Industrial networks - Profiles - Part 5-19: Installation of fieldbuses - Installation profiles for CPF 19

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NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61784-5-19:2024 sisaldab Euroopa standardi EN IEC 61784-5-19:2024 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61784-5-19:2024 consists of the English text of the European standard EN IEC 61784-5-19:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
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ICS 25.040.40, 35.100.40

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61784-5-19

May 2024

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Supersedes EN 61784-5-19:2013

English Version

Industrial networks - Profiles - Part 5-19: Installation of fieldbuses - Installation profiles for CPF 19 (IEC 61784-5-19:2024)

Réseaux industriels - Profils - Partie 5-19: Installation des bus de terrain - Profils d'installation pour CPF 19 (IEC 61784-5-19:2024)

Industrielle Kommunikationsnetze - Profile - Teil 5-19: Feldbusinstallation - Installationsprofile für die Kommunikationsprofilfamilie 19 (IEC 61784-5-19:2024)

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Comité Européen de Normalisation Electrotechnique
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 65C/1281/FDIS, future edition 2 of IEC 61784-5-19, 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 61784-5-19:2024.

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) 2025-02-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-05-08

This document supersedes EN 61784-5-19:2013 and all of its amendments and corrigenda (if any).

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.

This document is read in conjunction with EN IEC 61918:2018, EN IEC 61918:2018/A11:2019, EN IEC 61918:2018/AC:2019-03, EN IEC 61918:2018/A1:2022, EN IEC 61918:2018/A12:2023, and EN IEC 61918:2018/A2:2024.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61784-5-19:2024 was approved by CENELEC as a European Standard without any modification.

IEC 61784-5-19

Edition 2.0 2024-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Industrial networks – Profiles – Part 5-19: Installation of fieldbuses – installation profiles for CPF 19

Réseaux industriels – Profils – Partie 5-19: Installation des bus de terrain – Profils d'installation pour CPF 19

IEC 61784-5-19:2024-04(en-fr)

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INTERNATIONAL STANDARD

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Industrial networks – Profiles – Part 5-19: Installation of fieldbuses – Installation profiles for CPF 19

Réseaux industriels – Profils – Partie 5-19: Installation des bus de terrain – Profils d'installation pour CPF 19

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INDUSTRIAL NETWORKS – PROFILES –

Part 5-19: Installation of fieldbuses – Installation profiles for CPF 19

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 61784-5-19 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This document is to be used in conjunction with IEC 61918:2018, IEC 61918:2018/AMD1:2022 and IEC 61918:2018/AMD2:2024.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

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

a) addition of new installation profiles CP19/3 and CP19/4 in Clause 4;
b) In Annex B, Table B.4 has been changed and Figure B.1 and Figure B.2 have been deleted;
c) Annex C is new installation profiles for CP19/3 and related references have been added;
d) Annex D is new installation profiles for CP19/4 and related references have been added.

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

Draft	Report on voting
65C/1281/FDIS	65C/1296/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 International Standard is English.

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/publications.

A list of all parts of IEC 61784-5 series, published under the general title *Industrial networks – Profiles – Installation of fieldbuses*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This document is one of a series produced to facilitate the use of communication networks in industrial control systems.

IEC 61918:2018 and IEC 61918:2018/AMD1:2022 and IEC 61918/AMD2:2024 provide the common requirements for the installation of communication networks in industrial control systems. This installation profile standard provides the installation profiles of the communication profiles (CP) of a specific communication profile family (CPF) by stating which requirements of IEC 61918 fully apply and, where necessary, by supplementing, modifying, or replacing the other requirements (see Figure 1).

For general background on fieldbuses, their profiles, and relationship between the installation profiles specified in this document, see IEC 61158-1.

Each CP installation profile is specified in a separate annex of this document. Each annex is structured exactly as the reference standard IEC 61918 for the benefit of the persons representing the roles in the fieldbus installation process as defined in IEC 61918 (planner, installer, verification personnel, validation personnel, maintenance personnel, administration personnel). By reading the installation profile in conjunction with IEC 61918, these persons immediately know which requirements are common for the installation of all CPs and which are modified or replaced. The conventions used to draft this document are defined in Clause 5.

The provision of the installation profiles in one standard for each CPF (for example IEC 61784-5-19 for CPF 19) allows readers to work with standards of a convenient size.

