SIST

SLOVENSKI STANDARD
SIST EN IEC 61158-4-24:2019

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SIST EN 61158-4-24:2015

Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 4-24. del: Specifikacija protokola na ravni podatkovnih povezav - Elementi tipa 24 (IEC 61158 -4-24:2019)

Industrial communication networks - Fieldbus specifications - Part 4-24: Data-link layer protocol specification - Type 24 elements (IEC 61158-4-24:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 4-24: Protokollspezifikation des Data Link Layer (Sicherungsschicht) - Typ 24-Elemente (IEC 61158-4-24:2019)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 4-24: Spécification du protocole de la couche liaison de données - Éléments de type 24 (IEC 61158-4-24:2019)

Ta slovenski standard je istoveten z: **EN IEC 61158-4-24:2019**

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 IEC 61158-4-24:2019 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61158-4-24

June 2019

ICS 25.040.40; 35.100.20; 35.110

Supersedes EN 61158-4-24:2014

English Version

Industrial communication networks - Fieldbus specifications - Part 4-24: Data-link layer protocol specification - Type 24 elements (IEC 61158-4-24:2019)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 4-24: Spécification du protocole de la couche liaison de données - Éléments de type 24 (IEC 61158-4-24:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 4-24: Protokollspezifikation des Data Link Layer (Sicherungsschicht) - Typ 24-Elemente (IEC 61158-4-24:2019)

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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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 65C/946/FDIS, future edition 2 of IEC 61158-4-24, 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 IEC 61158-4-24:2019.

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) 2020-02-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-05-23

This document supersedes EN 61158-4-24:2014.

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

Endorsement notice

The text of the International Standard IEC 61158-4-24:2019 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 61158-1 NOTE Harmonized as EN 61158-1
IEC 61784-1 NOTE Harmonized as EN 61784-1
IEC 61784-2 NOTE Harmonized as EN 61784-2

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 61158-2	-	Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition	-EN 61158-2	-
IEC 61158-3-24	2014	Industrial communication networks - Fieldbus specifications - Part 3-24: Data-link layer service definition - Type 24 elements	-EN 61158-3-24	2014
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 9899	-	Information technology - Programming-languages - C		-
ISO/IEC 10731	-	Information technology - Open Systems-Interconnection - Basic Reference Model - Conventions for the definition of OSI services		-
ISO/IEC 13239	2002	Information technology_--Telecommunications and information exchange between systems_- High-level data link control (HDLC) procedures		-
ISO/IEC 19501	2005	Information technology - Open Distributed-Processing - Unified Modeling Language (UML) Version 1.4.2		-
ISO/IEC/IEEE 8802-2017 3		Standard for Ethernet	-	-

IEC 61158-4-24

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INTERNATIONAL STANDARD

colour inside

Industrial communication networks – Fieldbus specifications – Part 4-24: Data-link layer protocol specification – Type 24 elements

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INDUSTRIAL COMMUNICATION NETWORKS – FIELDBUS SPECIFICATIONS –

Part 4-24: Data-link layer protocol specification – Type 24 elements

FOREWORD

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NOTE Combinations of protocol types are specified in IEC 61784-1 and IEC 61784-2.

International Standard IEC 61158-4-24 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 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- patent declaration in the Introduction;
- corrections on transmission sequence of fixed-width time slot type in 4.3.2;
- technical extension for band sharing between I/O data exchange and message communication; and
- spelling and grammar.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
65C/946/FDIS	65C/955/RVD

Full information on the voting for the approval of this International 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 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.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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

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US 7769935 JP 4683346 US 8046512 DE 602007041530.6	[YE]	MASTER SLAVE COMMUNICATION SYSTEM AND MASTER SLAVE COMMUNICATION METHOD
JP 4356698	[YE]	COMMUNICATION DEVICE, SYNCHRONIZED COMMUNICATION SYSTEM, AND SYNCHRONIZED COMMUNICATION METHOD

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