



BSI Standards Publication

Field device tool (FDT) interface specification

Part 52-32: Communication implementation for common language infrastructure - IEC 61784 CP 3/4, CP 3/5 and CP 3/6

National foreword

This Published Document is the UK implementation of CLC IEC/TR 62453-52-32:2019. It is identical to IEC TR 62453-52-32:2017.

The UK participation in its preparation was entrusted to Technical Committee GEL/65/3, Industrial communications: process measurement and control, including fieldbus.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Field device tool (FDT) interface specification - Part 52-32:
Communication implementation for common language
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(IEC/TR 62453-52-32:2017)

Spécification des interfaces des outils des dispositifs de terrain (FDT) - Partie 52-32: Mise en œuvre d'un profil de communication pour l'infrastructure commune de langage - CP 3/4, CP 3/5 et CP 3/6 de l' IEC 61784 (IEC/TR 62453-52-32:2017)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (CLC IEC/TR 62453-52-32:2019) consists of the text of IEC/TR 62453-52-32:2017 prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation.

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The text of the International Standard IEC/TR 62453-52-32:2017 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61131-3	2013	Programmable controllers - Part 3: Programming languages	EN 61131-3	2013
IEC 61158-6-10	-	Industrial communication networks - Fieldbus specifications - Part 6-10: Application layer protocol specification - Type 10 elements	EN 61158-6-10	-
IEC 61158	series	Industrial communication networks - Fieldbus specifications - Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series	EN 61158	series
IEC 61784-1	2014	Industrial communication networks - Profiles - Part 1: Fieldbus profiles	EN 61784-1	2014
IEC 62453-1	2016	Field device tool (FDT) interface specification - Part 1: Overview and guidance	EN 62453-1	2017
IEC 62453-2	2016	Field device tool (FDT) interface specification - Part 2: Concepts and detailed description	EN 62453-2	2017
IEC TR 62453-42	2016	Field device tool (FDT) interface - specification - Part 42: Object model integration profile - Common language infrastructure	-	-
IEC 62453-303-2	2009	Field device tool (FDT) interface specification - Part 303-2: Communication profile integration - IEC 61784 CP 3/4, CP 3/5 and CP 3/6	EN 62453-303-2	2009

CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms, definitions, symbols, abbreviated terms and conventions	9
3.1 Terms and definitions.....	9
3.2 Abbreviations	9
3.3 Conventions.....	9
3.3.1 Datatype names and references to datatypes	9
3.3.2 Vocabulary for requirements	9
3.3.3 Use of UML	9
4 Bus Category.....	9
5 Access to instance and device data	9
5.1 General.....	9
5.2 IO signals provided by DTM.....	10
5.3 Data interfaces	10
5.3.1 General	10
5.3.2 Mapping PROFINET datatypes to FDT datatypes	10
5.3.3 SemanticInfo	11
6 Protocol specific behavior.....	12
6.1 PROFINET device model	12
6.2 Configuration and parameterization of PROFINET devices	13
6.3 PROFINET – related information of a Device DTM	13
6.4 Remarks on FDT 1.2 / 2 Compatibility.....	14
7 Protocol specific usage of general FDT datatypes	14
8 Protocol specific common datatype: PnDeviceAddress	14
9 Network management.....	15
9.1 General.....	15
9.2 Configuration	16
9.3 Process Data Items.....	28
9.4 Parameterization.....	28
10 Communication datatypes.....	28
10.1 General.....	28
10.2 ConnectRequest and ConnectResponse Services	28
10.2.1 PnConnectRequest Service	28
10.2.2 PnConnectResponse Service.....	29
10.3 DisconnectRequest and DisconnectResponse Services	30
10.3.1 PnDisconnectRequest Service	30
10.3.2 PnDisconnectResponse Service	31
10.4 TransactionRequest and TransactionResponse Services	32
10.4.1 PnReadRequest Service.....	32
10.4.2 PnReadResponse Service	33
10.4.3 PnWriteRequest Service.....	35
10.4.4 PnWriteResponse Service	36
10.4.5 PnCancelRequest Service	37
10.4.6 PnCancelResponse Service.....	38

