



National Standards Authority of Ireland  
Údarás um Chaighdeáin Náisiúnta na hÉireann

IRISH STANDARD

**I.S. EN 61158-5-16:2008**

ICS 35.100.70  
25.040.40

**INDUSTRIAL COMMUNICATION  
NETWORKS - FIELDBUS SPECIFICATIONS  
- PART 5-16: APPLICATION LAYER  
SERVICE DEFINITION - TYPE 16  
ELEMENTS (IEC 61158-5-16:2007 (EQV))**

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EUROPEAN STANDARD

**EN 61158-5-16**

NORME EUROPÉENNE

March 2008

EUROPÄISCHE NORM

ICS 35.100.70; 25.040.40

Partially supersedes EN 61158-5:2004 and EN 61491:1998

English version

**Industrial communication networks -  
Fieldbus specifications -  
Part 5-16: Application layer service definition -  
Type 16 elements  
(IEC 61158-5-16:2007)**

Réseaux de communication industriels -  
Spécifications des bus de terrain -  
Partie 5-16: Définition des services  
des couches d'application -  
Éléments de type 16  
(CEI 61158-5-16:2007)

Industrielle Kommunikationsnetze -  
Feldbusse -  
Teil 5-16: Dienstfestlegungen  
des Application Layer  
(Anwendungsschicht) -  
Typ 16-Elemente  
(IEC 61158-5-16:2007)

This European Standard was approved by CENELEC on 2008-02-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## I.S. EN 61158-5-16:2008

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### Foreword

The text of document 65C/475/FDIS, future edition 1 of IEC 61158-5-16, 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 was approved by CENELEC as EN 61158-5-16 on 2008-02-01.

This and the other parts of the EN 61158-5 series supersede EN 61158-5:2004. Together with EN 61158-2:2008 and its companion parts for Type 16, it also partially replaces EN 61491:1998 which is at present being revised (to be issued as a Technical Report).

With respect to EN 61158-5:2004 the following changes were made:

- deletion of Type 6 fieldbus for lack of market relevance;
- addition of new fieldbus types;
- partition into multiple parts numbered 5-2, 5-3, ..., 5-20.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2008-11-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2011-02-01

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 EN 61784 series. Use of the various protocol types in other combinations may require permission from their respective intellectual-property-right holders.

Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 61158-5-16:2007 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 61131-1	NOTE Harmonized as EN 61131-1:2003 (not modified).
IEC 61158-4-16	NOTE Harmonized as EN 61158-4-16:2008 (not modified).
IEC 61158-6-16	NOTE Harmonized as EN 61158-6-16:2008 (not modified).
IEC 61784-1	NOTE Harmonized as EN 61784-1:2008 (not modified).

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60559	- <sup>1)</sup>	Binary floating-point arithmetic for microprocessor systems	HD 592 S1	1991 <sup>2)</sup>
IEC 61131-3	- <sup>1)</sup>	Programmable controllers - Part 3: Programming languages	EN 61131-3	2003 <sup>2)</sup>
IEC/TR 61158-1	2007	Industrial communication networks - Fieldbus specifications - Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series	-	-
IEC 61158-3-16	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 3-16: Data-link layer service definition - Type 16 elements	EN 61158-3-16	2008 <sup>2)</sup>
ISO/IEC 7498-1	- <sup>1)</sup>	Information technology - Open Systems Interconnection - Basic Reference Model: The Basic Model	EN ISO/IEC 7498-1	1995 <sup>2)</sup>
ISO/IEC 8822	- <sup>1)</sup>	Information technology - Open Systems Interconnection - Presentation service definition	-	-
ISO/IEC 8824	- <sup>1)</sup>	Information technology - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)	-	-
ISO/IEC 9545	- <sup>1)</sup>	Information technology - Open Systems Interconnection - Application Layer structure	-	-
ISO/IEC 10646-1	- <sup>1)</sup>	Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane	-	-
ISO/IEC 10731	- <sup>1)</sup>	Information technology - Open Systems Interconnection - Basic reference model - Conventions for the definition of OSI services	-	-

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.



**IEC 61158-5-16**

Edition 1.0 2007-12

# **INTERNATIONAL STANDARD**

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**Industrial communication networks – Fieldbus specifications –  
Part 5-16: Application layer service definition – Type 16 elements**



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