



IEC 62769-100

Edition 2.0 2023-04
REDLINE VERSION

INTERNATIONAL STANDARD



**Field device integration (FDI®) –
Part 100: Profiles – Generic Protocols**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 25.040.40; 35.100.05

ISBN 978-2-8322-6845-2

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD	5
1 Scope	7
2 Normative references	7
3 Terms, definitions, abbreviated terms and conventions acronyms	8
3.1 Terms and definitions	8
3.2 Abbreviated terms and acronyms	8
4 Conventions	8
4.1 EDDL syntax	8
4.2 XML syntax	8
4.3 Capitalizations	8
5 Profile for Generic Protocols	9
5.1 General	9
5.2 Catalog profile	9
5.2.1 Protocol support file	9
5.2.2 CommunicationProfile definition	10
5.2.3 Profile device	10
5.2.4 Protocol version information	10
5.3 Associating a Package with a device	10
5.3.1 Device type identification mapping	10
5.3.2 Device type revision mapping	12
5.4 Information Model mapping	12
5.4.1 ProtocolType definition	12
5.4.2 DeviceType mapping	12
5.4.3 FunctionalGroup identification definition	13
5.5 Topology elements	13
5.5.1 ConnectionPoint definition	13
5.5.2 Communication Device definition	14
5.5.3 Communication service provider definition	15
5.5.4 Network definition	16
5.6 Methods	16
5.6.1 Methods for FDI® Communication Servers	16
5.6.2 Methods for Gateways	20
4.6.3 Transfer service parameters	20
Annex A (normative) Topology scan result schema	29
A.1 General	29
A.2 Network	29
A.3 GenericNetworkT	29
A.4 GenericConnectionPointT	30
A.5 GenericIdentificationT	30
A.6 GenericAddressT	31
A.7 GenericIdentificationExtendedT	31
Annex B (normative) Transfer service parameters	32
B.1 General	32
B.2 sendData	32
B.3 receiveData	32
B.4 TransferSendDataT	32

B.5	EddDataTypeInfoListT	33
B.6	EddDataTypeInfoT	33
B.7	EddDataTypeT	34
B.8	TransferResultDataT	35
Annex C	(normative) Protocol specific definitions	36
C.1	General	36
C.2	Header	36
C.3	ProtocolIdentifier	36
C.4	Address	36
C.5	Manufacturer	37
C.6	DeviceModel	37
C.7	DeviceRevision	37
C.8	SerialNumber	37
C.9	Tag	37
C.10	ProfileId	38
C.11	Version	38
C.12	ProtocolSupportFile	38
C.13	ExtendedDeviceRevision	38
Bibliography		39
Table 1	– ProtocolSupportFile for FDI® Device Packages	10
Table 2	– Catalog values for profile devices	10
Table 3	– Device identification information mapping	11
Table 4	– Device revision information mapping	12
Table 5	– Protocol type GenericProtocol	12
Table 6	– Inherited DeviceType property mapping	12
Table 7	– Generic Protocol Device Types identification attributes	13
Table 8	– ConnectionPoint type for Generic Protocols	13
Table 9	– Method Connect arguments	17
Table 10	– Method Disconnect arguments	17
Table 11	– Method Transfer arguments	18
Table 12	– EddDataTypeInfo DataType Structure	19
Table 13	– EddDataTypeEnum Values	19
Table 14	– Method SetAddress arguments	20
Table 15	– Connect service arguments	22
Table 16	– Method Transfer arguments	24
Table 17	– Method SetAddress arguments	27
Table A.1	– Elements of GenericNetworkT	29
Table A.2	– Attributes of GenericConnectionPointT	30
Table A.3	– Elements of GenericConnectionPointT	30
Table A.4	– Attributes of GenericIdentificationT	31
Table A.5	– Attributes of GenericIdentificationExtendedT	31
Table B.1	– Attributes of TransferSendDataT	33
Table B.2	– Elements of TransferSendDataT	33
Table B.3	– Elements of EddDataTypeInfoListT	33

Table B.4 – Attributes of EddDataTypeInfoT	34
Table B.5 – Enumerations of EddDataTypeT.....	35
Table B.6 – Attributes of TransferResultDataT	35

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE INTEGRATION (FDI®) –

Part 100: Profiles – Generic Protocols

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62769-100:2020. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62769-100 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This second edition cancels and replaces the first edition published in 2020. This edition constitutes a technical revision.