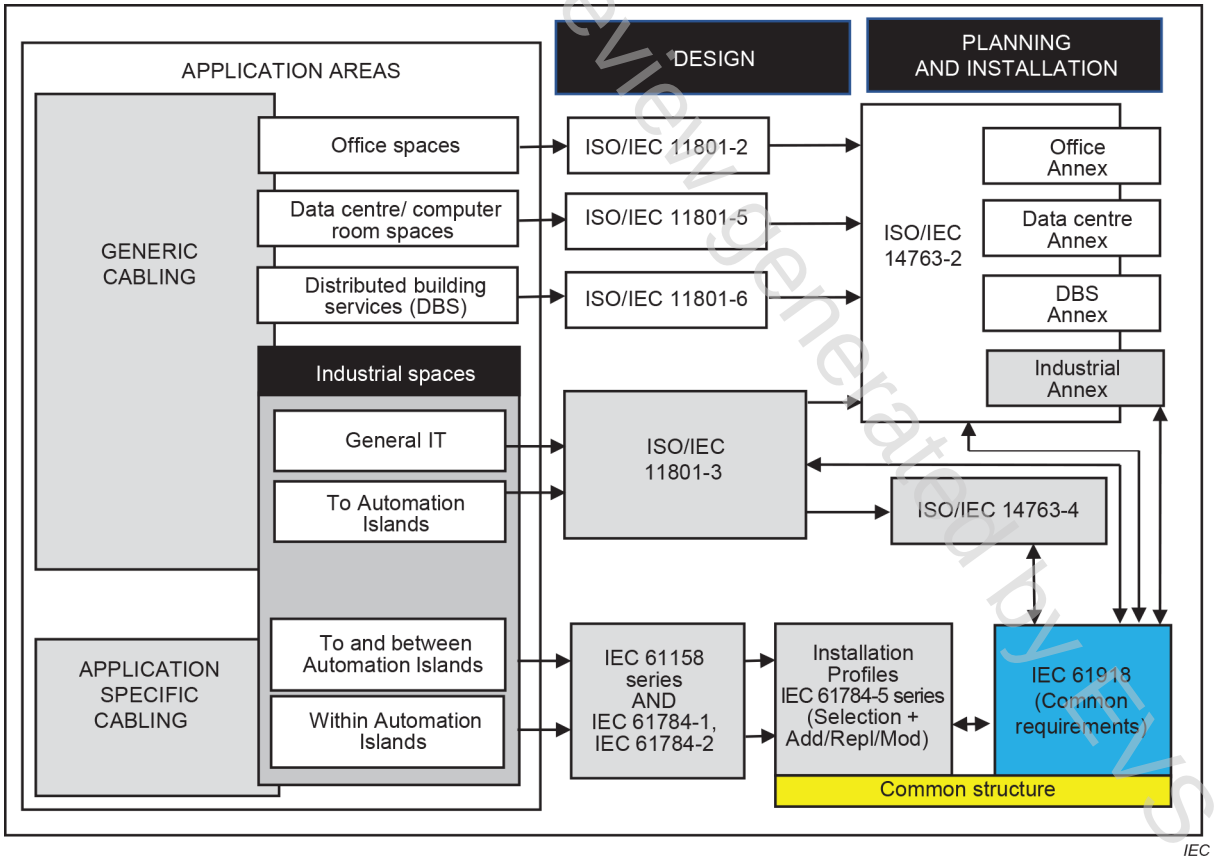

Figure 1 – Standards relationships

INDUSTRIAL NETWORKS – PROFILES –

Part 5-19: Installation of fieldbuses – Installation profiles for CPF 19

1 Scope

This part of IEC 61784-5 specifies the installation profile for CPF 19 (MECHATROLINK™[1]).

The installation profiles are specified in the annexes. These annexes are read in conjunction with IEC 61918:2018, IEC 61918:2018/AMD1:2022 and IEC 61918:2018/AMD2:2024.

2 Normative references

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.

IEC 61918:2018[2], *Industrial communication networks – Installation of communication networks in industrial premises*
IEC 61918:2018/AMD1:2022
IEC 61918:2018/AMD2:2024

NOTE For profile specific normative references, see Clauses A.2, B.2, C.2, D.2.

3 Terms, definitions and abbreviated terms

For the purposes of this document, the terms, definitions and abbreviated terms given in IEC 61918:2018, Clause 3, IEC 61918:2018/AMD1:2022, Clause 3 and Clauses A.3, B.3, C.3, and D.3,apply.

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

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

4 CPF19: Overview of installation profiles

CPF 19 consists of four communication profiles as specified in IEC 61784-1 and IEC 61784-2.

The installation requirements for CP 19/1 (MECHATROLINK™-II) are specified in Annex A.

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1 MECHATROLINK™ and Σ-LINK™ II are trade names of YASKAWA ELECTRIC CORPORATION. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the trade names holder or any of its products. Compliance to this profile does not require use of the trade names. Use of the trade name requires permission of the trade name holder.

2 The normative references of IEC 61918:2018, Clause 2, IEC 61918:2018/AMD1:2022, Clause 2 and IEC 61918:2018/AMD2:2024, Clause 2, apply.