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**Feldgeräteintegration (FDI) –
Teil 103-1: Profile –
PROFIBUS
(IEC 62769-103-1:2015);
Englische Fassung EN 62769-103-1:2015**

Field Device Integration (FDI) –
Part 103-1: Profiles –
PROFIBUS
(IEC 62769-103-1:2015);
English version EN 62769-103-1:2015

Intégration des appareils de terrain (FDI) –
Partie 103-1: Profils –
PROFIBUS
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Version anglaise EN 62769-103-1:2015

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Anwendungsbeginn

Anwendungsbeginn für die von CENELEC am 2015-06-16 angenommene Europäische Norm als DIN-Norm ist 2016-03-01.

Nationales Vorwort

Vorausgegangener Norm-Entwurf: E DIN EN 62769-103-1:2014-05.

Für dieses Dokument ist das nationale Arbeitsgremium K 956 „Feldbus“ der DKE Deutsche Kommission Elektrotechnik Elektronik Informationstechnik in DIN und VDE (www.dke.de) zuständig.

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Das Präsidium des DIN hat mit Präsidialbeschluss 1/2004 festgelegt, dass DIN-Normen, deren Inhalt sich auf internationale Arbeitsergebnisse der Informationsverarbeitung gründet, unter bestimmten Bedingungen allein in englischer Sprache veröffentlicht werden dürfen. Diese Bedingungen sind für die vorliegende Norm erfüllt.

Da sich die Benutzer der vorliegenden Norm der englischen Sprache als Fachsprache bedienen, wird die Englische Fassung der EN 62769-103-1 veröffentlicht. Zu deren Abschnitt 1, der den Anwendungsbereich festlegt, und Abschnitt 3, der die Begriffe festlegt, wurde eine Übersetzung angefertigt und als informativer Nationaler Anhang NA der vorliegenden Norm hinzugefügt. Für die meisten der verwendeten Begriffe existieren keine gebräuchlichen deutschen Benennungen, da sich die deutschen Anwender in der Regel ebenfalls der englischen Benennungen bedienen. Diese Norm steht nicht in unmittelbarem Zusammenhang mit Rechtsvorschriften und ist nicht als Sicherheitsnorm anzusehen.

Das Original-Dokument enthält Bilder in Farbe, die in der Papierversion in einer Graustufen-Darstellung wiedergegeben werden. Elektronische Versionen dieses Dokuments enthalten die Bilder in der originalen Farbdarstellung.

Nationaler Anhang NA (informativ)

1 Anwendungsbereich^{N1)}

Dieser Teil von IEC 62769 legt ein FDI-Profil nach IEC 62769 für IEC 61784-1_CP 3/1 (PROFIBUS DP)¹⁾ und IEC 61784-1_CP3/2 (PROFIBUS PA) fest.

3 Begriffe, Abkürzungen und Konventionen

3.1 Begriffe

Für die Anwendung dieses Dokuments gelten die Begriffe nach IEC 61784-1, IEC 61804, IEC 62541-100, IEC 62769-4, IEC 62769-5, IEC 62769-7 und PI-Auftrag-Nr.: 2.122:2008.

^{N1)} Nationale Fußnote: Die Nummerierung der IEC 62769-103-1:2015 wurde beibehalten.

¹⁾ PROFIBUS ist der Handelsname der gemeinnützigen Nutzerorganisation PROFIBUS & PROFINET International. Diese Angabe dient nur der Unterrichtung der Anwender dieser Norm gegeben und bedeutet keine Anerkennung des Inhabers der Warenzeichens oder eines seiner Produkte durch die IEC. Die Übereinstimmung mit dieser Norm erfordert nicht die Verwendung des Handelsnamens. Die Verwendung dieses Handelsnamens erfordert die Erlaubnis seines Inhabers.

– Leerseite –

English Version

Field Device Integration (FDI) - Part 103-1: Profiles - PROFIBUS
(IEC 62769-103-1:2015)

Intégration des appareils de terrain (FDI) - Partie 103-1:
Profils - PROFIBUS
(IEC 62769-103-1:2015)

Feldgeräteintegration (FDI) - Teil 103-1: Profile -
PROFIBUS
(IEC 62769-103-1:2015)

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European foreword

The text of document 65E/354/CDV, future edition 1 of IEC 62769-103-1, 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 62769-103-1:2015.

