
**Industrijska komunikacijska omrežja - Profili - 5-14. del: Inštalacija procesnih vodil
- Inštalacijski profili za CPF 14 (IEC 61784-5-14:2010)**

Industrial communication networks - Profiles - Part 5-14: Installation of fieldbuses -
Installation profiles for CPF 14 (IEC 61784-5-14:2010)

Industrielle Kommunikationsnetze - Profile - Teil 5-14: Feldbusinstallation -
Installationsprofile für die Kommunikationsprofilfamilie 14 (IEC 61784-5-14:2010)

Réseaux de communication industriels - Profils - Partie 5-14: Installation des bus de
terrain - Profils d'installation pour CPF 14 (CEI 61784-5-14:2010)

[https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-](https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012)

Ta slovenski standard je istoveten z: EN 61784-5-14:2012

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.05	Večslojne uporabniške rešitve	Multilayer applications

SIST EN 61784-5-14:2012**en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61784-5-14:2012](https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012)

<https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61784-5-14

April 2012

ICS 25.040.40; 35.100.40

English version

**Industrial communication networks -
Profiles -
Part 5-14: Installation of fieldbuses -
Installation profiles for CPF 14
(IEC 61784-5-14:2010)**

Réseaux de communication industriels -
Profils -
Partie 5-14: Installation des bus de terrain -
Profils d'installation pour CPF 14
(CEI 61784-5-14:2010)

Industrielle Kommunikationsnetze -
Profile -
Teil 5-14: Feldbusinstallation -
Installationsprofile für die
Kommunikationsprofilfamilie 14
(IEC 61784-5-14:2010)

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

[SIST EN 61784-5-14:2012](https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-11d1-40524de34c34)

[https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-](https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-11d1-40524de34c34)

This European Standard was approved by CENELEC on 2011-10-19. 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, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 65C/602/FDIS, future edition 1 of IEC 61784-5-14, 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 61784-5-14:2012.

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) 2012-10-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-10-19

This standard is to be used in conjunction with IEC 61918, second edition (2010-07), together with the European Common Modification published with EN 61918:2008.

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.

iTeh STANDARD PREVIEW (standardsite.com)

Endorsement notice

The text of the International Standard IEC 61784-5-14:2010 was approved by CENELEC as a European Standard without any modification.

SIST EN 61784-5-14:2012
<https://standards.i-teh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012>

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61918	2010	Industrial communication networks - Installation of communication networks in industrial premises	-	-

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 61784-5-14:2012](https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012)

<https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61784-5-14:2012](https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012)

<https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012>



IEC 61784-5-14

Edition 1.0 2010-07

INTERNATIONAL STANDARD



**Industrial communication networks – Profiles –
Part 5-14: Installation of fieldbuses – Installation profiles for CPF 14**

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61784-5-14:2012
<https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

U

ICS 25.040.40; 35.100.40

ISBN 978-2-88912-060-4

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms, definitions and abbreviated terms	7
4 CPF 14: Overview of installation profiles	7
5 Installation profile conventions	7
6 Conformance to installation profiles.....	8
Annex A (normative) CP 14/1 and 14/2 (EPA) specific installation profile.....	9
Figure 1 – Standards relationships.....	6
Figure A.1 – Example of EPA explosion-proof system.....	10
Figure A.2 – Earth of zener safety barrier	11
Figure A.3 – Earth of zener safety barrier	11
Figure A.4 – Example of power with Ethernet.....	14
Figure A.5 – Example of power supply over 0,2 A	15
Figure A.6 – Pin assignment of sub-D connector.....	24
Figure A.7 – Example of a 4-pin open style connector.....	25
Figure A.8 –Example of a 6-pin open style connector.....	26
Figure A.9 – Example of an 8-pin open style connector.....	27
Table A.1 – Network characteristics for balanced cabling based on Ethernet	12
Table A.2 – Network characteristics for optical fibre cabling.....	13
Table A.3 – Information relevant to copper cable	15
Table A.4 –Information relevant to copper cable: fixed cables.....	16
Table A.5 – Information relevant to copper cable: cords.....	16
Table A.6 – Information relevant to optical fibre cables	17
Table A.7 – Connectors for balanced cabling CPs based on Ethernet	18
Table A.8 – Optical fibre connecting hardware	18
Table A.9 –Relationship between FOC and fibre types (CP 14/1 and CP 14/2)	19
Table A.10 – Specific connectors for balanced cabling based on Ethernet	19
Table A.11 Requirements of sub-D and open style connector	19
Table A.12 – Parameters for balanced cables	22
Table A.13 – Parameters for silica optical fibre cables	22
Table A.14 – Parameters for POF optical fibre cables	23
Table A.15 – Parameters for hard cladded silica optical fibre cables	23
Table A.16 – Signal lines assignment of sub-D connector	24
Table A.17 – Signal lines assignment of sub-D connector for 1 000 Base Ethernet	25
Table A.18 – Signal lines assignment for a 4-pin open style connector	26
Table A.19 – Signal lines assignment for a 6-pin open style connector	27

