SLOVENSKI STANDARD
SIST EN 61158-2:2008

01-junij-2008

Nadomešča:
SIST EN 61158-2:2004
SIST EN 61491:2001

Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 2. del: Specifikacija fizičnega nivoja in definicija opravil (IEC 61158-2:2007)

Industrial communication networks - Fieldbus specifications -- Part 2: Physical layer specification and service definition

Industrielle Kommunikationsnetze - Feldbusse - Teil 2: Spezifikation und Dienstfestlegungen des Physical Layer (Bitübertragungsschicht)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 2: Spécification des couches physiques et définition des services

Ta slovenski standard je istoveten z: **EN 61158-2:2008**

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.10	Fizični sloj	Physical layer
35.110	Omreževanje	Networking

SIST EN 61158-2:2008 **en,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61158-2

February 2008

ICS 25.040; 35.100; 35.240.50

Supersedes EN 61158-2:2004 and partially supersedes EN 61491:1998

English version

Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition
(IEC 61158-2:2007)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 2: Spécification des couches physiques et définition des services (CEI 61158-2:2007)

Industrielle Kommunikationsnetze - Feldbusse - Teil 2: Spezifikation und Dienstfestlegungen des Physical Layer (Bitübertragungsschicht) (IEC 61158-2:2007)

This European Standard was approved by CENELEC on 2008-02-01. 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, 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

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

Ref. No. EN 61158-2:2008 E

Foreword

The text of document 65C/472/FDIS, future edition 4 of IEC 61158-2, 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 61158-2 on 2008-02-01.

This European Standard supersedes EN 61158-2:2004. Together with its companion parts for Type 16, it also partially replaces EN 61491:1998 which is at present being revised (to be issued as a Technical Report).

With respect to EN 61158-2:2004 the following changes were made:

– deletion of Type 6 fieldbus for lack of market relevance;

– addition of new fieldbus types;

– generalization of the seldom-used Type 1 radio to a more useful form.

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)	2008-11-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-02-01

NOTE Use of some of the associated protocol types is restricted by their intellectual-property-right holders. In all cases, the commitment to limited release of intellectual-property-rights made by the holders of those rights permits a particular data-link layer protocol type to be used with physical layer and application layer protocols in type combinations as specified explicitly in the EN 61784 series. Use of the various protocol types in other combinations may require permission of their respective intellectual-property-right holders.

IEC and CENELEC draw attention to the fact that it is claimed that compliance with this standard may involve the use of patents as follows, where the [xx] notation indicates the holder of the patent right:

Type 2 (Subclauses 5.3, 9.3, 10.3, Clauses 17 through 20, Annex F through Annex H):

5,396,197 [AB] Network Node TAP

IEC and CENELEC take no position concerning the evidence, validity and scope of these patent rights.

The holders of these patent rights have assured 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 statement of the holders of these patent rights are registered with IEC. Information may be obtained from:

[AB]: Rockwell Technologies, LLC
Allen-Bradley Co, LLC
1201 So. Second Street
Milwaukee, WI 53204
USA
Attention: Intellectual Property Dept.

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.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61158-2:2007 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 60079-0	NOTE	Harmonized as EN 60079-0:2006 (modified).
IEC 60079-27	NOTE	Harmonized as EN 60079-27:2006 (not modified).
IEC 60227-5	NOTE	Harmonized as HD 21.5 S3:1994 (modified).
IEC 60875-1	NOTE	Harmonized as EN 60875-1:2001 (not modified).
IEC 60947-5-2	NOTE	Harmonized as EN 60947-5-2:2007 (not modified).
IEC 61300-3-4	NOTE	Harmonized as EN 61300-3-4:2001 (not modified).
IEC 61491	NOTE	Harmonized as EN 61491:1998 (modified).
IEC 61596	NOTE	Harmonized as EN 61596:1997 (not modified).
IEC 61784-1	NOTE	Harmonized as EN 61784-1:2008 (not modified).

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.

Publication	Year	Title	EN/HD	Year
IEC 60050-731	- [1]	International Electrotechnical Vocabulary (IEV) - Chapter 731: Optical fibre communication	-	-
IEC 60079-11	- [1]	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"	EN 60079-11	2007 [2]
IEC 60079-14	- [1]	Explosive atmospheres - Part 14: Electrical installations design, selection and erection	EN 60079-14	2003 [2]
IEC 60079-25	- [1]	Electrical apparatus for explosive gas atmospheres - Part 25: Intrinsically safe systems	EN 60079-25 + corr. April	2004 [2] 2006
IEC 60096-1	- [1]	Radio-frequency cables - Part 1: General requirements and measuring methods	-	-
IEC 60169-8	- [1] [3]	Radio-frequency connectors - Part 8: R.F. coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock - Characteristic impedance 50 ohms (Type BNC)	-	-
IEC 60169-17	- [1]	Radio-frequency connectors - Part 17: R.F. coaxial connectors with inner diameter of outer conductor 6,5mm (0,256 in) with screw coupling - Characteristic impedance 50 ohms (type TNC)	-	-
IEC 60189-1	1986	Low-frequency cables and wires with PVC insulation and PVC sheath - Part 1: General test and measuring methods	-	-

[1] Undated reference.

