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INTERNATIONAL STANDARD



**Field device integration (FDI) –
Part 101-1: Profiles – Foundation Fieldbus H1**

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	4
1 Scope.....	7
2 Normative references	7
3 Terms, definitions, abbreviated terms and conventions.....	8
3.1 Terms and definitions.....	8
3.2 Abbreviated terms.....	8
3.3 Conventions.....	8
3.3.1 EDDL syntax.....	8
3.3.2 XML syntax.....	8
3.3.3 Capitalizations.....	8
4 Profile for CP 1/1 (FOUNDATION™ H1).....	9
4.1 General.....	9
4.2 Catalog profile	9
4.2.1 Protocol support file.....	9
4.2.2 CommunicationProfile definition.....	9
4.2.3 Profile device.....	10
4.2.4 Protocol version information	10
4.3 Associating a Package with a CP 1/1 device.....	10
4.3.1 Device type identification mapping.....	10
4.3.2 Device type revision mapping	10
4.4 Information Model mapping.....	10
4.4.1 ProtocolType definition	10
4.4.2 DeviceType mapping	11
4.4.3 FunctionalGroup Identification definition	11
4.4.4 BlockType property mapping	12
4.4.5 Mapping to Block ParameterSet.....	12
4.5 Topology elements.....	12
4.5.1 ConnectionPoint definition	12
4.5.2 Communication Device definition	14
4.5.3 Communication service provider definition.....	16
4.5.4 Network definition	16
4.6 Methods.....	17
4.6.1 Methods for FDI Communication Servers.....	17
4.6.2 Methods for Gateways	24
Annex A (normative) Topology scan schema.....	25
A.1 General.....	25
A.2 FoundationH1AddressT	25
A.3 FoundationH1ConnectionPointT.....	25
A.4 FoundationH1NetworkT	26
A.5 Network	26
A.6 FoundationBlockIdentificationT	27
A.7 FoundationIdentificationT.....	27
Annex B (normative) Transfer service parameters.....	29
B.1 General.....	29
B.2 receiveData	29

B.3	sendData	29
B.4	OperationT.....	30
B.5	ResponseCodeT	30
B.6	TransferResultDataT.....	30
B.7	TransferSendDataT.....	31
Annex C (informative) Communication service arguments for Transfer Method		32
Bibliography.....		33
Table 1	– Capability File part	9
Table 2	– CommunicationProfile definition	10
Table 3	– Device type catalog mapping.....	10
Table 4	– ProtocolType Foundation_H1 definition	11
Table 5	– Inherited DeviceType Property mapping	11
Table 6	– Identification Parameters.....	11
Table 7	– Inherited BlockType property mapping.....	12
Table 8	– ConnectionPointType ConnectionPoint_Foundation_H1 definition	13
Table 9	– Communication device ParameterSet definition	15
Table 10	– Method Connect arguments.....	18
Table 11	– Method Disconnect arguments	19
Table 12	– Method Transfer arguments.....	19
Table 13	– Method GetPublishedData arguments.....	21
Table 14	– Method SetAddress arguments.....	23
Table A.1	– Attributes of FoundationH1ConnectionPointT	26
Table A.2	– Elements of FoundationH1ConnectionPointT	26
Table A.3	– Elements of FoundationH1NetworkT	26
Table A.4	– Attributes of FoundationBlockIdentificationT.....	27
Table A.5	– Attributes of FoundationIdentificationT	28
Table B.1	– Elements of receiveData	29
Table B.2	– Enumerations of OperationT	30
Table B.3	– Attributes of ResponseCodeT	30
Table B.4	– Attributes of TransferResultDataT	31
Table B.5	– Attributes of TransferSendDataT.....	31

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE INTEGRATION (FDI) –

Part 101-1: Profiles – Foundation Fieldbus H1

FOREWORD

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International Standard IEC 62769-101-1 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/620/CDV	65E/683/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.

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- amended.

