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

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### ~~INDUSTRIAL COMMUNICATION NETWORKS –~~ PROFILES –

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

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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](https://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](https://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](https://www.iec.ch/webstore) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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## INTRODUCTION

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

IEC 61918:~~2013~~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.

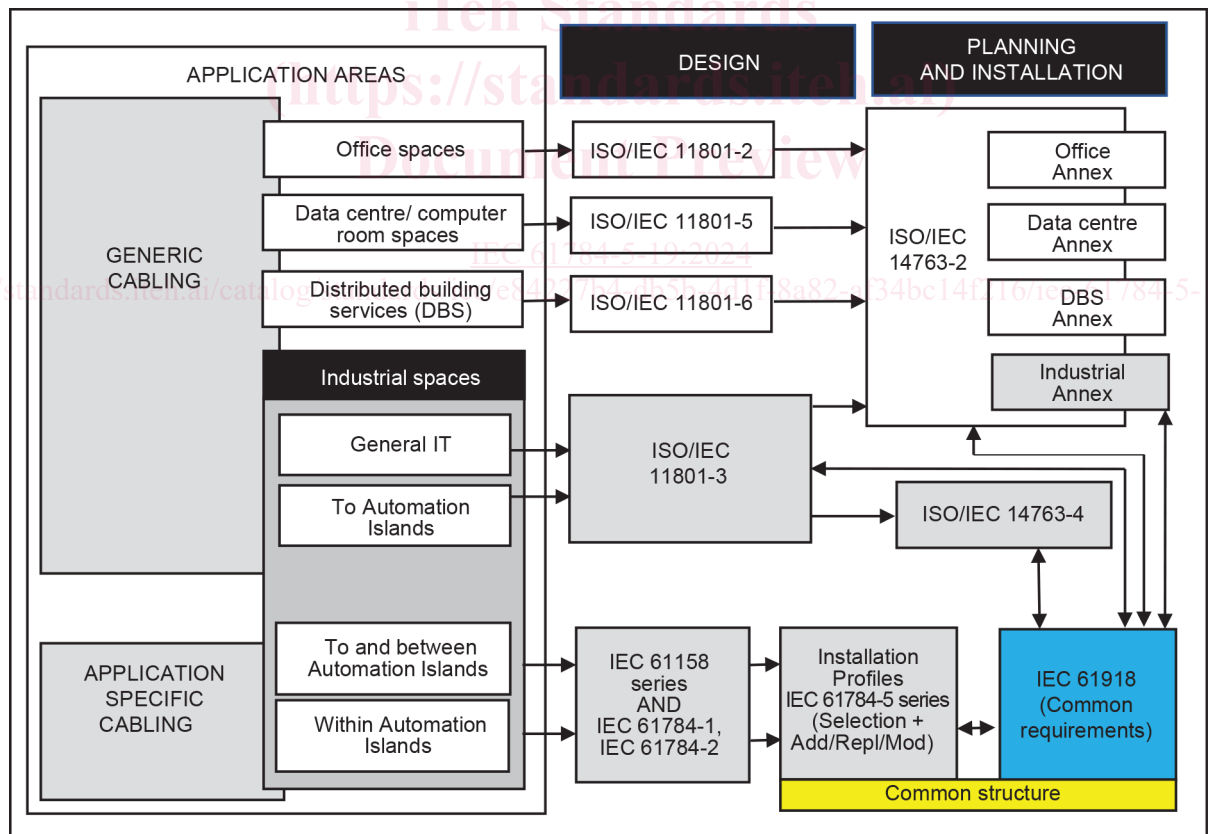
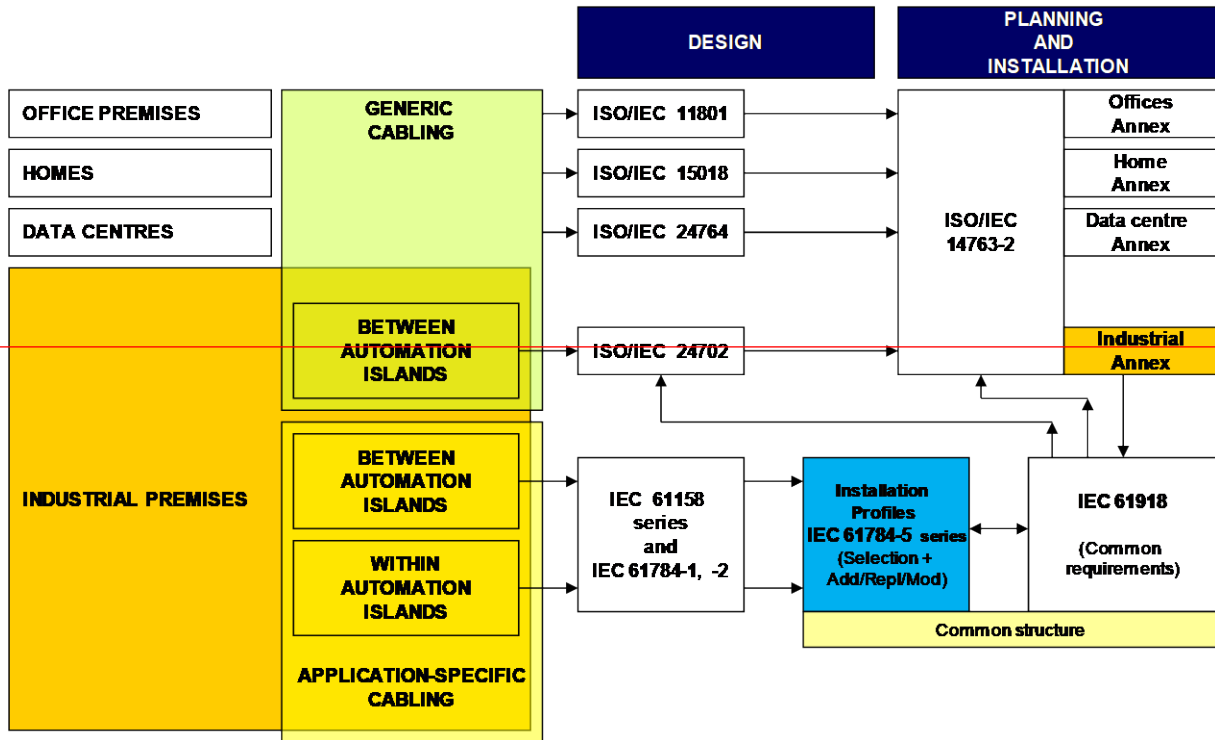
Each CP installation profile is specified in a separate annex of this document. Each annex is structured exactly as the reference standard IEC 61918 for the benefit of the persons representing the roles in the fieldbus installation process as defined in IEC 61918 (planner, installer, verification personnel, 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.

