



# SLOVENSKI STANDARD SIST EN IEC 62769-109-1:2020

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**Vključitev procesne naprave (FDI) - 109-1. del: Profili - HART® in brezžični HART® (IEC 62769-109-1:2020)**

Field Devices Integration (FDI) - Part 109-1: Profiles - HART® and WirelessHART® (IEC 62769-109-1:2020)

Feldgeräteintegration (FDI) - Teil 109-1: Profile - HART(r) und WirelessHART(r) (IEC 62769-109-1:2020)

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Intégration des appareils de terrain (FDI) - Partie 109-1: Profils - HART® et WirelessHART® (IEC 62769-109-1:2020)

**Ta slovenski standard je istoveten z: EN IEC 62769-109-1:2020**

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**ICS:**

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
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EUROPEAN STANDARD

EN IEC 62769-109-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2020

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Supersedes EN 62769-109-1:2015 and all of its  
amendments and corrigenda (if any)

English Version

## Field devices integration (FDI) - Part 109-1: Profiles - HART(r) and WirelessHART(r) (IEC 62769-109-1:2020)

Intégration des appareils de terrain (FDI) - Partie 109-1:  
Profils - HART(r) et WirelessHART(r)  
(IEC 62769-109-1:2020)

Feldgeräteintegration (FDI) - Teil 109-1: Profile - HART(r)  
und WirelessHART(r)  
(IEC 62769-109-1:2020)

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

**EN IEC 62769-109-1:2020 (E)****European foreword**

The text of document 65E/624/CDV, future edition 2 of IEC 62769-109-1, 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 62769-109-1:2020.

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) 2021-03-02
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-06-02

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The text of the International Standard IEC 62769-109-1:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61784-1	NOTE	Harmonized as EN IEC 61784-1
IEC 61784-2	NOTE	Harmonized as EN IEC 61784-2
IEC 61804 (series)	NOTE	Harmonized as EN 61804 (series)
IEC 62769-1	NOTE	Harmonized as EN 62769-1
IEC 62769-2	NOTE	Harmonized as EN 62769-2
IEC 62769-3	NOTE	Harmonized as EN 62769-3
IEC 62769-6	NOTE	Harmonized as EN 62769-6

## 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 62541-100	2015	OPC Unified Architecture - Part 100: Device Interface	EN 62541-100	2015
IEC 62769-4	— <sup>1</sup>	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: FDI Communication Devices	-	-

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<sup>1</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-4:2020.

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IEC 62769-109-1

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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Field device integration (FDI) –  
Part 109-1: Profiles – HART® and WirelessHART®**  
(standards.iteh.ai)

**Intégration des appareils de terrain (FDI) –  
Partie 109-1: Profils – HART® et WirelessHART®**  
SIST EN IEC 62769-109-1:2020  
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## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms, definitions, abbreviated terms and conventions .....	6
3.1 Terms and definitions .....	6
3.2 Abbreviated terms and acronyms .....	6
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 9/1 (HART®) or CP 9/2 (WirelessHART®) .....	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 .....	9
4.2.4 Protocol version information .....	9
4.3 Associating a Package with a CP 9/1 device .....	9
4.3.1 Device type identification mapping .....	9
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 .....	10
4.4.3 FunctionalGroup Identification definition .....	11
4.5 Topology elements .....	11
4.5.1 ConnectionPoint definition .....	11
4.5.2 Communication Device definition .....	17
4.5.3 Communication service provider definition .....	18
4.5.4 Network definition .....	18
4.6 Methods .....	19
4.6.1 Methods for FDI Communication Servers .....	19
4.6.2 Methods for Gateways .....	23
Annex A (normative) Topology scan schema .....	31
A.1 General .....	31
A.2 IdentificationType .....	31
A.3 AddressTypeTP .....	33
A.4 AddressTypeIP .....	33
A.5 AddressTypeTDMA .....	34
A.6 AddressType .....	34
A.7 ConnectionPointType .....	35
A.8 NetworkType .....	36
A.9 Network .....	36
Annex B (normative) Transfer service parameters .....	37
B.1 General .....	37
B.2 receiveData .....	37
B.3 sendData .....	37



