68
Table B.1 – Network characteristics for balanced cabling based on Ethernet .....	73

Table B.2 – Network characteristics for optical fibre cabling.....	74
Table B.3 – Fibre lengths for 1 mm POF A4a.2 POF 0.5 NA .....	74
Table B.4 – Fibre lengths for 1 mm POF A4d POF 0.3 NA .....	75
Table B.5 – Recognized fibre types.....	76
Table B.6 – Recognized fibre PMDs.....	76
Table B.7 – Information relevant to copper cable: fixed cables 10/100 MHz .....	77
Table B.8 – Information relevant to copper cable: fixed cables 1 000 MHz .....	77
Table B.9 – Information relevant to copper cable: cords 10/100 MHz .....	78
Table B.10 – TCL limits for unshielded twisted-pair cabling serving 10/100 Mb/s .....	79
Table B.11 – TCL limits for unshielded twisted-pair cabling serving 1 000 Mb/s .....	79
Table B.12 – ELTCTL limits for unshielded twisted-pair cabling serving 10/100 Mb/s .....	79
Table B.13 – ELTCTL limits for unshielded twisted-pair cabling serving 1 000 Mb/s .....	79
Table B.14 – Coupling attenuation limits for screened twisted-pair cabling.....	80
Table B.15 – Information relevant to optical fibre cables .....	80
Table B.16 – Connectors for balanced cabling CPs based on Ethernet .....	81
Table B.17 – TCL limits for connectors based on Ethernet serving 1 000 Mb/s.....	81
Table B.18 – Industrial EtherNet/IP 8-way modular connector parameters .....	82
Table B.19 – Industrial EtherNet/IP M12-4 D-coding connector parameters .....	82
Table B.20 – Industrial EtherNet/IP M12-8 X-coding connector parameters.....	83
Table B.21 – Optical fibre connecting hardware.....	84
Table B.22 – Relationship between FOC and fibre types (CP2/2).....	86
Table B.23 – Connector insertion loss.....	86
Table B.24 – Parameters for balanced cables.....	92
Table B.25 – Parameters for silica optical fibre cables .....	92
Table B.26 – Parameters for POF optical fibre cables .....	93
Table C.1 – Basic network characteristics for copper cabling not based on Ethernet.....	104
Table C.2 – Cable trunk and drop lengths for CP 2/3 .....	105
Table C.3 – Summary of available current for trunk cables (CP 2/3).....	109
Table C.4 – Permissible current for thin cable drop lines of various lengths .....	110
Table C.5 – Power supply specification for DeviceNet.....	110
Table C.6 – Power supply tolerance stack up for DeviceNet.....	111
Table C.7 – Current versus cable length for one power supply thick cable .....	114
Table C.8 – Current versus length for two power supplies.....	115
Table C.9 – Definition of equation variables .....	117
Table C.10 – Information relevant to copper cable: fixed cables.....	120
Table C.11 – Information relevant to copper cable: cords.....	120
Table C.12 – DeviceNet cables and connector support cross reference .....	121
Table C.13 – DeviceNet cable profiles .....	122
Table C.14 – Copper connectors for non-Ethernet based fieldbus .....	124
Table C.15 – Additional connectors for CP 2/3 (DeviceNet) .....	124
Table C.16 – Parameters for balanced cables.....	129
Table C.17 – Wire colour code and function.....	135
Table C.18 – Auxiliary power cable colour code.....	141

Table C.19 – Auxiliary power supply requirements .....	142
Table C.20 – Signal wire verification .....	152
Table C.21 – Shield to earth .....	152
Table C.22 – Connector pin out .....	154

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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 fourth edition cancels and replaces the third edition published in 2013. This edition constitutes a technical revision.

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

- a) references to ISO/IEC 24702 have been replaced with references to ISO/IEC 11801-3 in Table B.1;
- b) errors have been corrected;
- c) Tables B11 and B13 have been added in support of 1,000 Mb/s 4 Pair Ethernet;

d) Clarification of dual power supplies for Annex C.

This standard is to be used in conjunction with IEC 61918:2018.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
65C/924/FDIS	65C/925/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

A list of all parts of IEC 61784-5 series, under the general title *Industrial communication networks – Profiles – Installation of fieldbuses*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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IEC 61784-5-2:2018

**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.**

## INTRODUCTION

This International Standard is one of a series produced to facilitate the use of communication networks in industrial control systems.

IEC 61918:2018 provides the common requirements for the installation of communication networks in industrial control systems. This installation profile standard provides the installation profiles of the communication profiles (CP) of a specific communication profile family (CPF) by stating which requirements of IEC 61918 fully apply and, where necessary, by supplementing, modifying, or replacing the other requirements (see Figure 1).

For general background on fieldbuses, their profiles, and relationship between the installation profiles specified in this document, see IEC 61158-1.

Each CP installation profile is specified in a separate annex of this document. Each annex is structured exactly as the reference standard IEC 61918 for the benefit of the persons representing the roles in the fieldbus installation process as defined in IEC 61918 (planner, installer, verification personnel, validation personnel, maintenance personnel, administration personnel). By reading the installation profile in conjunction with IEC 61918, these persons immediately know which requirements are common for the installation of all CPs and which are modified or replaced. The conventions used to draft this document are defined in Clause 5.

