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Industrial communication networks - Fieldbus specifications - Part 4-2: Data-link layer protocol specification - Type 2 elements (IEC 61158-4-2:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 4-2: Protokollspezifikation des Data Link Layer (Sicherheitsschicht) - Typ 2-Elemente (IEC 61158-4-2:2019)

Réseaux de communication industriels - Specifications des bus de terrain - Partie 4-2: Spécification du protocole de la couche liaison de données - Éléments de Type 2 (IEC 61158-4-2:2019)

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**Industrial communication networks - Fieldbus specifications -
Part 4-2: Data-link layer protocol specification - Type 2 elements
(IEC 61158-4-2:2019)**

Réseaux de communication industriels - Spécifications des
bus de terrain - Partie 4-2: Spécification du protocole de la
couche liaison de données - Éléments de Type 2
(IEC 61158-4-2:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 4-2:
Protokollspezifikation des Data Link Layer
(Sicherheitsschicht) - Typ 2-Elemente
(IEC 61158-4-2:2019)

This European Standard was approved by CENELEC on 2019-05-23. 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.

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EN IEC 61158-4-2:2019 (E)**European foreword**

The text of document 65C/946/FDIS, future edition 4 of IEC 61158-4-2, 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 61158-4-2:2019.

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- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-05-23

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The text of the International Standard IEC 61158-4-2:2019 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 61158-1:2019 NOTE Harmonized as EN IEC 61158-1:2019 (not modified)
- IEC 61158-2:2014 NOTE Harmonized as EN 61158-2:2014 (not modified)
- IEC 61784-1:2019 NOTE Harmonized as EN IEC 61784-1:2019 (not modified)
- IEC 61784-2:2019 NOTE Harmonized as EN IEC 61784-2:2019 (not modified)

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	3:EN 61131-3	-
IEC 61158-3-2 Amd 1	2014 2019	Industrial communication networks - Part 3-2: Data-link layer service definition - Type 2 elements	-EN 61158-3-2	2014
IEC 61158-5-2	2019	Industrial communication networks - Part 5-2: Application layer service definition - Type 2 elements	-EN IEC 61158-5-2	2019
IEC 61158-6-2	2014	Industrial communication networks - Part 6-2: Application layer protocol specification - Type 2 elements	-EN 61158-6-2	2014
IEC 61588	2009	Precision clock synchronization protocol for-networked measurement and control systems	-	-
IEC 61784-3-2	-	Industrial communication networks -- Profiles - Part 3-2: Functional safety fieldbuses - Additional specifications for CPF 2	--	-
IEC 62026-3	2014	Low-voltage switchgear and controlgear -- Controller-device interfaces (CDIs) - Part 3: DeviceNet	--	-
IEC 62439-3	2012	Industrial communication networks - High-availability automation networks -- Part 3: Parallel Redundancy Protocol (PRP) and High availability Seamless Redundancy (HSR)	HighEN 62439-3	2012
ISO 11898	1993	Road vehicles - Interchange of digital-information - Controller area network (CAN) for high-speed communication	-	-
ISO/IEC 3309	-	Information technology -- Telecommunications and information exchange between systems - High-level data link control (HDLC) procedures - Frame structure	--	-

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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 802-3	-	Standard for Ethernet	-
IEEE Std 802.1D	2004	IEEE Standard for Local and Metropolitan-Area Networks – Media Access Control (MAC) bridges	-
IEEE Std 802.1Q	2005	IEEE Standard for Local and Metropolitan-Area Networks – Virtual bridged local area networks	-
IEEE Std 802.3	2015	IEEE Standard for Ethernet	-
IETF RFC 951	-	Bootstrap Protocol (BOOTP)	-
IETF RFC 1213	-	Management Information Base for Network-Management of TCP/IP-based Internets: MIB-II	-
IETF RFC 1542	-	Clarifications and Extensions for the-Bootstrap Protocol	-
IETF RFC 1643	-	Definitions of Managed Objects for the-Ethernet-like interface types	-
IETF RFC 2131	-	Dynamic Host Configuration Protocol	-
IETF RFC 2132	-	DHCP Options and BOOTP Vendor-Extensions	-
IETF RFC 2863	-	The Interfaces Group MIB	-
IETF RFC 3635	-	Definitions of managed objects for the-ethernet-like interface types	-
IETF RFC 4541	-	IGMP and MLD Snooping Switches	-
IETF RFC 5227	2008	IPv4 Address Conflict Detection	-

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Part 4-2: Data-link layer protocol specification – Type 2 elements**

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