



# SLOVENSKI STANDARD

## SIST EN 61784-3:2010

01-oktober-2010

Nadomešča:

kSIST FprEN 61784-3:2009/kFprA1:2009

SIST EN 61784-3:2008

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**Industrijska komunikacijska omrežja - Profili - 3. del: Funkcijska varnost procesnih vodil (IEC 61784-3:2010)**

Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses (IEC 61784-3:2010)

**iTeh STANDARD PREVIEW**

Industrielle Kommunikationsnetze - Profile - Teil 3: Funktional sichere Übertragung bei Feldbussen - Allgemeine Regeln und Profilstellungen (IEC 61784-3:2010)

[SIST EN 61784-3:2010](https://standards.itih.ai/catalog/standards/sis/94d1c575-c534-4a41-9cc9-d27d12b2a455/sist-en-61784-3-2010)

Réseaux de communication industriels - Partie 3: Bus de terrain à sécurité fonctionnelle - Règles générales et définitions des profils (CEI 61784-3:2010)

**Ta slovenski standard je istoveten z: EN 61784-3:2010**

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**ICS:**

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

**SIST EN 61784-3:2010**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61784-3**

August 2010

ICS 25.040.40; 35.100.05

Supersedes EN 61784-3:2008

English version

**Industrial communication networks -  
Profiles -  
Part 3: Functional safety fieldbuses -  
General rules and profile definitions  
(IEC 61784-3:2010)**

Réseaux de communication industriels -  
Partie 3: Bus de terrain à sécurité  
fonctionnelle -  
Règles générales et définitions des profils  
(CEI 61784-3:2010)

Industrielle Kommunikationsnetze -  
Profile -  
Teil 3: Funktional sichere Übertragung bei  
Feldbussen -  
Allgemeine Regeln und Profilverfestlegungen  
(IEC 61784-3:2010)

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SIST EN 61784-3:2010

This European Standard was approved by CENELEC on 2010-07-01. 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 Central Secretariat 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 Central Secretariat 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 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/591A/FDIS, future edition 2 of IEC 61784-3, 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 was approved by CENELEC as EN 61784-3 on 2010-07-01.

This European Standard supersedes EN 61784-3:2008.

The main technical changes with respect to EN 61784-3:2008 are listed below:

- clarifications and additional explanations for requirements, updated references;
- updates of definitions and requirements in relation with the new edition of EN 61508;
- addition of a new informative Annex D providing an assessment guideline;
- updates in parts for CPF 1, CPF 2, CPF 3, CPF 6 (details provided in the parts);
- addition of new parts for CPF 8, CPF 12, CPF 13, CPF 14;
- in CPF parts, addition of an annex to provide information about test laboratories for testing and validating conformance of FSCP products.

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

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement [SIST EN 61784-3:2010](https://standards.iteh.ai/catalog/standards/sist/94d1c575-c534-4a41-9cc9-1d73112b2455/iec-61784-3-2010) (dop) 2011-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2013-07-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61784-3:2010 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 60204-1	NOTE	Harmonized as EN 60204-1.
IEC 61496 series	NOTE	Harmonized in EN 61496 series (partially modified).
IEC 61508-4:2010	NOTE	Harmonized as EN 61508-4:2010 (not modified).
IEC 61508-5:2010	NOTE	Harmonized as EN 61508-5:2010 (not modified).
IEC 61508-6:2010	NOTE	Harmonized as EN 61508-6:2010 (not modified).
IEC 61511 series	NOTE	Harmonized in EN 61511 series (not modified).
IEC 61800-5-2	NOTE	Harmonized as EN 61800-5-2.
IEC 62061	NOTE	Harmonized as EN 62061.
ISO 10218-1	NOTE	Harmonized as EN ISO 10218-1.
ISO 12100-1	NOTE	Harmonized as EN ISO 12100-1.
ISO 13849-1	NOTE	Harmonized as EN ISO 13849-1.
ISO 13849-2	NOTE	Harmonized as EN ISO 13849-2.
ISO 14121	NOTE	Harmonized as EN ISO 14121.