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

- a) added ExtendedDeviceRevision implementing the FDI® Version scheme and the method ScanExtended.

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

Draft	Report on voting
65E/865/CDV	65E/922/RVC

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/standardsdev/publications.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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.

FIELD DEVICE INTEGRATION (FDI®) –

Part 100: Profiles – Generic Protocols

1 Scope

This part of IEC 62769 specifies an FDI®¹ profile of IEC 62769 for Generic Protocols. That means that all interfaces are defined and a host can add support for more protocols without changing its implementation. Nevertheless, there are some protocol specific definitions (PSD) that need to be specified per protocol using this profile. Annex C specifies what PSD need to be defined per protocol so that FDI® Device Packages, FDI® Communication Packages for Gateways and FDI® Communication Servers, FDI® Communication Server, Gateways and Devices supporting such a protocol can work together in a host not aware about this specific protocol.

NOTE A host not using FDI® Communication Server but a proprietary mechanism for communication ~~defines~~ needs to define its own means to deal with this profile to support several protocols without changing its implementation. This is specific to the proprietary way how the communication driver is bound to the host.

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 61804 (all parts), *Devices and integration in enterprise systems – Function blocks (FB) for process control and Electronic Device Description Language (EDDL)*

IEC 61804-3, *Devices and integration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL) – Part 3: EDDL syntax and semantics*

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

IEC 62769-1, *Field Device Integration (FDI®) – Part 1: Overview*

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

IEC 62769-3, *Field Device Integration (FDI®) – Part 3: Server*

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

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

¹ FDI® is a registered trademark of the non-profit organization Fieldbus Foundation, Inc. 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.

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

IEC 62769-151-1, *Field Device Integration (FDI®) – Part 151-1: Profiles – OPC UA*

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Field device integration (FDI®) –
Part 100: Profiles – Generic Protocols**

**Intégration des appareils de terrain (FDI®) –
Partie 100: Profils – Protocoles Génériques**

CONTENTS

FOREWORD	5
1 Scope	7
2 Normative references	7
3 Terms, definitions, abbreviated terms and acronyms	8
3.1 Terms and definitions	8
3.2 Abbreviated terms and acronyms	8
4 Conventions	8
4.1 EDDL syntax	8
4.2 XML syntax	8
4.3 Capitalizations	8
5 Profile for Generic Protocols	9
5.1 General	9
5.2 Catalog profile	9
5.2.1 Protocol support file	9
5.2.2 CommunicationProfile definition	9
5.2.3 Profile device	10
5.2.4 Protocol version information	10
5.3 Associating a Package with a device	10
5.3.1 Device type identification mapping	10
5.3.2 Device type revision mapping	11
5.4 Information Model mapping	12
5.4.1 ProtocolType definition	12
5.4.2 DeviceType mapping	12
5.4.3 FunctionalGroup identification definition	12
5.5 Topology elements	13
5.5.1 ConnectionPoint definition	13
5.5.2 Communication Device definition	14
5.5.3 Communication service provider definition	15
5.5.4 Network definition	16
5.6 Methods	16
5.6.1 Methods for FDI® Communication Servers	16
5.6.2 Methods for Gateways	20
Annex A (normative) Topology scan result schema	29
A.1 General	29
A.2 Network	29
A.3 GenericNetworkT	29
A.4 GenericConnectionPointT	30
A.5 GenericIdentificationT	30
A.6 GenericAddressT	31
A.7 GenericIdentificationExtendedT	31
Annex B (normative) Transfer service parameters	32
B.1 General	32
B.2 sendData	32
B.3 receiveData	32
B.4 TransferSendDataT	32
B.5 EddDataTypeInfoListT	33