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) 2016-03-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-06-16

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62769-103-1:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 61804-3	NOTE	Harmonized as EN 61804-3 ¹⁾ (not modified).
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1) To be published.

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INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning

- a) method for the supplying and installation of device-specific functionalities, see Patent Family DE10357276;
- b) method and device for accessing a functional module of automation system, see Patent Family EP2182418;
- c) methods and apparatus to reduce memory requirements for process control system software applications, see Patent Family US2013232186;
- d) extensible device object model, see Patent Family US12/893,680.

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FIELD DEVICE INTEGRATION (FDI) –

Part 103-1: Profiles – PROFIBUS

1 Scope

This part of IEC 62769 specifies an FDI profile of IEC 62769 for IEC 61784-1_CP 3/1 (PROFIBUS DP)¹ and IEC 61784-1_CP3/2 (PROFIBUS PA).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61784-1, *Industrial communication networks – Profiles – Part 1: Fieldbus profiles*

IEC 61804 (all parts), *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: FDI Client*

NOTE 1 IEC 62769-2 is technical identical to FDI-2022.

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

NOTE 2 IEC 62769-4 is technically identical to FDI-2024.

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

NOTE 3 IEC 62769-5 is technically identical to FDI-2025.

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

NOTE 4 IEC 62769-7 is technically identical to FDI-2027.

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>

¹ PROFIBUS is the trade name of the non-profit consortium PROFIBUS & PROFINET International. This information is given for the convenience of users of this technical report 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.

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 61784-1, IEC 61804, IEC 62541-100, IEC 62769-4, IEC 62769-5, IEC 62769-7 and PI Order No.: 2.122:2008 apply.

3.2 Abbreviated terms and acronyms

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

EDD	Electronic Device Description
EDDL	Electronic Device Description Language (see IEC 61804)
GSD	General station description (see PI Order No.: 2.122:2008)
I&M	Identification and maintenance function
UIP	User Interface Plug-in
UUID	Universally unique identifier (see ISO/IEC 11578)
XML	Extensible markup language (see 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 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 use capitalized terms to emphasize that these terms have an FDI specific meaning.

Some of these terms use an acronym as a prefix for example

- FDI Client, or
- FDI Server.

Some of these terms are compound terms such as:

- 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 such as:

- PROFILE_ID or
- Profibus_PA_Network

5 Profile for PROFIBUS

5.1 General

This profile document to the FDI specification in IEC 62769 specifies the protocol specifics needed for FDI Packages describing Communication Servers, Gateways and Devices.

For Communication Servers this document defines also protocol specifics as these need to be considered in the Communication Servers hosted Information Model.

5.2 Catalog profile

5.2.1 Protocol support file

5.2.1.1 FDI Device Package

Protocol specific attachments are mentioned in the Package Catalog as defined in IEC 62769-5. A communication feature list (GSD) file according to PI Order No.: 2.122:2008 is a mandatory attachment for FDI Device Packages representing PROFIBUS DP and PROFIBUS PA devices. Table 1 specifies the parameters of the ProtocolSupportFile in the FDI Device Package.

Table 1 – ProtocolSupportFile for FDI Device Packages

Parameter	Description
Content Type	text/plain
Root Namespace	empty
Source Relationship	http://fdi-cooperation.com/2010/relationship/attachment-protocol
Filename	According to PI Order No.: 2.122:2008

5.2.1.2 FDI Communication Packages

A GSD file as specified in PI Order No.: 2.122:2008 is an optional attachment for FDI Communication Packages representing PROFIBUS DP and PROFIBUS PA devices. Table 2 specifies the parameters of ProtocolSupportFile for FDI Communication Packages.

Table 2 – ProtocolSupportFile for FDI Communication Packages

Parameter	Description
Content Type:	text/plain
Root Namespace:	empty
Source Relationship:	http://fdi-cooperation.com/2010/relationship/attachment-protocol
Filename:	According to PI Order No.: 2.122:2008

5.2.2 CommunicationProfile definition

IEC 62769-4 defines a CommunicationProfileT enumeration type for the Catalog XML schema. Table 3 defines the PROFIBUS specific values for this enumeration.