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IEC

Figure 1 – Standards relationships

# INDUSTRIAL ~~COMMUNICATION~~ 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™<sup>1</sup>).

The installation profiles are specified in the annexes. These annexes are read in conjunction with IEC 61918:~~2013~~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:~~2013~~2018<sup>2</sup>, *Industrial communication networks – Installation of communication networks in industrial premises*  
IEC 61918:2018/AMD1:2022  
IEC 61918:2018/AMD2:2024

~~The normative references of IEC 61918:2013, Clause 2, apply. For profile specific normative references, see Clause A.2.~~

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 61918:2013, Clause 3, apply. For profile specific terms, definitions and abbreviated terms see Clauses A.3 and B.3.~~

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>

<sup>1</sup> 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 ~~MECHATROLINK~~ requires permission of the trade name holder.

<sup>2</sup> 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.

## 4 CPF19: Overview of installation profiles

CPF 19 consists of ~~two~~ 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.

The installation requirements for CP 19/2 (MECHATROLINK™-III) are specified in Annex B.

The installation requirements for CP 19/3 ( $\Sigma$ -LINK™ II) are specified in Annex C.

The installation requirements for CP 19/4 (MECHATROLINK™-4) are specified in Annex D.

## 5 Installation profile conventions

The numbering of the clauses and subclauses in the annexes of this document corresponds to the numbering of IEC 61918 main clauses and subclauses.

The annex clauses and subclauses of this document supplement, modify, or replace the respective clauses and subclauses in IEC 61918.

Where there is no corresponding subclause of IEC 61918 in the normative annexes in this document, the subclause of IEC 61918 applies without modification.

The annex heading letter represents the installation profile assigned in Clause 4. The annex heading number shall represent the corresponding numbering of IEC 61918.

EXAMPLE "Subclause B.4.4" in IEC 61784-5-19 means that CP 19/2 specifies 4.4 of IEC 61918:2018 and IEC 61918:2018/AMD1:2022.

All main clauses of IEC 61918 are cited and apply in full unless otherwise stated in each normative installation profile annex.

If all subclauses of a (sub)clause are omitted, then the corresponding IEC 61918 (sub)clause applies.

If in a (sub)clause it is written "Not applicable.", then the corresponding IEC 61918 (sub)clause does not apply.

If in a (sub)clause it is written "*Addition:*", then the corresponding IEC 61918 (sub)clause applies with the additions written in the profile.

If in a (sub)clause it is written "*Replacement:*", then the text provided in the profile replaces the text of the corresponding IEC 61918 (sub)clause.

NOTE A replacement can also comprise additions.

If in a (sub)clause it is written "*Modification:*", then the corresponding IEC 61918 (sub)clause applies with the modifications written in the profile.

If all (sub)clauses of a (sub)clause are omitted but in this (sub)clause it is written "*(Sub)clause x has addition:*" (or "*Replacement:*") or "(Sub)clause x is not applicable.", then (sub)clause x becomes valid as declared and all the other corresponding IEC 61918 (sub)clauses apply.