[2] Valid edition at date of issue.

[3] IEC 60169-8:1986 is superseded by IEC 61169-8:2007, which is harmonized as EN 61169-8:2007.

Publication	Year	Title	EN/HD	Year
IEC 60255-22-1	1988	Electrical relays - Part 22-1: Electrical disturbance tests for measuring relays and protection equipment - 1 MHz burst disturbance tests	- [4]	-
IEC 60364-4-41 (mod)	- [1]	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	HD 60364-4-41 + corr. July 2007	2007 [2]
IEC 60364-5-54 (mod)	- [1]	Electrical installations of buildings - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements, protective conductors and protective bonding conductors	HD 60364-5-54	2007 [2]
IEC 60529	- [1]	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May 1993	1991 [2]
IEC 60603-7	- [1]	Connectors for frequencies below 3 MHz for use with printed boards - Part 7: Detail specification for connectors, 8-way, including fixed and free connectors with common mating features, with assessed quality	EN 60603-7	1997 [2]
IEC 60760	- [1]	Flat quick-connect terminations	-	-
IEC 60793 (mod)	Series	Optical fibres	EN 60793	Series
IEC 60794-1-2	- [1]	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures	EN 60794-1-2	2003 [2]
IEC 60807-3	- [1]	Rectangular connectors for frequencies below 3 MHz - Part 3: Detail specification for a range of connectors with trapezoidal shaped metal shells and round contacts - Removable crimp types with closed crimp barrels, rear insertion/rear extraction	-	-
IEC 60874-10-1	- [1]	Connectors for optical fibres and cables - Part 10-1: Detail specification for fibre optic connector type BFOC/2,5 terminated to multimode fibre type A1	-	-
IEC 61000-4-2	- [1]	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	1995 [2]
IEC 61000-4-3	- [1]	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006 [2]

[4] EN 60255-22-1:2008 is based on IEC 60255-22-1:2007.

Publication	Year	Title	EN/HD	Year
IEC 61000-4-4	- [1]	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2004 [2]
IEC 61131-2	- [1]	Programmable controllers - Part 2: Equipment requirements and tests	EN 61131-2	2007 [2]
IEC 61156-1	- [1]	Multicore and symmetrical pair/quad cables for digital communications - Part 1: Generic specification	-	-
IEC 61158-4-2	- [1]	Industrial communication networks - Fieldbus specifications - Part 4-2: Data-link layer protocol specification - Type 2 elements	EN 61158-4-2	2008 [2]
IEC 61158-4-3	- [1]	Industrial communication networks - Fieldbus specifications - Part 4-3: Data-link layer protocol specification - Type 3 elements	EN 61158-4-3	2008 [2]
IEC 61754-2	- [1]	Fibre optic connector interfaces - Part 2: Type BFOC/2,5 connector family	EN 61754-2	1997 [2]
IEC 61754-13	- [1]	Fibre optic connector interfaces - Part 13: Type FC-PC connector	EN 61754-13	2006 [2]
IEC 61754-22	- [1]	Fibre optic connector interfaces - Part 22: Type F-SMA connector family	EN 61754-22	2005 [2]
ISO/IEC 7498	Series	Information technology - Open systems interconnection - Basic Reference Model: The Basic Model	EN ISO/IEC 7498	Series
ISO/IEC 8482	- [1]	Information technology - Telecommunications and information exchange between systems - Twisted pair multipoint interconnections	-	-
ISO/IEC 8802-3	- [1]	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/IEC 9314-1	- [1]	Information Processing Systems - Fibre distributed data interface (FDDI) - Part 1: Token Ring physical layer protocol (PHY)	EN 29314-1	1993 [2]
ISO/IEC 10731	- [1]	Information technology - Open Systems Interconnection - Basic reference model - Conventions for the definition of OSI services	-	-
ANSI TIA/EIA-232-F	- [1]	Interface between data terminal equipment and data circuit - Terminating equipment employing serial binary data interchange	-	-
ANSI TIA/EIA-422-B	- [1]	Electrical characteristics of balanced voltage digital interface circuits	-	-

Publication	Year	Title	EN/HD	Year
ANSI TIA/EIA-485-A	- [1)]	Electrical characteristics of generators and receivers for use in balanced digital multipoint systems	-	-
ANSI TIA/EIA-644-A	- [1)]	Electrical Characteristics of Low Voltage Differential Signaling (LVDS) Interface Circuits	-	-

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INTERNATIONAL STANDARD

Industrial communication networks – Fieldbus specifications – Part 2: Physical layer specification and service definition

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