



SLOVENSKI STANDARD

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SIST EN 61784-3-3:2008

Industrijska komunikacijska omrežja - Profili - 3-3. del: Funkcijska varnost procesnih vodil - Dodatne specifikacije za CPF 3 (IEC 61784-3-3:2010)

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

Industrielle Kommunikationsnetze - Profile - Teil 3-3: Funktionale sichere Übertragung bei Feldbussen - Zusätzliche Festlegungen für die Kommunikationsprofilfamilie 3 (IEC 61784-3-3:2010)

Réseaux de communication industriels - Partie 3-3: Bus de terrain à sécurité fonctionnelle - Spécifications complémentaires pour le CPF 3 (IEC 61784-3-3:2010)

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

ICS:

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35.100.05	Večslojne uporabniške rešitve	Multilayer applications

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EUROPEAN STANDARD
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EN 61784-3-3

August 2010

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English version

**Industrial communication networks -
Profiles -
Part 3-3: Functional safety fieldbuses -
Additional specifications for CPF 3
(IEC 61784-3-3:2010)**

Réseaux de communication industriels -
Partie 3-3: Bus de terrain à sécurité
fonctionnelle -
Spécifications complémentaires
pour le CPF 3
(CEI 61784-3-3:2010)

Industrielle Kommunikationsnetze -
Profile -
Teil 3-3: Funktional sichere Übertragung
bei Feldbussen -
Zusätzliche Festlegungen
für die Kommunikationsprofilfamilie 3
(IEC 61784-3-3:2010)

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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 61784-3-3, 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 61784-3-3 on 2010-07-01.

This European Standard supersedes EN 61784-3-3:2008.

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

- updates in relation with changes in EN 61784-3;
- introduction of a secondary watchdog timer (F_WD_Time_2) to cover the use cases 'configuration-in-run', or 'maintenance of fault tolerance systems', or both (7.1.3, 7.2.3, 7.2.6, 8.1.1, 8.1.4, 8.1.6.2);
- missing GSDL definitions conveyed from other approved documents (8.3.2.1);
- missing CRC signature calculation for a GSD conveyed from other approved documents (8.3.3.3);
- constraints for the parameter value assignment of the primary watchdog timer 'F_WD_Time' (9.3.3);
- identification of the safety parameterization state of an F-Device or F-Module via field IM4 (signature) within the I&M functions (9.6.2);
- updated documents in bibliography.

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:

- | | | |
|--|---|------------|
| | SIST EN 61784-3-3:2010 | |
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| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (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.

Endorsement notice

The text of the International Standard IEC 61784-3-3:2010 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 60870-5-1	NOTE	Harmonized as EN 60870-5-1.
IEC 61158 series	NOTE	Harmonized in EN 61158 series (not modified).
IEC 61496 series	NOTE	Harmonized in EN 61496 series (partially modified).
IEC 61508-1:2010	NOTE	Harmonized as EN 61508-1:2010 (not 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 61784-5 series	NOTE	Harmonized in EN 61784-5 series (not modified).
IEC 61800-5-2	NOTE	Harmonized as EN 61800-5-2.
IEC 61804 series	NOTE	Harmonized in EN 61804 series (not modified).
ISO 10218-1	NOTE	Harmonized as EN ISO 10218-1.
ISO 12100-1	NOTE	Harmonized as EN ISO 12100-1.

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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 60204-1	-	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	-
IEC 61000-6-2	-	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments	EN 61000-6-2	-
IEC 61010-1	-	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements	EN 61010-1	-
IEC 61131-2	-	Programmable controllers - Part 2: Equipment requirements and tests	EN 61131-2	-
IEC 61131-3	-	Programmable controllers - Part 3: Programming languages	EN 61131-3	-
IEC 61158-2	-	Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition	EN 61158-2	-
IEC 61158-3-3	-	Industrial communication networks - Fieldbus specifications - Part 3-3: Data-link layer service definition - Type 3 elements	EN 61158-3-3	-
IEC 61158-4-3	-	Industrial communication networks - Fieldbus specifications - Part 4-3: Data-link layer protocol specification - Type 3 elements	EN 61158-4-3	-
IEC 61158-5-3	-	Industrial communication networks - Fieldbus specifications - Part 5-3: Application layer service definition - Type 3 elements	EN 61158-5-3	-
IEC 61158-5-10	-	Industrial communication networks - Fieldbus specifications - Part 5-10: Application layer service definition - Type 10 elements	EN 61158-5-10	-
IEC 61158-6-3	-	Industrial communication networks - Fieldbus specifications - Part 6-3: Application layer protocol specification - Type 3 elements	EN 61158-6-3	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61158-6-10	-	Industrial communication networks - Fieldbus specifications - Part 6-10: Application layer protocol specification - Type 10 elements	EN 61158-6-10	-
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 61508-2	-	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 61511	Series	Functional safety - Safety instrumented systems for the process industry sector	EN 61511	Series
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	-
IEC 61784-3	2010	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions	EN 61784-3	2010
IEC 61784-5-3	-	Industrial communication networks - Profiles - Part 5-3: Installation of fieldbuses - Installation profiles for CPF 3	EN 61784-5-3	-
IEC 61918	-	Industrial communication networks - Installation of communication networks in industrial premises	EN 61918	-
IEC 62061	-	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	EN 62061	-
IEC 62280-1	2002	Railway applications - Communication, signalling and processing systems - Part 1: Safety-related communication in closed transmission systems	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62280-2	-	Railway applications - Communication, signalling and processing systems - Part 2: Safety-related communication in open transmission systems	-	-
IEC/TR 62390	-	Common automation device - Profile guideline	-	-
ISO 13849-1	-	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	-
ISO 13849-2	-	Safety of machinery - Safety-related parts of control systems - Part 2: Validation	EN ISO 13849-2	-
ISO 15745-3	-	Industrial automation systems and integration - Open systems application integration framework - Part 3: Reference description for IEC 61158 based control systems	-	-
ISO 15745-4	-	Industrial automation systems and integration - Open systems application integration framework - Part 4: Reference description for Ethernet-based control systems	-	-

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INTERNATIONAL STANDARD



**Industrial communication networks – Profiles –
Part 3-3: Functional safety fieldbuses – Additional specifications for CPF 3**

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