



IEC 62769-103-1

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REDLINE VERSION

# INTERNATIONAL STANDARD



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**Field device integration (FDI) –  
Part 103-1: Profiles – PROFIBUS**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## FIELD DEVICE INTEGRATION (FDI) –

### Part 103-1: Profiles – PROFIBUS

#### 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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**This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.**

International Standard IEC 62769-103-1 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 2015. This edition constitutes a technical revision.

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

- a) support for generic protocol extension for faster adoption of other technologies;
- b) support for Package Developers to build EDDs targeted for today's EDD bases system under a single development tool.

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

CDV	Report on voting
65E/622/CDV	65E/685A/RVC 65E/685/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62769 series, published under the general title *Field Device Integration (FDI)*, 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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## INTRODUCTION

~~The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning~~

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- ~~b) method and device for accessing a functional module of automation system, see Patent Family EP2182418;~~
- ~~c) methods and apparatus to reduce memory requirements for process control system software applications, see Patent Family US2013232186;~~
- ~~d) extensible device object model, see Patent Family US12/893,680.~~

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## FIELD DEVICE INTEGRATION (FDI) –

### Part 103-1: Profiles – PROFIBUS

#### 1 Scope

This part of IEC 62769 specifies an FDI profile of IEC 62769 for IEC 61784-1\_CP 3/1 (PROFIBUS DP)<sup>1</sup> and IEC 61784-1\_CP3/2 (PROFIBUS PA)<sup>1</sup>.

#### 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 61784-1, Industrial communication networks – Profiles – Part 1: Fieldbus profiles~~

IEC 61804 (all parts), *Function blocks (FB) for process control and Electronic Device Description Language (EDDL)*

IEC 62541-100:2015, *OPC Unified Architecture - Part 100: Device Interface*

IEC 62769-2<sup>2</sup>, *Field Device Integration (FDI) - Part 2: FDI Client*

~~NOTE 1 – IEC 62769-2 is technical identical to FDI-2022.~~

IEC 62769-4<sup>3</sup>, *Field Device Integration (FDI) – Part 4: FDI Packages*

~~NOTE 2 – IEC 62769-4 is technically identical to FDI-2024.~~

IEC 62769-5<sup>4</sup>, *Field Device Integration (FDI) – Part 5: FDI Information Model*

~~NOTE 3 – IEC 62769-5 is technically identical to FDI-2025.~~

IEC 62769-7<sup>5</sup>, *Field Device Integration (FDI) – Part 7: FDI Communication Devices*

~~NOTE 4 – IEC 62769-7 is technically identical to FDI-2027.~~

PI Order No.: 2.122:2008, *Specification for PROFIBUS – Device Description and Device Integration – Volume 1: GSD, V5.1, July 2008: GSD*; available at <[www.profibus.com](http://www.profibus.com)> [viewed 2018-11-23]

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<sup>1</sup> PROFIBUS is the trade name of the non-profit consortium PROFIBUS & PROFINET International. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the trademark holder or any of its products. Compliance does not require use of the trade name. Use of the trade name requires permission of the trade name holder.

<sup>2</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-2:2020.

<sup>3</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-4:2020.

<sup>4</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-5:2020.

<sup>5</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-7:2020.

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Field device integration (FDI) –  
Part 103-1: Profiles – PROFIBUS**

**Intégration des appareils de terrain (FDI) –  
Partie 103-1: Profils – PROFIBUS**



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## FIELD DEVICE INTEGRATION (FDI) –

### Part 103-1: Profiles – PROFIBUS

#### FOREWORD

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### Part 103-1: Profiles – PROFIBUS

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IEC 62541-100:2015, *OPC Unified Architecture - Part 100: Device Interface*

IEC 62769-22, *Field Device Integration (FDI) - Part 2: FDI Client*

IEC 62769-4<sup>3</sup>, *Field Device Integration (FDI) – Part 4: FDI Packages*

IEC 62769-54, *Field Device Integration (FDI) – Part 5: FDI Information Model*

IEC 62769-75, *Field Device Integration (FDI) – Part 7: FDI Communication Devices*

PI Order No.: 2.122:2008, *Specification for PROFIBUS – Device Description and Device Integration – Volume 1: GSD, V5.1, July 2008: GSD*; available at <[www.profibus.com](http://www.profibus.com)> [viewed 2018-11-23]

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<sup>4</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-5:2020.

<sup>5</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-7:2020.

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# COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

## INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

### Partie 103-1: Profils – PROFIBUS

#### AVANT-PROPOS

- 1) La Commission Electrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. A cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
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La Norme internationale IEC 62769-103-1 a été établie par le sous-comité 65E: Les dispositifs et leur intégration dans les systèmes de l'entreprise, du comité d'études 65 de l'IEC: Mesure, commande et automation dans les processus industriels.

Cette deuxième édition annule et remplace la première édition parue en 2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) prise en charge d'extensions de protocoles génériques, pour une adoption plus rapide d'autres technologies;
- b) capacité offerte aux Développeurs de Paquetages d'élaborer des EDD ciblant les systèmes actuels de bases EDD, en exploitant un seul outil de développement.



Le texte de cette Norme internationale est issu des documents suivants:

CDV	Rapport de vote
65E/622/CDV	65E/685A/RVC 65E/685/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de la présente Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62769, publiées sous le titre général *Intégration des appareils de terrain (FDI)*, peut être consultée sur le site web de l'IEC.

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## INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

### Partie 103-1: Profils – PROFIBUS

#### 1 Domaine d'application

La présente partie de l'IEC 62769 spécifie un profil FDI de l'IEC 62769 pour l'IEC 61784-1\_CP 3/1 (PROFIBUS DP)<sup>1</sup> et l'IEC 61784-1\_CP 3/2 (PROFIBUS PA)<sup>1</sup>.

#### 2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 61804 (toutes les parties), *Blocs fonctionnels (FB) pour les procédés industriels et le langage de description électronique de produit (EDDL)*

IEC 62541-100:2015, *Architecture unifiée OPC - Partie 100: Interface d'appareils*

IEC 62769-2<sup>2</sup>, *Intégration des appareils de terrain (FDI) – Partie 2: Client FDI*

IEC 62769-4<sup>3</sup>, *Intégration des appareils de terrain (FDI) – Partie 4: Paquetages FDI*

IEC 62769-5<sup>4</sup>, *Intégration des appareils de terrain (FDI) – Partie 5: Modèle d'Information FDI*

IEC 62769-7<sup>5</sup>, *Intégration des appareils de terrain (FDI) – Partie 7: Appareils de communication FDI*

Spécification PI N° 2.122:2008, *Specification for PROFIBUS – Device Description and Device Integration – Volume 1: GSD Specification, V5.1, juillet 2008, GSD*; disponible à l'adresse <[www.profibus.com](http://www.profibus.com)> (disponible en anglais seulement) [consultée 2018-11-23]

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<sup>2</sup> En cours de préparation. Stade au moment de la publication: IEC/RFDIS 62769-2:2020.

<sup>3</sup> En cours de préparation. Stade au moment de la publication: IEC/RFDIS 62769-4:2020.

<sup>4</sup> En cours de préparation. Stade au moment de la publication: IEC/RFDIS 62769-5:2020.

<sup>5</sup> En cours de préparation. Stade au moment de la publication: IEC/RFDIS 62769-7:2020.