



NSAI
Standards

Irish Standard
I.S. EN IEC 61158-5-12:2019

Industrial communication networks -
Fieldbus specifications - Part 5-12:
Application layer service definition - Type
12 elements

I.S. EN IEC 61158-5-12:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN IEC 61158-5-12:2019 is the adopted Irish version of the European Document EN IEC 61158-5-12:2019, Industrial communication networks - Fieldbus specifications - Part 5-12: Application layer service definition - Type 12 elements

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EUROPEAN STANDARD

EN IEC 61158-5-12

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Supersedes EN 61158-5-12:2014

English Version

**Industrial communication networks - Fieldbus specifications -
Part 5-12: Application layer service definition - Type 12 elements
(IEC 61158-5-12:2019)**

Réseaux de communication industriels - Spécifications des
bus de terrain - Partie 5-12 : Définition des services de la
couche application - Éléments de type 12
(IEC 61158-5-12:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 5-12:
Dienstfestlegungen des Application Layer
(Anwendungsschicht) - Typ 12-Elemente
(IEC 61158-5-12:2019)

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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 61158-5-12:2019 (E)

European foreword

The text of document 65C/947/FDIS, future edition 4 of IEC 61158-5-12, 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 61158-5-12:2019.

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) 2020-02-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-05-15

This document supersedes EN 61158-5-12:2014.

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 61158-5-12:2019 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 61158-2	NOTE	Harmonized as EN 61158-2
IEC 61158-4-12	NOTE	Harmonized as EN 61158-4-12
IEC 61158-6-12	NOTE	Harmonized as EN 61158-6-12
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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61131-3	-	Programmable controllers - Part 3: Programming languages	EN 61131-3	-
IEC 61158-1	2019	Industrial communication networks - Fieldbus specifications - Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series	EN IEC 61158-1	2019
IEC 61158-3-12	2019	Industrial communication networks - Fieldbus specifications - Part 3-12: Data-link layer service definition - Type 12 elements	-	-
ISO/IEC 646	1991	Information technology; ISO 7-bit coded character set for information interchange	-	-
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/IEEE 8802-3	-	Standard for Ethernet	-	-
ISO/IEC 9545	-	Information technology - Open Systems Interconnection - Application layer structure	-	-
ISO/IEC 10646	-	Information technology - Universal Coded Character Set (UCS)	-	-
ISO/IEC 10731	-	Information technology - Open Systems Interconnection - Basic Reference Model - Conventions for the definition of OSI services	-	-
ISO/IEC/IEEE 60559	-	Information technology - Microprocessor Systems - Floating-Point arithmetic	-	-
IEEE 802.1D	-	IEEE Standard for local and metropolitan area networks - Media Access Control (MAC) Bridges	-	-
IETF RFC 791	-	Internet Protocol - DARPA Internet Program Protocol Specification	-	-

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Edition 4.0 2019-04

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**Industrial communication networks – Fieldbus specifications –
Part 5-12: Application layer service definition – Type 12 elements**





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IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.



IEC 61158-5-12

Edition 4.0 2019-04

INTERNATIONAL STANDARD

**Industrial communication networks – Fieldbus specifications –
Part 5-12: Application layer service definition – Type 12 elements**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL COMMUNICATION NETWORKS – FIELDBUS SPECIFICATIONS –

Part 5-12: Application layer service definition – Type 12 elements

FOREWORD

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

International Standard IEC 61158-5-12 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

This fourth edition cancels and replaces the third edition published in 2014. This edition constitutes a technical revision.

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

- Technical corrections; and
- Editorial improvements for clarification.

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

FDIS	Report on voting
65C/947/FDIS	65C/950/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 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.

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 service is provided by the application protocol making use of the services available from the data-link or other immediately lower layer. This document defines the application service characteristics that fieldbus applications and/or system management may exploit.

Throughout the set of fieldbus standards, the term “service” refers to the abstract capability provided by one layer of the OSI Basic Reference Model to the layer immediately above. Thus, the application layer service defined in this document is a conceptual architectural service, independent of administrative and implementation divisions.

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