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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~~

- ~~a) Method for the Supplying and Installation of Device-Specific Functionalities, see Patent Family DE10357276;~~
- ~~b) Method and device for accessing a functional module of automation system, see Patent Family EP2182418;~~
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FIELD DEVICE INTEGRATION (FDI) –

Part 101-1: Profiles – Foundation Fieldbus H1

1 Scope

This part of IEC 62769 specifies ~~an FDI profile of~~ the IEC 62769 profile for IEC 61784-1_CP 1/1 (FOUNDATION™ Fieldbus H1)¹.

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 61158-5-9:2014, *Industrial communication networks – Fieldbus specifications – Part 5-9: Application layer service definition – Type 9 elements*

IEC 61784-1, *Industrial communication networks – Profiles – Part 1: Fieldbus Profiles*

IEC 61784-2, *Industrial communication networks – Profiles – Part 2: Additional fieldbus profiles for real-time networks based on ISO/IEC/IEEE 8802-3*

IEC 61784-3:~~2010~~2016, *Industrial communication networks – Profiles – Part 3: Functional safety fieldbuses – General rules and profile definitions*

IEC 61804 (all parts), *Function blocks (FB) for process control and electronic device description language (EDDL)*

IEC 62541-6, *OPC unified architecture – Part 6: Mappings*

IEC 62541-100:2015, *OPC Unified Architecture – Part 100: ~~OPC UA for Devices~~ Device Interface*

~~NOTE – IEC 62769-1 is technically identical to FDI-2021.~~

IEC 62769-1, *Field device integration (FDI) – Part 1: Overview*

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

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

IEC 62769-4:~~2015~~, *Field Device Integration (FDI) – Part 4: FDI Packages*

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

IEC 62769-5:~~2015~~, *Field Device Integration (FDI) – Part 5: FDI Information Model*

¹ FOUNDATION™ Fieldbus is the trade name of the non-profit consortium Fieldbus Foundation. 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.

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IEC 62769-6, *Field Device Integration (FDI) – Part 6: FDI Technology Mapping*

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IEC 62769-7:~~42015~~, *Field Device Integration (FDI) – Part 7: FDI Communication Devices*

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

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Field device integration (FDI) –
Part 101-1: Profiles – Foundation Fieldbus H1**

**Intégration des appareils de terrain (FDI) –
Partie 101-1: Profils – Foundation Fieldbus H1**



CONTENTS

FOREWORD	4
1 Scope	6
2 Normative references	6
3 Terms, definitions, abbreviated terms and conventions	7
3.1 Terms and definitions	7
3.2 Abbreviated terms	7
3.3 Conventions	7
3.3.1 EDDL syntax	7
3.3.2 XML syntax	7
3.3.3 Capitalizations	7
4 Profile for CP 1/1 (FOUNDATION™ H1)	8
4.1 General	8
4.2 Catalog profile	8
4.2.1 Protocol support file	8
4.2.2 CommunicationProfile definition	8
4.2.3 Profile device	8
4.2.4 Protocol version information	8
4.3 Associating a Package with a CP 1/1 device	9
4.3.1 Device type identification mapping	9
4.3.2 Device type revision mapping	9
4.4 Information Model mapping	9
4.4.1 ProtocolType definition	9
4.4.2 DeviceType mapping	9
4.4.3 FunctionalGroup Identification definition	10
4.4.4 BlockType property mapping	10
4.4.5 Mapping to Block ParameterSet	11
4.5 Topology elements	11
4.5.1 ConnectionPoint definition	11
4.5.2 Communication Device definition	13
4.5.3 Communication service provider definition	14
4.5.4 Network definition	15
4.6 Methods	16
4.6.1 Methods for FDI Communication Servers	16
4.6.2 Methods for Gateways	21
Annex A (normative) Topology scan schema	22
A.1 General	22
A.2 FoundationH1AddressT	22
A.3 FoundationH1ConnectionPointT	22
A.4 FoundationH1NetworkT	23
A.5 Network	23
A.6 FoundationBlockIdentificationT	24
A.7 FoundationIdentificationT	24
Annex B (normative) Transfer service parameters	26
B.1 General	26
B.2 receiveData	26
B.3 sendData	26

