

Field Device Integration (FDI®) - Part 103-4: PROFINET



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 25.040.40, 35.100.05

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English Version

Field Device Integration (FDI)® - Part 103-4: PROFINET
(IEC 62769-103-4:2023)

Intégration des appareils de terrain (FDI)® - Partie 103-4:
PROFINET
(IEC 62769-103-4:2023)

Feldgeräteintegration (FDI) - Teil 103-4: Profile -
PROFINET
(IEC 62769-103-4:2023)

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European foreword

The text of document 65E/863/CDV, future edition 3 of IEC 62769-103-4, 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 62769-103-4:2023.

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) 2024-02-23
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- IEC 61804-3 NOTE Approved as EN IEC 61804-3
- IEC 61804-4 NOTE Approved as EN IEC 61804-4
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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Field Device Integration (FDI)[®] –
Part 103-4: PROFINET**

**Intégration des appareils de terrain (FDI)[®] –
Partie 103-4: PROFINET**



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Field Device Integration (FDI)[®] –
Part 103-4: PROFINET**

**Intégration des appareils de terrain (FDI)[®] –
Partie 103-4: PROFINET**

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IEC 62769-103-4 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 third edition cancels and replaces the second 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 DeviceType to ProfinetIdentificationT;
- b) added namespace to Annex A and Annex B;
- c) added mapping rule for Device type when running in profile mode;
- d) replaced GSD file with GSDML file, detailing of device type mapping;
- e) added mapping to PA DIM.

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

Draft	Report on voting
65E/863/CDV	65E/920/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.

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FIELD DEVICE INTEGRATION (FDI®) –

Part 103-4: PROFINET

1 Scope

This part of IEC 62769 specifies an FDI®¹ profile of IEC 62769 for IEC 61784-2_CP 3/4, IEC 61784-2_CP3/5 and IEC 61784-2_CP3/6 (PROFINET²).

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 61158-5-10, *Industrial communication networks – Fieldbus specifications – Part 5-10: Application layer service definition – Type 10 elements*

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

IEC 61804 (all parts), *Devices and integration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL)*

IEC 62541-100:2015, *OPC unified architecture – Part 100: Device Interface*

IEC 62769-2, *Field device integration (FDI®) – Part 2: Client*

IEC 62769-4, *Field device integration (FDI®) – Part 4: FDI® Packages*

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

IEC 62769-6, *Field device integration (FDI®) – Part 6: Technology Mapping*

IEC 62769-7, *Field device integration (FDI®) – Part 7: Communication devices*

PI Order No.: 2.122:2008, *Specification for PROFIBUS – Device Description and Device Integration – Volume 1: GSD, V5.1, July 2008: GSD*; available at <www.PROFIBUS.com>

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PI Order No.: 2.352:2014, *GSDML Specification for PROFINET IO*; available at www.PROFIBUS.com

3 Terms, definitions, abbreviated terms and acronyms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61158-5-10, IEC 61784-2, IEC 61804 (all parts), IEC 62541-100, IEC 62769-2, IEC 62769-4, IEC 62769-5, IEC 62769-6, IEC 62769-7 and PI Order No.: 2.352:2014 apply.

ISO and IEC maintain terminology 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 abbreviated terms and acronyms apply:

DCP	Discovery and basic configuration protocol (see IEC 61158-5-10)
DNS	Domain name system
EDD	Electronic Device Description
EDDL	Electronic Device Description Language (see IEC 61804 (all parts))
GSD	General station description (see PI Order No.: 2.122:2008)
GSDML	GSD markup language (see PI Order No.: 2.352:2014)
IP	Internet protocol (IETF RFC 791)
UIP	User Interface plug-in
UUID	Universal unique identifier (see ISO/IEC 11578)
XML	Extensible markup language (see REC-xml-20081126)

4 Conventions

4.1 EDDL syntax

This document 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 the 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.