The provision of the installation profiles in one standard for each CPF (for example IEC 61784-5-2 for CPF 2) allows readers to work with standards of a convenient size.

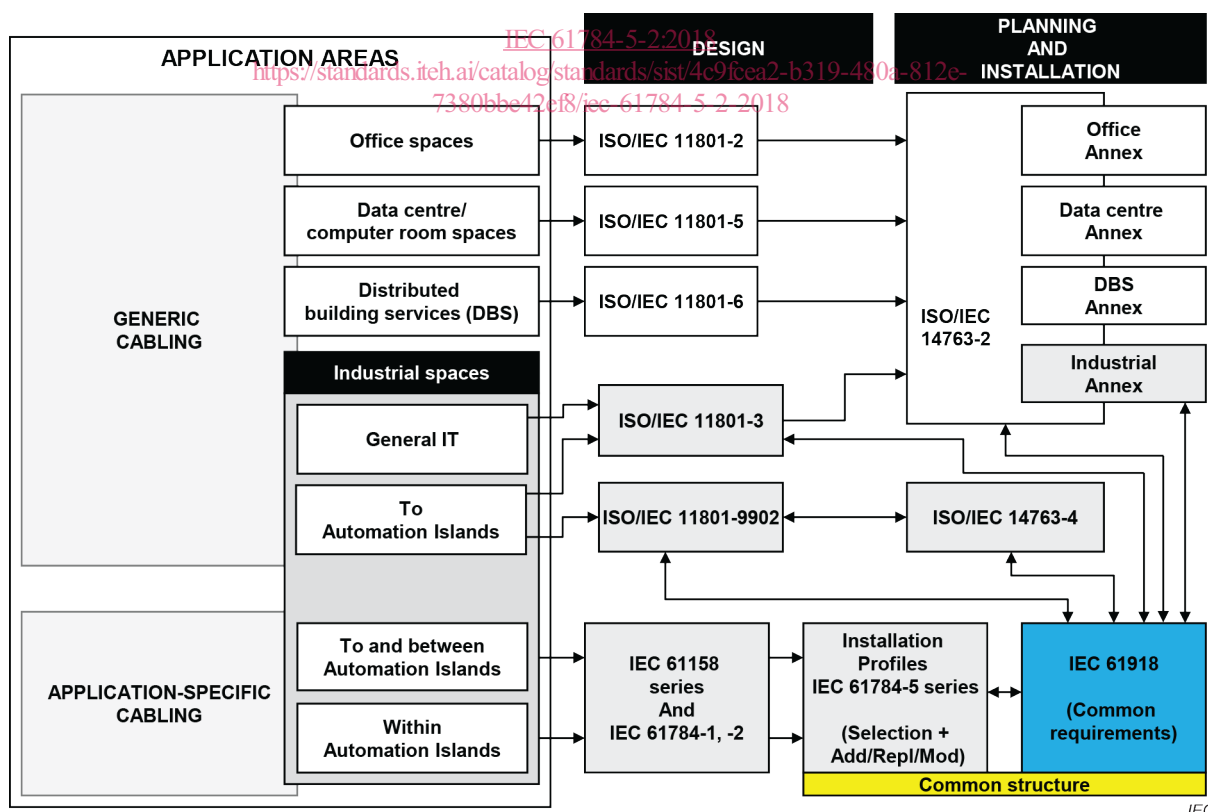


Figure 1 – Standards relationships

## INDUSTRIAL COMMUNICATION NETWORKS – PROFILES –

### Part 5-2: Installation of fieldbuses – Installation profiles for CPF 2

#### 1 Scope

This part of IEC 61784-5 specifies the installation profiles for CPF 2 (CIP™<sup>1</sup>).

The installation profiles are specified in the annexes. These annexes are read in conjunction with IEC 61918:2018.

#### 2 Normative references

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.

IEC 61918:2018, *Industrial communication networks – Installation of communication networks in industrial premises*

The normative references of IEC 61918:2018, Clause 2, apply.

NOTE For profile specific normative references, see Clauses A.2, B.2, and C.2.

#### 3 Terms, definitions and abbreviated terms

For the purpose of this document, the terms, definitions and abbreviated terms given in IEC 61918:2018 Clause 3, apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

NOTE For profile specific terms, definitions and abbreviated terms, see Clauses A.3, B.3, and C.3.

#### 4 CPF 2: Overview of installation profiles

CPF 2 consists of three basic communication profiles as specified in IEC 61784-1 and IEC 61784-2. These profiles share a common upper layers protocol named CIP™ (Common Industrial Protocol).

The installation requirements for CP 2/1 (ControlNet™<sup>2</sup>) are specified in Annex A.

<sup>1</sup> CIP™ (Common Industrial Protocol) is a trade name of ODVA, Inc. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by IEC of the trademark holder or any of its products. Compliance to this document does not require use of the trade name CIP™. Use of the trade name CIP™ requires permission of ODVA, Inc.