

<b>STN</b>	<b>Integrácia softvérového nástroja (FDI) Časť 150-1: Profily Bezdrôtová sieť ISA100</b>	<b>STN EN IEC 62769-150-1</b>  18 4012
------------	--	--

Field device integration (FDI) - Part 150-1: Profiles - ISA100 WIRELESS

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/21

Obsahuje: EN IEC 62769-150-1:2021, IEC 62769-150-1:2021

**132877**

EUROPEAN STANDARD

**EN IEC 62769-150-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2021

ICS 35.100.05; 25.040.40; 35.240.50

English Version

**Field device integration (FDI) - Part 150-1: Profiles - ISA100  
WIRELESS  
(IEC 62769-150-1:2021)**

Intégration des appareils de terrain (FDI) - Partie 150-1:  
Profils - ISA100 WIRELESS  
(IEC 62769-150-1:2021)

Feldgeräteintegration (FDI) - Teil 150-1: Profile - ISA100  
WIRELESS  
(IEC 62769-150-1:2021)

This European Standard was approved by CENELEC on 2021-03-11. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 62769-150-1:2021 (E)****European foreword**

The text of document 65E/765/FDIS, future edition 1 of IEC 62769-150-1, prepared by SC 65E "Devices and integration in enterprise systems" 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 62769-150-1:2021.

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) 2021-12-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-03-11

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.

**Endorsement notice**

The text of the International Standard IEC 62769-150-1:2021 was approved by CENELEC as a European Standard without any modification.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62734	2014	Industrial networks - Wireless communication network and communication profiles - ISA 100.11a	EN 62734	2015
IEC 61804	series	Function Blocks (FB) for process control and electronic device description language (EDDL)	EN IEC 61804	series
IEC 62541-6	-	OPC Unified Architecture - Part 6: Mappings	EN IEC 62541-6	-
IEC 62541-100	2015	OPC Unified Architecture - Part 100: Device Interface	EN 62541-100	2015
IEC 62769-2	-	Field Device Integration (FDI) - Part 2: FDI Client	EN 62769-2	-
IEC 62769-4	-	Field Device Integration (FDI) - Part 4: FDI Packages	EN 62769-4	-
IEC 62769-5	-	Field Device Integration (FDI) - Part 5: Information Model	EN 62769-5	-
IEC 62769-6	-	Field Device Integration (FDI) - Part 6: Technology Mapping	EN 62769-6	-
IEC 62769-7	-	Field Device Integration (FDI) - Part 7: FDI Communication Devices	EN 62769-7	-



IEC 62769-150-1

Edition 1.0 2021-02

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

---

**Field device integration (FDI) –  
Part 150-1: Profiles – ISA100 WIRELESS**

**Intégration des appareils de terrain (FDI) –  
Partie 150-1: Profils – ISA100 WIRELESS**



**THIS PUBLICATION IS COPYRIGHT PROTECTED****Copyright © 2021 IEC, Geneva, Switzerland**

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

**About the IEC**

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

**About IEC publications**

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

**IEC publications search - [webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

**IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

**IEC Customer Service Centre - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: [sales@iec.ch](mailto:sales@iec.ch).

**IEC online collection - [oc.iec.ch](http://oc.iec.ch)**

Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 18 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

**A propos de l'IEC**

La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

**A propos des publications IEC**

Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

**Recherche de publications IEC - [webstore.iec.ch/advsearchform](http://webstore.iec.ch/advsearchform)**

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études, ...). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

**IEC Just Published - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)**

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

**Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)**

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [sales@iec.ch](mailto:sales@iec.ch).

**IEC online collection - [oc.iec.ch](http://oc.iec.ch)**

Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

**Electropedia - [www.electropedia.org](http://www.electropedia.org)**

Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.