B.6	EddDataTypeInfoT	33
B.7	EddDataTypeT	34
B.8	TransferResultDataT	35
Annex C (normative) Protocol specific definitions		36
C.1	General	36
C.2	Header	36
C.3	ProtocolIdentifier	36
C.4	Address	36
C.5	Manufacturer	37
C.6	DeviceModel	37
C.7	DeviceRevision	37
C.8	SerialNumber	37
C.9	Tag	37
C.10	ProfileId	38
C.11	Version	38
C.12	ProtocolSupportFile	38
C.13	ExtendedDeviceRevision	38
Bibliography		39
Table 1 – ProtocolSupportFile for FDI® Device Packages		9
Table 2 – Catalog values for profile devices		10
Table 3 – Device identification information mapping		11
Table 4 – Device revision information mapping		11
Table 5 – Protocol type GenericProtocol		12
Table 6 – Inherited DeviceType property mapping		12
Table 7 – Generic Protocol Device Types identification attributes		13
Table 8 – ConnectionPoint type for Generic Protocols		13
Table 9 – Method Connect arguments		17
Table 10 – Method Disconnect arguments		17
Table 11 – Method Transfer arguments		18
Table 12 – EddDataTypeInfo DataType Structure		19
Table 13 – EddDataTypeEnum Values		19
Table 14 – Method SetAddress arguments		20
Table 15 – Connect service arguments		22
Table 16 – Method Transfer arguments		24
Table 17 – Method SetAddress arguments		27
Table A.1 – Elements of GenericNetworkT		29
Table A.2 – Attributes of GenericConnectionPointT		30
Table A.3 – Elements of GenericConnectionPointT		30
Table A.4 – Attributes of GenericIdentificationT		31
Table A.5 – Attributes of GenericIdentificationExtendedT		31
Table B.1 – Attributes of TransferSendDataT		33
Table B.2 – Elements of TransferSendDataT		33
Table B.3 – Elements of EddDataTypeInfoListT		33
Table B.4 – Attributes of EddDataTypeInfoT		34

Table B.5 – Enumerations of EddDataTypeT.....	35
Table B.6 – Attributes of TransferResultDataT	35

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE INTEGRATION (FDI®) –

Part 100: Profiles – Generic Protocols

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 62769-100 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This second edition cancels and replaces the first edition published in 2020. This edition constitutes a technical revision.

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

- a) added ExtendedDeviceRevision implementing the FDI® Version scheme and the method ScanExtended.

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

Draft	Report on voting
65E/865/CDV	65E/922/RVC

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/standardsdev/publications.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

FIELD DEVICE INTEGRATION (FDI®) –

Part 100: Profiles – Generic Protocols

1 Scope

This part of IEC 62769 specifies an FDI^{®1} profile of IEC 62769 for Generic Protocols. That means that all interfaces are defined and a host can add support for more protocols without changing its implementation. Nevertheless, there are some protocol specific definitions (PSD) that need to be specified per protocol using this profile. Annex C specifies what PSD need to be defined per protocol so that FDI[®] Device Packages, FDI[®] Communication Packages for Gateways and FDI[®] Communication Servers, FDI[®] Communication Server, Gateways and Devices supporting such a protocol can work together in a host not aware about this specific protocol.

NOTE A host not using FDI[®] Communication Server but a proprietary mechanism for communication needs to define its own means to deal with this profile to support several protocols without changing its implementation. This is specific to the proprietary way how the communication driver is bound to the host.

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 61804 (all parts), *Devices and integration in enterprise systems – Function blocks (FB) for process control and Electronic Device Description Language (EDDL)*

IEC 61804-3, *Devices and integration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL) – Part 3: EDDL syntax and semantics*

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

IEC 62769-1, *Field Device Integration (FDI®) – Part 1: Overview*

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

IEC 62769-3, *Field Device Integration (FDI®) – Part 3: Server*

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

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

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

¹ FDI[®] is a registered trademark of the non-profit organization Fieldbus Foundation, Inc. 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.