B.4	OperationT.....	27
B.5	ResponseCodeT.....	27
B.6	TransferResultDataT.....	27
B.7	TransferSendDataT.....	28
Annex C (informative) Communication service arguments for Transfer Method		29
Bibliography.....		30
Table 1 – Capability File part		8
Table 2 – CommunicationProfile definition		8
Table 3 – Device type catalog mapping.....		9
Table 4 – ProtocolType Foundation_H1 definition		9
Table 5 – Inherited DeviceType Property mapping		10
Table 6 – Identification Parameters.....		10
Table 7 – Inherited BlockType property mapping.....		11
Table 8 – ConnectionPointType ConnectionPoint_Foundation_H1 definition		11
Table 9 – Communication device ParameterSet definition.....		14
Table 10 – Method Connect arguments.....		16
Table 11 – Method Disconnect arguments		17
Table 12 – Method Transfer arguments.....		18
Table 13 – Method GetPublishedData arguments.....		19
Table 14 – Method SetAddress arguments.....		21
Table A.1 – Attributes of FoundationH1ConnectionPointT.....		23
Table A.2 – Elements of FoundationH1ConnectionPointT		23
Table A.3 – Elements of FoundationH1NetworkT		23
Table A.4 – Attributes of FoundationBlockIdentificationT.....		24
Table A.5 – Attributes of FoundationIdentificationT		25
Table B.1 – Elements of receiveData		26
Table B.2 – Enumerations of OperationT		27
Table B.3 – Attributes of ResponseCodeT		27
Table B.4 – Attributes of TransferResultDataT.....		28
Table B.5 – Attributes of TransferSendDataT.....		28

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE INTEGRATION (FDI) –

Part 101-1: Profiles – Foundation Fieldbus H1

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FIELD DEVICE INTEGRATION (FDI) –

Part 101-1: Profiles – Foundation Fieldbus H1

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IEC 62769-6, *Field Device Integration (FDI) – Part 6: FDI Technology Mapping*

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SOMMAIRE

AVANT-PROPOS	34
1 Domaine d'application	36
2 Références normatives	36
3 Termes, définitions, termes abrégés et conventions	37
3.1 Termes et définitions	37
3.2 Termes abrégés	37
3.3 Conventions	37
3.3.1 Syntaxe EDDL	37
3.3.2 Syntaxe XML	37
3.3.3 Majuscules	37
4 Profil pour CP 1/1 (FOUNDATION™ H1)	38
4.1 Généralités	38
4.2 Profil de catalogue	38
4.2.1 Fichier de prise en charge de protocole	38
4.2.2 Définition de CommunicationProfile	38
4.2.3 Appareil de profil	38
4.2.4 Informations relatives à la version de protocole	39
4.3 Association d'un Paquetage avec un appareil CP 1/1	39
4.3.1 Mapping d'identification du type d'appareil	39
4.3.2 Mapping des révisions de type d'appareil	39
4.4 Mapping du Modèle d'Information	39
4.4.1 Définition de ProtocolType	39
4.4.2 Mapping de DeviceType	40
4.4.3 Définition du FunctionalGroup «Identification»	40
4.4.4 Mapping des propriétés de BlockType	40
4.4.5 Mapping sur le ParameterSet du Bloc	41
4.5 Eléments de topologie	41
4.5.1 Définition de ConnectionPoint	41
4.5.2 Définition de l'Appareil de Communication	43
4.5.3 Définition du fournisseur de service de communication	45
4.5.4 Définition du Réseau	45
4.6 Méthodes	46
4.6.1 Méthodes pour les Serveurs de Communication FDI	46
4.6.2 Méthodes pour les Passerelles	52
Annexe A (normative) Schéma de balayage de la topologie	53
A.1 Généralités	53
A.2 FoundationH1AddressT	53
A.3 FoundationH1ConnectionPointT	53
A.4 FoundationH1NetworkT	54
A.5 Network	54
A.6 FoundationBlockIdentificationT	55
A.7 FoundationIdentificationT	55
Annexe B (normative) Paramètres du service Transfer	57
B.1 Généralités	57
B.2 receiveData	57
B.3 sendData	57

