

STN	Priemyselné komunikačné siete Inštalácia komunikačných sietí v priemyselných zariadeniach Zmena A1	STN EN IEC 61918/A1 18 4020
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Industrial communication networks - Installation of communication networks in industrial premises

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/23

STN EN IEC 61918 z marca 2019 sa bez tejto zmeny A1 môže používať do 13.4.2025.

Obsahuje: EN IEC 61918:2018/A1:2022, IEC 61918:2018/AMD1:2022

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 61918:2018/A1

April 2022

ICS 25.040.40; 33.020; 35.240.50

English Version

**Industrial communication networks - Installation of
communication networks in industrial premises
(IEC 61918:2018/AMD1:2022)**

Réseaux de communication industriels - Installation de
réseaux de communication dans des locaux industriels
(IEC 61918:2018/AMD1:2022)

Industrielle Kommunikationsnetze - Installation von
Kommunikationsnetzen in Industrieanlagen
(IEC 61918:2018/AMD1:2022)

This amendment A1 modifies the European Standard EN IEC 61918:2018; it was approved by CENELEC on 2022-04-13. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

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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 61918:2018/A1:2022 (E)**European foreword**

The text of document 65C/1141/FDIS, future IEC 61918/AMD1, 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 61918:2018/A1:2022.

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) 2023-01-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-04-13

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Endorsement notice

The text of the International Standard IEC 61918:2018/AMD1:2022 was approved by CENELEC as a European Standard without any modification.

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.

Delete the following references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61935-1	2015	Specification for the testing of balanced and coaxial information technology cabling - Part 1: Installed balanced cabling as specified in ISO/IEC 11801 and related standards	-	-
ISO/IEC 8802-3	-	Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications	-	-
+ AMD1	2021		-	-

Add the following references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-4	-	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	-
IEC 61000-4-5	-	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	-
IEC 61010-2-201	-	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-201: Particular requirements for control equipment	EN IEC 61010-2-201	-

EN IEC 61918:2018/A1:2022 (E)

IEC 61010-2-203	— ¹	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-203: Particular requirements for industrial communication circuits and communication port interconnection	-	-
IEC 61156-1	-	Multicore and symmetrical pair/quad cables for digital communications - Part 1: Generic specification	-	-
IEC 61156-11	-	Multicore and symmetrical pair/quad cables for digital communications - Part 11: Symmetrical single pair cables with transmission characteristics up to 600 MHz - Horizontal floor wiring - Sectional specification	-	-
IEC 61156-12	-	Multicore and symmetrical pair/quad cables for digital communications - Part 12: Symmetrical single pair cables with transmission characteristics up to 600 MHz - Work area wiring - Sectional specification	-	-
IEC 61935-1	2019	Specification for the testing of balanced and coaxial information technology cabling - Part 1: Installed balanced cabling as specified in ISO/IEC 11801-1 and related standards	-	-
IEC 61935-1-1	2019	Specification for the testing of balanced and coaxial information technology cabling - Part 1-1: Additional requirements for the measurement of transverse conversion loss and equal level transverse conversion transfer loss	-	-
IEC 63171-6	-	Connectors for electrical and electronic equipment - Part 6: Detail specification for 2-way and 4-way (data/power), shielded, free and fixed connectors for power and data transmission with frequencies up to 600 MHz.	EN IEC 63171-6	-
ISO/IEC/IEEE 8802-3	2021	Telecommunications and exchange between information technology systems - Requirements for local and metropolitan area networks - Part 3: Standard for Ethernet	-	-
ISO/IEC 11801-3: 2017/AMD1	2021	Information technology - Generic cabling for customer premises - Part 3: Industrial premises	-	-
IEEE Std 802.3cg	-	IEEE Standard for Ethernet - Amendment 5: Physical Layer Specifications and Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced Pair of Conductors	-	-

¹ To be published. Stage at the time of publication: IEC/ACDV 61010-2-203:2021.



IEC 61918

Edition 4.0 2022-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE



AMENDMENT 1
AMENDEMENT 1

Industrial communication networks – Installation of communication networks in industrial premises

Réseaux de communication industriels – Installation de réseaux de communication dans des locaux industriels



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IEC 61918

Edition 4.0 2022-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE



AMENDMENT 1
AMENDEMENT 1

Industrial communication networks – Installation of communication networks in industrial premises

Réseaux de communication industriels – Installation de réseaux de communication dans des locaux industriels

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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ICS 25.040.40; 33.020, 35.240.50

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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COMMUNICATION NETWORKS IN INDUSTRIAL PREMISES****AMENDMENT 1****FOREWORD**

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Amendment 1 to IEC 61918:2018 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

The text of this Amendment is based on the following documents:

Draft	Report on voting
65C/1141/FDIS	65C/1162/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 Amendment is English.

IEC 61918:2018/AMD1:2022
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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 www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications/.

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INTRODUCTION to Amendment 1

This Amendment 1 describes the installation in the critical environment of industrial premises of balanced 1-pair networks that use cabling in connection with Ethernet specified in 1000BASE-T1 type A, which allows bidirectional signal transmission at 1 000 Mbit/s up to 15 m, 1000BASE-T1 type B for 1 000 Mbit/s up to 40 m, 100BASE-T1 for 100 Mbit/s up to 15 m, 10BASE-T1S for 10 Mbit/s up to 15 m, 10BASE-T1L for 10 Mbit/s up to 1 000 m.

These balanced 1-pair networks use the industrial versions of 1 000 Mbit/s and 100 Mbit/s ISO/IEC/IEEE 8802-3:2021, and 10 Mbit/s IEEE Std 802.3cg networks.

INTRODUCTION

Replace Figure 2 with the following updated figure.