IEC 62769-151-1, *Field Device Integration (FDI®) – Part 151-1: Profiles – OPC UA*

SOMMAIRE

AVANT-PROPOS	43
1 Domaine d'application	45
2 Références normatives	45
3 Termes, définitions, abréviations et acronymes	46
3.1 Termes et définitions	46
3.2 Abréviations et acronymes	46
4 Conventions	46
4.1 Syntaxe EDDL	46
4.2 Syntaxe XML	46
4.3 Utilisation de majuscules	46
5 Profil de Protocoles Génériques	47
5.1 Généralités	47
5.2 Profil du catalogue	47
5.2.1 Fichier de prise en charge du protocole	47
5.2.2 Définition du CommunicationProfile	48
5.2.3 Appareil de profil	48
5.2.4 Informations relatives à la version du protocole	48
5.3 Association d'un Paquetage à un appareil	48
5.3.1 Mapping d'identification de type d'appareil	48
5.3.2 Mapping de révision de type d'appareil	50
5.4 Mapping du Modèle d'Information	50
5.4.1 Définition de ProtocolType	50
5.4.2 Mapping de DeviceType	50
5.4.3 Définition du FunctionalGroup "Identification"	51
5.5 Eléments de topologie	51
5.5.1 Définition de ConnectionPoint	51
5.5.2 Définition d'Appareil de Communication	52
5.5.3 Définition du fournisseur de service de communication	53
5.5.4 Définition du Réseau	54
5.6 Méthodes	54
5.6.1 Méthodes pour les Serveurs de Communication FDI®	54
5.6.2 Méthodes pour les Passerelles	59
Annexe A (normative) Schéma du résultat d'analyse topologique	68
A.1 Généralités	68
A.2 Network	68
A.3 GenericNetworkT	68
A.4 GenericConnectionPointT	69
A.5 GenericIdentificationT	69
A.6 GenericAddressT	70
A.7 GenericIdentificationExtendedT	70
Annexe B (normative) Paramètres du service Transfer	71
B.1 Généralités	71
B.2 sendData	71
B.3 receiveData	71
B.4 TransferSendDataT	71
B.5 EddDataTypeInfoListT	72

B.6	EddDataTypeInfoT	72
B.7	EddDataTypeT	73
B.8	TransferResultDataT	74
Annexe C (normative) Définitions spécifiques au protocole		75
C.1	Généralités	75
C.2	Header	75
C.3	ProtocolIdentifier	75
C.4	Address	75
C.5	Manufacturer	76
C.6	DeviceModel	76
C.7	DeviceRevision	76
C.8	SerialNumber	76
C.9	Tag	77
C.10	ProfileId	77
C.11	Version	77
C.12	ProtocolSupportFile	77
C.13	ExtendedDeviceRevision	77
Bibliographie		78
Tableau 1 – ProtocolSupportFile pour les Paquetages d'Appareils FDI®		47
Tableau 2 – Valeurs de catalogue pour les appareils de profil		48
Tableau 3 – Mapping des informations d'identification de type d'appareil		49
Tableau 4 – Mapping des informations de révision d'appareil		50
Tableau 5 – Type de protocole GenericProtocol		50
Tableau 6 – Mapping des propriétés héritées du DeviceType		51
Tableau 7 – Attributs d'identification des Types d'Appareils de Protocole Générique		51
Tableau 8 – Type de ConnectionPoint pour les Protocoles Génériques		52
Tableau 9 – Arguments de la méthode Connect		55
Tableau 10 – Arguments de la méthode Disconnect		55
Tableau 11 – Arguments de la méthode Transfer		56
Tableau 12 – Structure du DataType EddDataTypeInfo		57
Tableau 13 – Valeurs de EddDataTypeEnum		58
Tableau 14 – Arguments de la méthode SetAddress		59
Tableau 15 – Arguments de la Méthode Connect		60
Tableau 16 – Arguments de la méthode Transfer		63
Tableau 17 – Arguments de la méthode SetAddress		66
Tableau A.1 – Eléments de GenericNetworkT		68
Tableau A.2 – Attributs de GenericConnectionPointT		69
Tableau A.3 – Eléments de GenericConnectionPointT		69
Tableau A.4 – Attributs de GenericIdentificationT		70
Tableau A.5 – Attributs de GenericIdentificationExtendedT		70
Tableau B.1 – Attributs de TransferSendDataT		72
Tableau B.2 – Eléments de TransferSendDataT		72
Tableau B.3 – Eléments de EddDataTypeInfoListT		72
Tableau B.4 – Attributs de EddDataTypeInfoT		73