B.4	TransferResultDataT.....	37
B.5	TransferSendDataT.....	38
	Bibliography.....	39
Table 1	– Device Information Files.....	8
Table 2	– CommunicationProfile definition.....	8
Table 3	– Catalog values for profile devices.....	9
Table 4	– Protocol Version Information.....	9
Table 5	– Device type catalog mapping.....	9
Table 6	– ProtocolType HART definition.....	10
Table 7	– Inherited DeviceType Property mapping.....	10
Table 8	– Identification parameters.....	11
Table 9	– ConnectionPointType HART_TP definition.....	12
Table 10	– ConnectionPointType HART_IP Definition.....	14
Table 11	– ConnectionPointType HART_TDMA Definition.....	16
Table 12	– Method Connect arguments.....	20
Table 13	– Method Disconnect arguments.....	20
Table 14	– Method Transfer arguments.....	21
Table 15	– Method GetPublishedData arguments.....	22
Table 16	– Method SetAddress arguments.....	23
Table 17	– Method Connect arguments.....	24
Table 18	– Method Disconnect arguments.....	25
Table 19	– Method Transfer arguments.....	26
Table 20	– Method GetPublishedData arguments.....	27
Table 21	– Method SetAddress arguments.....	28
Table A.1	– Attributes of IdentificationT.....	32
Table A.2	– Elements of AddressTypeTP.....	33
Table A.3	– Elements of AddressTypeIP.....	34
Table A.4	– Elements of AddressTypeTDMA.....	34
Table A.5	– Elements of AddressT.....	35
Table A.6	– Elements of ConnectionPointT.....	35
Table A.7	– Elements of NetworkT.....	36
Table B.1	– Attributes of TransferResultDataT.....	37
Table B.2	– Attributes of TransferSendDataT.....	38

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## FIELD DEVICE INTEGRATION (FDI) –

## Part 109-1: Profiles – HART® and WirelessHART®

## 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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International Standard IEC 62769-109-1 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/624/CDV	65E/687A/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

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

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## FIELD DEVICE INTEGRATION (FDI) –

### Part 109-1: Profiles – HART® and WirelessHART®

#### 1 Scope

This part of IEC 62769 specifies an FDI profile of IEC 62769 for IEC 61784-1\_CP 9/1 (HART®)<sup>1</sup> and IEC 61784-1\_CP 9/2 (WirelessHART®)<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 62541-100:2015, *OPC Unified Architecture Specification – Part 100: Device Interface*

IEC 62769-4:–<sup>2</sup>, *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: FDI Communication Devices*

#### 3 Terms, definitions, abbreviated terms and conventions

##### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62541-100, IEC 62769-4, IEC 62769-5 and IEC 62769-7 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

##### 3.2 Abbreviated terms and acronyms

For the purposes of this document, the following abbreviations apply:

CP	Communication profile (see IEC 61784-1 or IEC 61784-2)
CPF	Communication profile family (see IEC 61784-1 or IEC 61784-2)
EDD	Electronic device description (see IEC 61804)
EDDL	Electronic device description language (see IEC 61804)

<sup>1</sup> HART® and wirelessHART® are the registered trademark of FieldComm Group. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.

<sup>2</sup> Under preparation. Stage at the time of publication: IEC/RFDIS 62769-4:2020.

FDI	Field device integration
FSK	Frequency-Shift-Keying
HCF	HART Communication Foundation
ID	Identification
IM	Information Model
IP	Internet protocol
PDU	Protocol data unit
PSK	Phase-Shift-Keying
TCP	Transmission Control Protocol (see IETF RFC 793)
UDP	User Datagram Protocol (see IETF RFC 768)
XML	Extensible markup language

### 3.3 Conventions

#### 3.3.1 EDDL syntax

This document specifies content for the EDD component that is part of FDI Communication Packages. EDDL syntax uses the font Courier New. EDDL syntax is used for method signature, variable, data structure and component declarations.

#### 3.3.2 XML syntax

XML syntax examples use font Courier New. The XML syntax is used to describe XML document schema.

EXAMPLE `<xs:simpleType name="ExampleT">`

#### 3.3.3 Capitalizations

The IEC 62769 series uses capitalized terms to emphasize that these terms have an FDI specific meaning.

Some of these terms using an acronym as a prefix, for example

- FDI Client or
- FDI Server.

Some of these terms are compound terms such as:

- FDI Communication Servers or
- Profile Package.

Parameter names or attributes are concatenated to a single term, where the original terms start in this term with a capital letter such as:

- ProtocolSupportFile or
- ProtocolType.

Parameter names or attributes can also be constructed by using an underscore character to concatenate two or more terms like:

- PROFILE\_ID or
- HART\_Network.