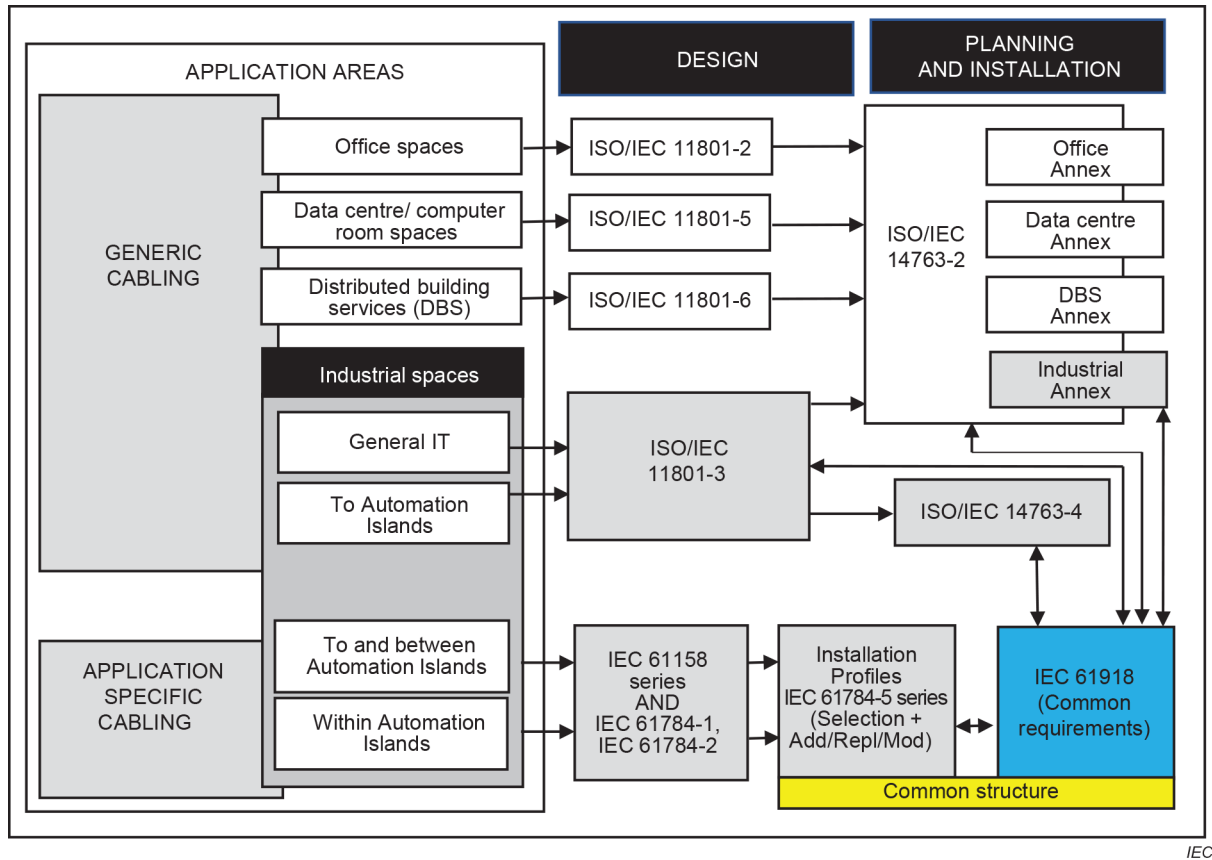


Figure 2 – Standards relationships

2 Normative references

Delete the following normative references:

IEC 61935-1:2015, *Specification for the testing of balanced and coaxial information technology cabling – Part 1: Installed balanced cabling as specified in ISO/IEC 11801 and related standards*

ISO/IEC 8802-3, *Information technology – Telecommunications and information exchange between systems – Local and metropolitan area networks – Specific requirements – Part 3: Standard for Ethernet*

Add the following normative references:

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61010-2-201, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-201: Particular requirements for control equipment*

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IEC 61010-2-203:—¹, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-203: Particular requirements for industrial communication circuits and communication port interconnection*

IEC 61156-1, *Multicore and symmetrical pair/quad cables for digital communications – Part 1: Generic specification*

IEC 61156-11, *Multicore and symmetrical pair/quad cables for digital communications – Part 11: Symmetrical single pair cables with transmission characteristics up to 600 MHz – Horizontal floor wiring – Sectional specification*

IEC 61156-12, *Multicore and symmetrical pair/quad cables for digital communications – Part 12: Symmetrical single pair cables with transmission characteristics up to 600 MHz – Work area wiring – Sectional specification*

IEC 61935-1:2019, *Specification for the testing of balanced and coaxial information technology cabling – Part 1: Installed balanced cabling as specified in ISO/IEC 11801-1 and related standards*

IEC 61935-1-1:2019, *Specification for the testing of balanced and coaxial information technology cabling – Part 1-1: Additional requirements for the measurement of transverse conversion loss and equal level transverse conversion transfer loss*

IEC 63171-6, *Connectors for electrical and electronic equipment – Part 6: Detail specification for 2-way and 4-way (data/power), shielded, free and fixed connectors for power and data transmission with frequencies up to 600 MHz*

ISO/IEC/IEEE 8802-3:2021, *Telecommunications and exchange between information technology systems – Requirements for local and metropolitan area networks – Part 3: Standard for Ethernet*

ISO/IEC 11801-3:2017/AMD1:2021, *Amendment 1 – Information technology – Generic cabling for customer premises – Part 3: Industrial premises*

IEEE Std 802.3cg, *IEEE Standard for Ethernet – Amendment 5, Physical Layer Specifications and Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced Pair of Conductors*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

¹ Under preparation. Stage at the time of publication: IEC/ACDV 61010-2-203:2021.