Tableau B.5 – Enumérations de EddDataTypeT	74
Tableau B.6 – Attributs de TransferResultDataT	74

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

INTÉGRATION DES APPAREILS DE TERRAIN (FDI®) –**Partie 100: Profils – Protocoles Génériques****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.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'attention est attirée sur le fait que certains des éléments de la présente Publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 62769-100 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. Il s'agit d'une Norme internationale.

Cette deuxième édition annule et remplace la première édition parue en 2020. Cette édition constitue une révision technique.

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

- a) ajout d'ExtendedDeviceRevision qui met en œuvre le schéma de version FDI® et la méthode ScanExtended.

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

Projet	Rapport de vote
65E/865/CDV	65E/922/RVC

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

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 62769, publiées sous le titre général *Intégration des appareils de terrain (FDI®)*, se trouve 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 webstore.iec.ch dans les données relatives au document recherché. A cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

INTÉGRATION DES APPAREILS DE TERRAIN (FDI®) –

Partie 100: Profils – Protocoles Génériques

1 Domaine d'application

La présente partie de l'IEC 62769 spécifie un profil FDI®¹ de l'IEC 62769 pour les Protocoles Génériques. Cela signifie que toutes les interfaces sont définies, et qu'un hôte peut ajouter une prise en charge pour davantage de protocoles sans modifier la mise en œuvre. Néanmoins, certaines définitions spécifiques au protocole (PSD) nécessitent d'être spécifiées à l'aide de ce profil. L'Annexe C spécifie les PSD qu'il est nécessaire de définir par protocole, de sorte que les Paquetages d'Appareils FDI®, les Paquetages de Communication FDI® pour les Passerelles et les Serveurs de Communication FDI®, le Serveur de Communication FDI®, les Passerelles et les Appareils qui prennent en charge ce type de protocole puissent fonctionner ensemble dans un hôte, quel que soit ce protocole spécifique.

NOTE Un hôte qui n'utilise pas de Serveur de Communication FDI® mais un mécanisme propriétaire pour sa communication nécessite de définir ses propres moyens de gérer ce profil de manière à prendre en charge différents protocoles sans modifier sa mise en œuvre.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils 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), *Les dispositifs et leur intégration dans les systèmes de l'entreprise – Blocs fonctionnels (FB) pour les procédés industriels et le langage de description électronique de produit (EDDL)*

IEC 61804-3, *Les dispositifs et leur intégration dans les systèmes de l'entreprise – Blocs fonctionnels (FB) pour les procédés industriels et le langage de description électronique de produit (EDDL) – Partie 3: Sémantique et syntaxe EDDL*

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*

IEC 62769-3, *Intégration des appareils de terrain (FDI®) – Partie 3: Serveur*

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 62769-7, *Intégration des appareils de terrain (FDI®) – Partie 7: Appareils de communication*

¹ FDI® est une marque déposée de l'organisation à but non lucratif Fieldbus Foundation, Inc. Cette information est donnée à l'intention des utilisateurs du présent document et ne signifie nullement que l'IEC approuve le détenteur de la marque ou l'emploi de ses produits. La conformité n'exige pas l'utilisation de la marque. L'utilisation de la marque exige l'autorisation du détenteur de la marque.

IEC 62769-151-1, *Intégration des appareils de terrain (FDI®) – Partie 151-1: Profils – OPC UA*