
**Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 6-25. del:
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Industrial communication networks - Fieldbus specifications - Part 6-25: Application layer
protocol specification - Type 25 elements (IEC 61158-6-25:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-25: Protokollspezifikation des
Application Layer (Anwendungsschicht) - Typ 25-Elemente (IEC 61158-6-25:2019)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 6-25:
Spécification du protocole de la couche application - Éléments de type 25 (IEC 61158-6-
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Industrielle Kommunikationsnetze - Feldbusse - Teil 6-25:
Protokollspezifikation des Application Layer
(Anwendungsschicht) - Typ 25-Elemente
(IEC 61158-6-25:2019)

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EN IEC 61158-6-25:2019 (E)**European foreword**

The text of document 65C/948/FDIS, future edition 1 of IEC 61158-6-25, 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 61158-6-25:2019.

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) 2020-04-25
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IEC 61158-1 NOTE Harmonized as EN IEC 61158-1

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.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|---------------------|-------------|---|-------------------|-------------|
| IEC 61158-3-25 | 2019 | Industrial communication networks - Fieldbus specifications - Part 3-25: Data-link layer service definition - Type X elements | EN IEC 61158-3-25 | 2019 |
| IEC 61158-5-25 | 2019 | Industrial communication networks - Fieldbus specifications - Part 5-25: Application layer service definition - Type 25 elements | EN IEC 61158-5-25 | 2019 |
| ISO/IEC 7498-1 | - | Information technology - Open Systems Interconnection - Basic reference model: The basic model | - | - |
| ISO/IEC 8822 | - | Information technology - Open Systems Interconnection - Presentation service definition | - | - |
| ISO/IEC 9545 | - | Information technology - Open Systems Interconnection - Application layer structure | - | - |
| ISO/IEC 8824-1 | - | Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation | - | - |
| ISO/IEC/IEEE 8802-3 | - | Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 3: Standard for Ethernet | - | - |
| IEEE 802.1D | - | IEEE Standard for local and metropolitan area networks - Media Access Control (MAC) Bridges | - | - |
| IEEE 802.1Q | - | IEEE Standard for Local and metropolitan area networks - Media Access Control (MAC) Bridges and Virtual Bridges | - | - |
| IETF RFC 768 | - | User Datagram Protocol | - | - |
| IETF RFC 791 | - | Internet Protocol - DARPA Internet Program Protocol Specification | - | - |

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INDUSTRIAL COMMUNICATION NETWORKS –
 FIELDBUS SPECIFICATIONS –

**Part 6-25: Application layer protocol specification –
 Type 25 elements**

FOREWORD

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International Standard IEC 61158-6-25 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

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

| | |
|--------------|------------------|
| FDIS | Report on voting |
| 65C/948/FDIS | 65C/956/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 in the IEC 61158 series, published under the general title *Industrial communication networks – Fieldbus specifications*, can be found on the IEC website.

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

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INTRODUCTION

This document 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 application protocol provides the application service by making use of the services available from the data-link or other immediately lower 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 application entities (AEs) 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:

- as a guide for implementers and designers;
- for use in the testing and procurement of equipment;
- as part of an agreement for the admittance of systems into the open systems environment;
- as a refinement to the understanding of time-critical communications within OSI.

This document 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.

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