SLOVENSKI STANDARD
SIST EN 61158-4-3:2012

01-julij-2012

Nadomešča:
SIST EN 61158-4-3:2008

Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 4-3. del: Specifikacija protokola na nivoju podatkovnih povezav - Elementi tipa 3 (IEC 61158 -4-3:2010)

Industrial communication networks - Fieldbus specifications - Part 4-3: Data-link layer protocol specification - Type 3 elements (IEC 61158-4-3:2010)

Industrielle Kommunikationsnetze - Feldbusse - Teil 4-3: Protokollspezifikation des Data Link Layer (Sicherungsschicht) - Typ 3-Elemente (IEC 61158-4-3:2010)

Réseaux de communication industriels - Spécifications de bus de terrain - Partie 4-3: Spécification du protocole de couche de liaison de données - Eléments de Type 3 (CEI 61158-4-3:2010)

Ta slovenski standard je istoveten z: **EN 61158-4-3:2012**

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.20	Podatkovni povezovalni sloj	Data link layer
35.110	Omreževanje	Networking

SIST EN 61158-4-3:2012 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61158-4-3

May 2012

ICS 25.040.40; 35.100.20; 35.110

Supersedes EN 61158-4-3:2008

English version

Industrial communication networks - Fieldbus specifications - Part 4-3: Data-link layer protocol specification - Type 3 elements

(IEC 61158-4-3:2010)

Réseaux de communication industriels - Spécifications de bus de terrain - Partie 4-3: Spécification du protocole de couche de liaison de données - Eléments de Type 3 (CEI 61158-4-3:2010)

Industrielle Kommunikationsnetze - Feldbusse - Teil 4-3: Protokollspezifikation des Data Link Layer (Sicherungsschicht) - Typ 3-Elemente (IEC 61158-4-3:2010)

This European Standard was approved by CENELEC on 2012-03-28. 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

Ref. No. EN 61158-4-3:2012 E

Foreword

The text of document 65C/605/FDIS, future edition 2 of IEC 61158-4-3, 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 approved by CENELEC as EN 61158-4-3:2012.

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)	2012-12-28
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-03-28

This document supersedes EN 61158-4-3:2008.

EN 61158-4-3:2012 includes the following significant technical changes with respect to EN 61158-4-3:2008:

— Corrections in Table A.15 and Table A.16;

— Expired patent removed and added new patents.

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.

Endorsement notice

The text of the International Standard IEC 61158-4-3:2010 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/TR 61158-1	NOTE	Harmonized as CLC/TR 61158-1.
IEC 61158-5-3	NOTE	Harmonized as EN 61158-5-3.
IEC 61158-6-3	NOTE	Harmonized as EN 61158-6-3.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 61158-2	2010	Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition	EN 61158-2	2010
IEC 61158-3-3	2007	Industrial communication networks - Fieldbus specifications - Part 3-3: Data-link layer service definition - Type 3 elements	EN 61158-3-3	2008
ISO/IEC 2022	-	Information technology - Character code structure and extension techniques	-	-
ISO/IEC 7498-1	-	Information technology - Open Systems Interconnection - Basic Reference Model: The Basic Model	-	-
ISO/IEC 7498-3	-	Information technology - Open Systems Interconnection - Basic Reference Model: Naming and addressing	-	-
ISO/IEC 10731	-	Information technology - Open Systems Interconnection - Basic reference model - Conventions for the definition of OSI services	-	-
ISO 1177	-	Information processing - Character structure for start/stop and synchronous character-oriented transmission	-	-

IEC 61158-4-3

Edition 2.0 2010-08

INTERNATIONAL STANDARD

Industrial communication networks – Fieldbus specifications – Part 4-3: Data-link layer protocol specification – Type 3 elements

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL COMMUNICATION NETWORKS – FIELDBUS SPECIFICATIONS –

Part 4-3: Data-link layer protocol specification – Type 3 elements

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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International Standard IEC 61158-4-3 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:

- Corrections in Table A.15 and Table A.16;
- Expired patent removed and added new patents.

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

FDIS	Report on voting
65C/605/FDIS	65C/619/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 ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61158 series, published under the general title *Industrial communication networks – Fieldbus specifications*, can be found on the IEC web site

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.

NOTE The revision of this standard will be synchronized with the other parts of the IEC 61158 series.

INTRODUCTION

This part of IEC 61158 is one of a series produced to facilitate the interconnection of automation system components. It is related to other standards in the set as defined by the "three-layer" fieldbus reference model described in IEC/TR 61158-1.

The data-link protocol provides the data-link service by making use of the services available from the physical layer. The primary aim of this standard is to provide a set of rules for communication expressed in terms of the procedures to be carried out by peer data-link entities (DLEs) at the time of communication. These rules for communication are intended to provide a sound basis for development in order to serve a variety of purposes:

a) as a guide for implementors and designers;

b) for use in the testing and procurement of equipment;

c) as part of an agreement for the admittance of systems into the open systems environment;

d) as a refinement to the understanding of time-critical communications within OSI.

This standard is concerned, in particular, with the communication and interworking of sensors, effectors and other automation devices. By using this standard together with other standards positioned within the OSI or fieldbus reference models, otherwise incompatible systems may work together in any combination.

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 its profile parts. Use of the various protocol types in other combinations may require permission from their respective intellectual-property-right holders.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning Type 3 elements and possibly other types given in the normative elements of this standard.

The following patent rights for Type 3 have been announced by [SI]:

Publication	Title
EP0604668-A1 (06.07.1994); EP0604668-B1 (18.02.1998)	Logical ring with monitoring of rotation time
EP0604669-A1 (06.07.1994); EP0604669-B1 (01.04.1998)	Bus system with monitoring of the activity state of participants

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

The holder of these patent rights has assured the IEC that he/she is willing to negotiate licences either free of charge or under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of these patent rights is registered with IEC. Information may be obtained from:

[SI]: Siemens AG
CT IP L&T
Hr. Hans-Jörg Müller
Otto-Hahn-Ring 6
D-81739 Munich
Germany

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

ISO (www.iso.org/patents) and IEC (http://www.iec.ch/tctools/patent_decl.htm) maintain on-line data bases of patents relevant to their standards. Users are encouraged to consult the data bases for the most up to date information concerning patents.