



SLOVENSKI STANDARD

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SIST EN 50170:2001

SIST EN 50170:2001/A1:2003

SIST EN 50170:2001/A2:2001

SIST EN 50170:2001/A3:2002

SIST EN 50254:2001

Digital data communications for measurement and control - Part 1: Profile sets for continuous and discrete manufacturing relative to fieldbus use in industrial control systems

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Digital data communications for measurement and control -- Part 1: Profile sets for continuous and discrete manufacturing relative to fieldbus use in industrial control systems

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Digitale Datenkommunikationen in der Leittechnik -- Teil 1: Feldbus-Kommunikationsprofile für die prozess- und fertigungstechnische Automatisierung

Communications numériques pour les systèmes de mesure et de commande -- Partie 1: Jeu de profils de communication pour les bus de terrain des systèmes de commande industriels utilisés pour la fabrication en continu et par lot

Ta slovenski standard je istoveten z: EN 61784-1:2004

ICS:

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

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EUROPEAN STANDARD

EN 61784-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2004

ICS 35.240.50; 35.100.20

Partially supersedes EN 50170:1996 + A1:2002 + A2:1999 + A3:2002 and EN 50254:1998

English version

**Digital data communications for measurement and control
Part 1: Profile sets for continuous and discrete manufacturing
relative to fieldbus use in industrial control systems
(IEC 61784-1:2003 + corrigendum 2004)**

Communications numériques pour les systèmes de mesure et de commande - Bus de terrain utilisés dans les systèmes de commande industriels
Partie 1: Jeu de profils de communication pour les bus de terrain des systèmes de commande industriels utilisés pour la fabrication en continu et par lot
(CEI 61784-1:2003 + corrigendum 2004)

Digitale Datenkommunikationen in der Leittechnik
Teil 1: Feldbus-Kommunikationsprofile für die prozess- und fertigungstechnische Automatisierung
(IEC 61784-1:2003 + Corrigendum 2004)

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This European Standard was approved by CENELEC on 2004-03-16. 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 one official version (English). 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 61784-1:2003, prepared by SC 65C, Digital communications, of IEC TC 65, Industrial-process measurement and control, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61784-1 on 2004-03-16 with inclusion of the accepted future IEC corrigendum.

This European Standard, together with EN 61158-2:2004 to EN 61158-6:2004, supersedes EN 50170:1996 + A1:2002 (+ corr. Aug. 2002) + A2:1999 + A3:2002 (+ corr. Aug. 2002) and EN 50254:1998.

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 (dop) 2005-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-04-01

The International Electrotechnical Commission (IEC) and CENELEC draw attention to the fact that use of this standard involves the use of the IEC/EN 61158 series, and so may involve the use of patents given in IEC/EN 61158. Each of the parts of IEC/EN 61158 lists patents that may apply to that part, and at least some of the protocol types defined or specified within that part to which those patents may apply. The IEC and CENELEC take no position concerning the evidence, validity and scope of those patent rights.

The holders of these patent rights identified in the IEC/EN 61158 series have assured the IEC that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with the IEC.

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights other than those identified above. IEC and CENELEC shall not be held responsible for identifying any or all such patent rights.

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

IEC 60793	NOTE	Harmonized in EN 60793 series (partially modified).
IEC 61131-3	NOTE	Harmonized as EN 61131-3:1993 (not modified).
IEC/TR 61158-1	NOTE	Harmonized as CLC/TR 61158-1:2004 (not modified).
ISO/IEC 9506-1	NOTE	Harmonized as EN 29506-1:1993 (not modified).
ISO/IEC 9506-2	NOTE	Harmonized as EN 29506-2:1993 (not modified).

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61784-1:2003 and its corrigendum July 2004 was approved by CENELEC as a European Standard without any modification.

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

NOTE 2 Where a standard cited below belongs to the EN 50000 series this European Standard applies instead of the relevant International Standard.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-11	1999	Electrical apparatus for explosive gas atmospheres Part 11: Intrinsic safety "i" ¹⁾	EN 50020	2002
IEC 60079-14	2002	Part 14: Electrical installations in hazardous areas (other than mines)	EN 60079-14	2003
IEC 60079-25	2003	Part 25: Intrinsically-safe systems	EN 60079-25	2004
IEC/TS 60079-27	2002	Part 27: Fieldbus intrinsically safe concept (FISCO)	-	-
IEC 61010	Series	Safety requirements for electrical equipment for measurement, control and laboratory use	EN 61010	Series
IEC 61131-2	1992	Programmable controllers Part 2: Equipment requirements and tests	EN 61131-2	1994 ²⁾
IEC 61158-2 + corr. July	2003 2004	Digital data communication for measurement and control - Fieldbus for use in industrial control systems Part 2: Physical layer specification	EN 61158-2	2004
IEC 61158-3	2003	Part 3: Data Link Layer service definition	EN 61158-3	2004
IEC 61158-4 + corr. July	2003 2004	Part 4: Data Link Layer protocol specification	EN 61158-4	2004
IEC 61158-5 + corr. July	2003 2004	Part 5: Application Layer service definition	EN 61158-5	2004

¹⁾ The title of EN 50020 is: Electrical apparatus for potentially explosive atmospheres – Intrinsic safety “i”.

²⁾ EN 61131-2:1994 is superseded by EN 61131-2:2003 (+ corr. August 2003), which is based on IEC 61131-2:2003.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61158-6 + corr. July	2003 2004	Part 6: Application Layer protocol specification	EN 61158-6	2004
ISO/IEC 7498-1	- ³⁾	Information technology - Open systems interconnection - Basic reference model Part 1: The basic model	EN ISO/IEC 7498-1	1995 ⁴⁾
ISO/IEC 7498-2	- ³⁾	Part 2: Security architecture	-	-
ISO/IEC 7498-3	- ³⁾	Part 3: Naming and addressing	-	-
ISO/IEC 8802-3	2001	Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications	-	-
ISO 15745-3	2003	Industrial automation systems and integration - Open systems application integration framework Part 3: Reference description for IEC 61158-based control systems	-	-
ANSI TIA/ EIA-232-F	1997	Interface between data terminal equipment and data circuit-terminating equipment employing serial binary data interchange	-	-
ANSI TIA/ EIA-422-B	1994	Electrical characteristics of balanced voltage digital interface circuits	-	-
ANSI TIA/ EIA-485-A	1998	Electrical characteristics of generators and receivers for use in balanced digital multipoint systems	-	-
IETF RFC 768	- ³⁾	User Datagram Protocol (UDP)	-	-
IETF RFC 791	- ³⁾	Internet Protocol	-	-
IETF RFC 792	- ³⁾	Internet Control Message Protocol	-	-
IETF RFC 793	- ³⁾	Transmission Control Protocol (TCP), Internet Activities Board recommended standard	-	-
IETF RFC 826	- ³⁾	Address Resolution Protocol (ARP), Internet Activities Board elective standard	-	-

³⁾ Undated reference.

⁴⁾ Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IETF RFC 894	- ³⁾	Internet Protocol on Ethernet Networks, Internet Activities Board elective standard	-	-
IETF RFC 1112	- ³⁾	Host Extensions for IP Multicasting	-	-
IETF RFC 2236	- ³⁾	Internet Group Management Protocol - Version 2	-	-
OSF C706	- ³⁾	CAE Specification DCE11: Remote Procedure Call	-	-

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INTERNATIONAL STANDARD

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61784-1

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Digital data communications for measurement and control –

Part 1: Profile sets for continuous and discrete manufacturing relative to fieldbus use in industrial control systems

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