

Industrial communication networks - Fieldbus
specifications - Part 1: Overview and guidance for the
IEC 61158 and IEC 61784 series

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61158-1:2019 sisaldab Euroopa standardi EN IEC 61158-1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61158-1:2019 consists of the English text of the European standard EN IEC 61158-1:2019.
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English Version

**Industrial communication networks - Fieldbus specifications -
Part 1: Overview and guidance for the IEC 61158 and IEC 61784
series
(IEC 61158-1:2019)**

Réseaux de communication industriels - Spécifications des
bus de terrain - Partie 1: Présentation et lignes directrices
des séries CEI 61158 et CEI 61784
(IEC 61158-1:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 1:
Überblick und Leitfaden zu den Normen der Reihe IEC
61158 und IEC 61784
(IEC 61158-1:2019)

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European foreword

The text of document 65C/944/FDIS, future edition 2 of IEC 61158-1, 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 61158-1:2019.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-05-15

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

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**INDUSTRIAL COMMUNICATION NETWORKS –
FIELD BUS SPECIFICATIONS –****Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series****FOREWORD**

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

International Standard IEC 61158 1 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 changes with respect to the previous edition:

- updates of the references to and information about the IEC 61158 series, IEC 61784-1, IEC 61784-3, IEC 61784-5 series and IEC 61918 throughout the document;
- new Type 25 and the related profile family CPF 20;
- new Type 26 and the related profile family CPF 21.

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

FDIS	Report on voting
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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 document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the 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 document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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INDUSTRIAL COMMUNICATION NETWORKS – FIELDBUS SPECIFICATIONS –

Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series

1 Scope

This part of IEC 61158 specifies the generic concept of fieldbuses.

This document also presents an overview and guidance for the IEC 61158 series by:

- explaining the structure and content of the IEC 61158 series;
- relating the structure of the IEC 61158 series to the ISO/IEC 7498-1 OSI Basic Reference Model;
- showing the logical structure of the IEC 61784 series;
- showing how to use parts of the IEC 61158 series in combination with the IEC 61784 series;
- providing explanations of some aspects of the IEC 61158 series that are common to the type specific parts of the IEC 61158-5 including the application layer service description concepts and the generic fieldbus data types.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

communication system

arrangement of hardware, software and propagation media to allow the transfer of messages from one application to another

3.1.2

fieldbus

communication system based on serial data transfer as typically used in industrial automation and process control applications

3.1.3

fieldbus system

system using a fieldbus with connected devices