B.4	OperationT.....	58
B.5	ResponseCodeT.....	58
B.6	TransferResultDataT.....	58
B.7	TransferSendDataT.....	59
Annexe C (informative) Arguments du service de communication pour la Méthode Transfer.....		60
Bibliographie.....		61
Tableau 1 – Partie fichier de capacité		38
Tableau 2 – Définition de CommunicationProfile		38
Tableau 3 – Mapping dans le catalogue des types d'appareils		39
Tableau 4 – Définition de ProtocolType Foundation_H1		39
Tableau 5 – Mapping des propriétés héritées du DeviceType.....		40
Tableau 6 – Paramètres du FunctionalGroup Identification		40
Tableau 7 – Mapping des propriétés héritées du BlockType.....		41
Tableau 8 – Définition du ConnectionPointType ConnectionPoint_Foundation_H1		42
Tableau 9 – Définition du ParameterSet de l'Appareil de Communication.....		44
Tableau 10 – Arguments de la Méthode Connect		47
Tableau 11 – Arguments de la Méthode Disconnect.....		48
Tableau 12 – Arguments de la Méthode Transfer		48
Tableau 13 – Arguments de la Méthode GetPublishedData.....		50
Tableau 14 – Arguments de la Méthode SetAddress		52
Tableau A.1 – Attributs de FoundationH1ConnectionPointT		54
Tableau A.2 – Eléments de FoundationH1ConnectionPointT.....		54
Tableau A.3 – Eléments de FoundationH1NetworkT.....		54
Tableau A.4 – Attributs de FoundationBlockIdentificationT.....		55
Tableau A.5 – Attributs de FoundationIdentificationT		56
Tableau B.1 – Eléments de receiveData		57
Tableau B.2 – Enumérations d'OperationT.....		58
Tableau B.3 – Attributs de ResponseCodeT.....		58
Tableau B.4 – Attributs de TransferResultDataT		59
Tableau B.5 – Attributs de TransferSendDataT		59

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

Partie 101-1: Profils – Foundation Fieldbus H1

AVANT-PROPOS

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La Norme internationale IEC 62769-101-1 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/620/CDV	65E/683/RVC

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

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données relatives au document recherché. A cette date, le document sera

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- amendé.

INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

Partie 101-1: Profils – Foundation Fieldbus H1

1 Domaine d'application

La présente partie de l'IEC 62769 spécifie le profil de l'IEC 62769 pour le profil de communication CP 1/1 (FOUNDATION™ Fieldbus H1)¹ défini dans l'IEC 61784-1.

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 61158-5-9:2014, *Réseaux de communication industriels – Spécifications des bus de terrain – Partie 5-9: Définition des services de la couche application – Eléments de type 9*

IEC 61784-1, *Réseaux de communication industriels – Profils – Partie 1: Profils de bus de terrain*

IEC 61784-2, *Réseaux de communication industriels – Profils – Partie 2: Profils de bus de terrain supplémentaires pour les réseaux en temps réel fondés sur l'ISO/IEC/IEEE 8802-3*

IEC 61784-3:2016, *Réseaux de communication industriels – Profils – Partie 3: Bus de terrain de sécurité fonctionnelle – Règles générales et définitions de profils*

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

IEC 62541-6, *Architecture unifiée OPC – Partie 6: Correspondances*

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

IEC 62769-1, *Intégration des appareils de terrain (FDI) – Partie 1: Vue d'ensemble*

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

IEC 62769-4, *Intégration des appareils de terrain (FDI) – Partie 4: Paquetages FDI*

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

IEC 62769-6, *Intégration des appareils de terrain (FDI) – Partie 6: Mapping de technologies FDI*

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