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<https://standards.iteh.ai/catalog/standards/sist/94d1c575-c534-4a41-9cc9-d27d12b2a455/sist-en-61784-3-2010>

## 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 61131-2	-	Programmable controllers - Part 2: Equipment requirements and tests	EN 61131-2	-
IEC 61158	Series	Industrial communication networks - Fieldbus specifications	EN 61158	Series
IEC 61326-3-1	-	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-1: Immunity requirements for safety- related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications	EN 61326-3-1	-
IEC 61326-3-2	-	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-2: Immunity requirements for safety- related systems and for equipment intended to perform safety-related functions (functional safety) - Industrial applications with specified electromagnetic environment	EN 61326-3-2	-
IEC 61508	Series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	Series
IEC 61508-1	2010	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1: General requirements	EN 61508-1	2010
IEC 61508-2	-	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems	EN 61508-2	-
IEC 61784-1	-	Industrial communication networks - Profiles - Part 1: Fieldbus profiles	EN 61784-1	-
IEC 61784-2	-	Industrial communication networks - Profiles - Part 2: Additional fieldbus profiles for real-time networks based on ISO/IEC 8802-3	EN 61784-2	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61784-3-1	-	Industrial communication networks - Profiles - Part 3-1: Functional safety fieldbuses - Additional specifications for CPF 1	EN 61784-3-1	-
IEC 61784-3-2	-	Industrial communication networks - Profiles - Part 3-2: Functional safety fieldbuses - Additional specifications for CPF 2	EN 61784-3-2	-
IEC 61784-3-3	-	Industrial communication networks - Profiles - Part 3-3: Functional safety fieldbuses - Additional specifications for CPF 3	EN 61784-3-3	-
IEC 61784-3-6	-	Industrial communication networks - Profiles - Part 3-6: Functional safety fieldbuses - Additional specifications for CPF 6	EN 61784-3-6	-
IEC 61784-3-8	-	Industrial communication networks - Profiles - Part 3-8: Functional safety fieldbuses - Additional specifications for CPF 8	EN 61784-3-8	-
IEC 61784-3-12	-	Industrial communication networks - Profiles - Part 3-12: Functional safety fieldbuses - Additional specifications for CPF 12	EN 61784-3-12	-
IEC 61784-3-13	-	Industrial communication networks - Profiles - Part 3-13: Functional safety fieldbuses - Additional specifications for CPF 13	EN 61784-3-13	-
IEC 61784-3-14	-	Industrial communication networks - Profiles - Part 3-14: Functional safety fieldbuses - Additional specifications for CPF 14	EN 61784-3-14	-
IEC 61784-5	Series	Industrial communication networks - Profiles - Part 5: Installation of fieldbuses - Installation profiles for CPF x	EN 61784-5	Series
IEC 61918	-	Industrial communication networks - Installation of communication networks in industrial premises	EN 61918	-
IEC 62280-1	2002	Railway applications - Communication, signalling and processing systems - Part 1: Safety-related communication in closed transmission systems	-	-
IEC 62443	Series	Industrial communication networks - Network and system security	-	-

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Edition 2.0 2010-06

# INTERNATIONAL STANDARD



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**Industrial communication networks – Profiles –  
Part 3: Functional safety fieldbuses – General rules and profile definitions**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**INDUSTRIAL COMMUNICATION NETWORKS –  
PROFILES –**
**Part 3: Functional safety fieldbuses –  
General rules and profile definitions**

## 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.
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- 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.

International Standard IEC 61784-3 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial process measurement, control and automation.

This second edition cancels and replaces the first edition published in 2007. This edition constitutes a technical revision. The main changes with respect to the previous edition are listed below:

- clarifications and additional explanations for requirements, updated references;
- updates of definitions and requirements in relation with the new edition of IEC 61508;
- addition of a new informative Annex D providing an assessment guideline;
- updates in parts for CPF 1, CPF 2, CPF 3, CPF 6 (details provided in the parts);
- addition of new parts for CPF 8, CPF 12, CPF 13, CPF 14;
- in CPF parts, addition of an annex to provide information about test laboratories for testing and validating conformance of FSCP products.

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

FDIS	Report on voting
65C/591A/FDIS	65C/603/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 61784-3 series, published under the general title *Industrial communication networks – Profiles – Functional safety 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.

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