

### SLOVENSKI STANDARD SIST EN IEC 61158-6-27:2023

**01-november-2023** 

Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 6-27. del: Specifikacija protokola na aplikacijski ravni - Elementi tipa 27 (IEC 61158-6-27:2023)

Industrial communication networks - Fieldbus Specifications Part 6-27: Application layer protocol specification - Type 27 elements (IEC 61158-6-27:2023)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-27: Protokollspezifikation des Application Layer (Anwendungsschicht) - Typ 27-Elemente (IEC 61158-6-27:2023)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 6-27 : Spécification du protocole de la couche application - Éléments de type 27 (IEC 61158-6-27:2023)

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industrijskih postopkov measurement and control

35.100.70 Uporabniški sloj Application layer

35.110 Omreževanje Networking

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Industrial communication networks - Fieldbus Specifications Part 6-27: Application layer protocol specification - Type 27 elements (IEC 61158-6-27:2023)

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Protokollspezifikation des Application Layer
(Anwendungsschicht) - Typ 27-Elemente
(IEC 61158-6-27:2023)

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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

### EN IEC 61158-6-27:2023 (E)

### **European foreword**

The text of document 65C/1205/FDIS, future edition 1 of IEC 61158-6-27, 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 61158-6-27:2023.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-01-20 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2026-04-20 document have to be withdrawn

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The text of the International Standard IEC 61158-6-27:2023 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 standard indicated:

IEC 61158-1:2023 NOTE Approved as EN IEC 61158-1:2023 (not modified)

IEC 61158-2 al/catal NOTE Approved as EN 61158-2 -48a6-b824-0flefc21b612/sist-en-icc-61158-6-27-2023

IEC 61158-6 (series) NOTE Approved as EN 61158-6 (series)

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IEC 61784-2 (series) NOTE Approved as EN IEC 61784-2 (series)<sup>2</sup>

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<sup>&</sup>lt;sup>1</sup> To be published. Stage at the time of publication: FprEN IEC 61784-1-X:2023.

<sup>&</sup>lt;sup>2</sup> To be published. Stage at the time of publication: FprEN IEC 61784-2-X:2023.

# 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.cencenelec.eu.

| <u>Publication</u>                       | <u>Year</u>   | <u>Title</u>   | EN/HD                     | <u>Year</u>             |
|--|---------------|--|---------------------------|-------------------------|
| IEC 61158-5-27                           | 2023          | Industrial communication networks -<br>Fieldbus specifications - Part 5-27:<br>Application layer service definition - Type<br>27 elements                                  | EN IEC 61158-5-27         | 7 2023                  |
| ISO/IEC 646                              | -             | Information technology; ISO 7-bit coded character set for information interchange  | -                         | -                       |
| ISO/IEC 7498-1                           | (h            | Information technology - Open Systems<br>Interconnection - Basic reference model:<br>The basic model   | h.ai)                     | -                       |
| ISO/IEC 9545                             | -             | Information technology - Open Systems Interconnection - Application layer structure  | W                         | -                       |
| ISO/IEC 9899<br>standards.iteh.ai/catalo | -<br>og/stand | Information technology - Programming 3 languages - C 7 76-667-48a6-b824-013  | -<br>efc21b612/sist-en-id | -<br>ec-61158-6-27-2023 |
| ISO/IEC 10731                            | -             | Information technology - Open Systems<br>Interconnection - Basic Reference Model -<br>Conventions for the definition of OSI<br>services                                    | -                         | -                       |
| ISO/IEC 19501                            | 2005          | Information technology - Open Distributed Processing - Unified Modeling Language (UML) Version 1.4.2   | -                         | -                       |
| ISO/IEC/IEEE 60559                       | 2020          | Information technology - Microprocessor<br>Systems - Floating-Point arithmetic   | -                         | -                       |
| ISO/IEC/IEEE 8802-3                      | -             | Telecommunications and exchange<br>between information technology systems –<br>Requirements for local and metropolitan<br>area networks – Part 3: Standard for<br>Ethernet | -<br>-                    | -                       |
| IEEE Std 802.1D                          | -             | IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges   | -                         | -                       |
|  |               |  |                           |                         |

### EN IEC 61158-6-27:2023 (E)

| IEEE Std 802.1Q  | -    | IEEE Standard for Local and metropolitan area networks - Bridges and Bridged Networks  | - |
|------------------|------|--|---|
| IEEE Std 802.1AB | -    | IEEE Standard for Local and metropolitan area networks: Station and Media Access Control Connectivity Discovery  | - |
| IEEE Std 802.1AS | -    | IEEE standard for Local and metropolitan<br>area networks - Timing and<br>Synchronization for Time-Sensitive<br>Applications in Bridged Local Area<br>Networks | - |
| IETF RFC 768     | 1980 | User Datagram Protocol   |   |
| IETF RFC 791     | 1981 | Internet Protocol  |   |
| IETF RFC 826     | 1982 | Ethernet Address Resolution Protocol: Or<br>Converting Network Protocol Addresses to<br>48.bit Ethernet Address for Transmission<br>on Ethernet Hardware       |   |
| IETF RFC 1112    | 1989 | Host Extensions for IP multicasting  | - |
| IETF RFC 2460    | 1998 | Internet Protocol - Version 6 (IPv6) -<br>Specification  | - |

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## IEC 61158-6-27

Edition 1.0 2023-03

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

Industrial communication networks – Fieldbus specifications – Part 6-27: Application layer protocol specification – Type 27 elements

Réseaux de communication industriels – Spécifications des bus de terrain – Partie 6-27: Spécification du protocole de la couche application – Éléments de type 27

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#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

## INDUSTRIAL COMMUNICATION NETWORKS – FIELDBUS SPECIFICATIONS –

# Part 6-27: Application layer protocol specification – Type 27 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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NOTE Combinations of protocol types are specified in the IEC 61784 1 series and the IEC 61784 2 series.

IEC 61158-6-27 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

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

| Draft         | Report on voting |
|---------------|------------------|
| 65C/1205/FDIS | 65C/1234/RVD     |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at <a href="https://www.iec.ch/members\_experts/refdocs">www.iec.ch/members\_experts/refdocs</a>. The main document types developed by IEC are described in greater detail at <a href="https://www.iec.ch/publications">www.iec.ch/publications</a>.

A list of all parts of the IEC 61158 series, 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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn.
- replaced by a revised edition, or eh Standards
- amended.

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