Table A.20 – Signal lines assignment for an 8-pin open style connector(10/100 Mbit/s) 28
Table A.21 – Signal lines assignment for an 8-pin open style connector(1 000 Mbit/s) 28

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 61784-5-14:2012

<https://standards.iteh.ai/catalog/standards/sist/7e067eb1-b625-46e6-b24b-54b242dc64aa/sist-en-61784-5-14-2012>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INDUSTRIAL COMMUNICATION NETWORKS –
PROFILES –**
**Part 5-14: Installation of fieldbuses –
Installation profiles for CPF 14**

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 61784-5-14 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

This standard is to be used in conjunction with IEC 61918:2010.

The text of this standard is based on the following documents:

FDIS	Report on voting
65C/602/FDIS	65C/616/RVD

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

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

A list of all parts of the IEC 61784-5 series, published 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 publication 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 publication. At this date, the publication will be

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

A bilingual version of this publication may be issued at a later date.

SIST EN 61784-5-14:2012

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 61918:2010 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 standard, see IEC/TR 61158-1.

Each CP installation profile is specified in a separate annex of this standard. 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 standard are defined in Clause 5.

The provision of the installation profiles in one standard for each CPF (for example IEC 61784-5-14 for CPF 14), allows readers to work with standards of a convenient size.

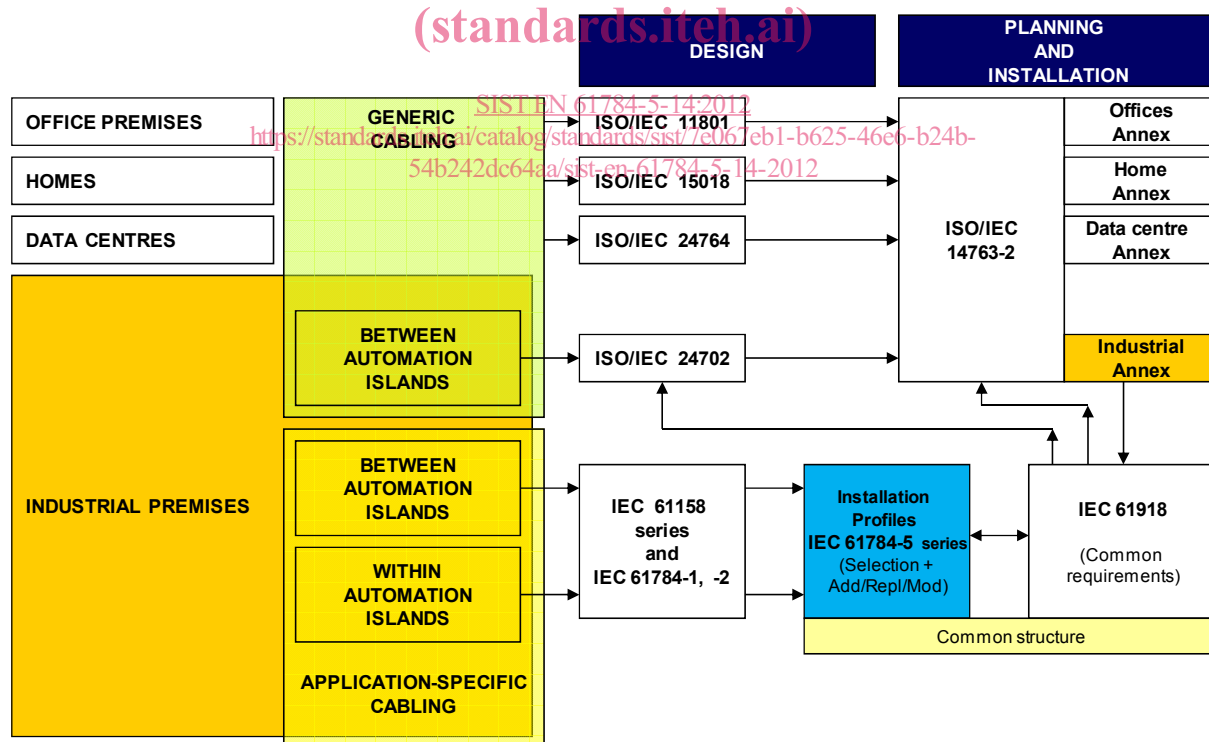


Figure 1 – Standards relationships