IEC 62769-150-1

Edition 1.0 2021-02

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

---

**Field device integration (FDI) –  
Part 150-1: Profiles – ISA100 WIRELESS**

**Intégration des appareils de terrain (FDI) –  
Partie 150-1: Profils – ISA100 WIRELESS**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

---

ICS 25.040.40; 35.100.05; 35.240.50

ISBN 978-2-8322-9308-9

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms, definitions, abbreviated terms and acronyms .....	6
3.1 Terms and definitions.....	6
3.2 Abbreviated terms and acronyms .....	7
4 Conventions .....	7
4.1 EDDL syntax.....	7
4.2 Capitalizations .....	7
5 Profile for ISA100 WIRELESS.....	8
5.1 General.....	8
5.2 Catalog profile .....	8
5.2.1 Protocol support file.....	8
5.2.2 CommunicationProfile definition.....	8
5.2.3 Profile device.....	8
5.2.4 Protocol version information .....	8
5.3 Associating a Package with a device.....	9
5.3.1 Device type identification mapping.....	9
5.3.2 Device type revision mapping .....	10
5.4 Information Model mapping .....	10
5.4.1 ProtocolType definition .....	10
5.4.2 DeviceType mapping .....	10
5.4.3 FunctionalGroup identification definition .....	11
5.4.4 BlockType property mapping .....	11
5.4.5 Mapping to Object ParameterSet .....	12
5.5 Topology elements.....	12
5.5.1 ConnectionPoint definition .....	12
5.5.2 Communication Device definition .....	14
5.5.3 Communication service provider definition .....	15
5.5.4 Network definition .....	16
5.6 Methods.....	17
5.6.1 Methods for FDI Communication Servers.....	17
5.6.2 Methods for Gateways .....	22
Annex A (normative) Topology scan result schema .....	23
A.1 General.....	23
A.2 Network .....	23
A.3 ISA100_WirelessNetworkT .....	23
A.4 ISA100_WirelessConnectionPointT .....	24
A.5 ISA100_WirelessIdentificationT.....	24
A.6 ISA100_WirelessAddressT.....	25
A.7 ISA_WirelessObjIdentificationT .....	26
Annex B (normative) Transfer service parameters.....	27
B.1 General.....	27
B.2 sendData .....	27
B.3 receiveData .....	27



B.4	TransferSendDataT.....	27
B.5	OperationT.....	28
B.6	TransferResultDataT.....	28
	Bibliography.....	30
Table 1	– Capability file part.....	8
Table 2	– Protocol Version Information.....	9
Table 3	– Device identification information mapping.....	10
Table 4	– Device type catalog mapping.....	10
Table 5	– Protocol type ISA100 WIRELESS.....	10
Table 6	– Inherited DeviceType property mapping.....	11
Table 7	– ISA100 WIRELESS device types identification attributes.....	11
Table 8	– Inherited BlockType property mapping.....	12
Table 9	– ConnectionPointType ConnectionPoint_ISA100_Wireless definition.....	13
Table 10	– Method Connect arguments.....	18
Table 11	– Method Disconnect arguments.....	19
Table 12	– Method Transfer arguments.....	20
Table 13	– Method GetPublishedData arguments.....	21
Table A.1	– Elements of ISA100_WirelessNetworkT.....	23
Table A.2	– Elements of ISA100_WirelessConnectionPointT.....	24
Table A.3	– Attributes of ISA100_WirelessIdentificationT.....	25
Table A.4	– Attributes of ISA100_WirelessObjIdentificationT.....	26
Table B.1	– Attributes of TransferSendDataT.....	28
Table B.2	– Enumerations of OperationT.....	28
Table B.3	– Attributes of TransferResultDataT.....	29

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIELD DEVICE INTEGRATION (FDI) –****Part 150-1: Profiles – ISA100 WIRELESS****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.

International Standard IEC 62769-150-1 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This document is based on FCG\_TS62769-150-1\_Profiles – ISA100\_1.1.0.3, a specification of the FieldComm Group, PROFIBUS Nutzerorganisation e. V., OPC Foundation and FDT Group.

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

FDIS	Report on voting
65E/765/FDIS	65E/775/RVD

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

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

## **FIELD DEVICE INTEGRATION (FDI) – Part 150-1: Profiles – ISA100 WIRELESS**

### **1 Scope**

This part of IEC 62769 specifies an FDI profile for IEC 62734 (ISA100 WIRELESS)<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 62734:2014, *Industrial networks – Wireless communication network and communication profiles – ISA 100.11a*

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: Device Interface*

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

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

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

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

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

---

<sup>1</sup> ISA100 WIRELESS™ is a trade name of the non-profit consortium Wireless Compliance Institute. 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.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN