IEC 62769-100

Edition 2.0 2023-04
REDLINE VERSION

INTERNATIONAL STANDARD

colour inside

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



IEC 62769-100:2023-04 RLV(en)



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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 25.040.40; 35.100.05

ISBN 978-2-8322-6845-2

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FIELD DEVICE INTEGRATION (FDI®) –

Part 100: Profiles – Generic Protocols

FOREWORD

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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- withdrawn,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.

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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*

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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*

3 Terms, definitions, abbreviated terms and ~~conventions~~ acronyms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61804 series, IEC 62541-100, IEC 62769-2, IEC 62769-3, IEC 62769-4, IEC 62769-5, and IEC 62769-7 apply.

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

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

3.2 Abbreviated terms and acronyms

EDD Electronic Device Description

EDDL Electronic Device Description Language (see IEC 61804 series)

FDI™® Field Device Integration™[2]

FCG FieldComm Group

PSD Protocol-specific definitions

XML Extensible markup language (see ~~FCG TS62769-100, Edition 1.1, Field Device Integration Part 100: Profiles – Generic Protocols, available at https://fieldcommgroup.org)~~ REC-xml-20081126)

4 Conventions

4.1 EDDL syntax

This part of IEC 62769 specifies content for the EDD component that is part of FDI® Communication Packages. The specification content using EDDL syntax uses the font `Courier New`. The EDDL syntax is used for method signature, variable, data structure and component declarations.

4.2 XML syntax

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

Example: `<xs:simpleType name="ExampleType">`

4.3 Capitalizations

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

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