10.5	SubscribeRequest and SubscribeResponse Service	39
10.5.1	PnSubscribeRequest	39
10.5.2	PnSubscribeResponse.....	40
10.6	UnsubscribeRequest and UnsubscribeResponse Service.....	41
10.6.1	PnUnsubscribeRequest Service.....	41
10.6.2	PnUnsubscribeResponse Service	41
10.7	AbortMessage Service	42
10.8	PnResponseError	42
10.8.1	Communication error	42
10.8.2	Handling of errors during Connect and Disconnect	43
11	Datatypes for process data information.....	43
11.1	General.....	43
11.2	PnIOSignalInfo.....	43
11.3	Mapping of PROFINET datatypes to FDT datatypes.....	45
12	Device identification	45
12.1	General.....	45
12.2	PnDeviceScanInfo datatype	45
12.3	PnDeviceIdentInfo datatype	49
	Bibliography.....	51
	Figure 1 – Part 52-32 of the IEC 62453 series	7
	Figure 2 – PROFINET Device Model.....	13
	Figure 3 – PROFINET Device Address.....	15
	Figure 4 – PROFINET Network Data	16
	Figure 5 – PnConnectRequest	29
	Figure 6 – PnConnectResponse.....	30
	Figure 7 – PnDisconnectRequest.....	31
	Figure 8 – PnDisconnectResponse	32
	Figure 9 – PnReadRequest.....	33
	Figure 10 – PnReadResponse	34
	Figure 11 – PnWriteRequest.....	36
	Figure 12 – PnWriteResponse	37
	Figure 13 – PnCancelRequest	38
	Figure 14 – PnCancelResponse.....	39
	Figure 15 – PnSubscribeRequest.....	40
	Figure 16 – PnSubscribeResponse	40
	Figure 17 – PnUnsubscribeRequest.....	41
	Figure 18 – PnUnsubscribeResponse	41
	Figure 19 – PnAbortMessage.....	42
	Figure 20 – PnResponseError.....	43
	Figure 21 – ProtocolIOSignalInfo	44
	Figure 22 – PnDeviceScanInfo datatype	46
	Figure 23 – PnDeviceIdentInfo.....	49
	Table 1 – Mapping of datatypes	11

Table 2 – Usage of SemanticInfo	12
Table 3 – Usage of general datatypes	14
Table 4 – PnDeviceAddress	15
Table 5 – PROFINET Network Data	17
Table 6 – PnConnectRequest datatype	29
Table 7 – PnConnectResponse datatype	30
Table 8 – PnDisconnectRequest datatype	31
Table 9 – PnDisconnectResponse datatype	32
Table 10 – PnReadRequest datatype	33
Table 11 – PnReadResponse datatype	35
Table 12 – PnWriteRequest datatype	36
Table 13 – PnWriteResponse datatype	37
Table 14 – PnCancelRequest datatype	38
Table 15 – PnCancelResponse datatype	39
Table 16 – PnSubscribeRequest datatype	40
Table 17 – PnSubscribeResponse datatype	40
Table 18 – PnUnsubscribeRequest datatype	41
Table 19 – PnUnsubscribeResponse datatype	42
Table 20 – PnAbortMessage datatype	42
Table 21 – PnResponseError datatype	43
Table 22 – PnDatatypeInfo	44
Table 23 – ProtocolIIOSignalInfo datatypes	45
Table 24 – PnDeviceScanInfo datatype	46
Table 25 – PnDeviceScanInfo specific mapping	47
Table 26 – PnDeviceIdentInfo datatypes	49
Table 27 – PnDeviceIdentInfo specific mapping	50

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –**Part 52-32: Communication implementation
for common language infrastructure –
IEC 61784 CP 3/4, CP 3/5 and CP 3/6**

FOREWORD

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IEC TR 62453-52-32, which is a technical report, has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

Each part of the IEC 62453-52-xy series is intended to be read in conjunction with its corresponding part in the IEC 62453-3xy series. This document corresponds to IEC 62453-303-2.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
65E/440/DTR	65E/514/RVC

Full information on the voting for the approval of this technical report 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.

The list of all parts of the IEC 62453 series, under the general title *Field device tool (FDT) interface specification*, 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.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This part of IEC 62453 is an interface specification for developers of Field Device Tool (FDT) components for function control and data access within a client/server architecture. The specification is a result of an analysis and design process to develop standard interfaces to facilitate the development of servers and clients by multiple vendors that need to interoperate seamlessly.

With the integration of fieldbuses into control systems, there are a few other tasks which need to be performed. In addition to fieldbus- and device-specific tools, there is a need to integrate these tools into higher-level system-wide planning or engineering tools. In particular, for use in extensive and heterogeneous control systems, typically in the area of the process industry, the unambiguous definition of engineering interfaces that are easy to use for all those involved is of great importance.

A device-specific software component, called Device Type Manager (DTM), is supplied by the field device manufacturer with its device. The DTM is integrated into engineering tools via the FDT interfaces defined in this specification. The approach to integration is in general open for all kind of fieldbuses and thus meets the requirements for integrating different kinds of devices into heterogeneous control systems.

Figure 1 shows how this part of the IEC 62453-52-xy series is aligned in the structure of the IEC 62453 series.

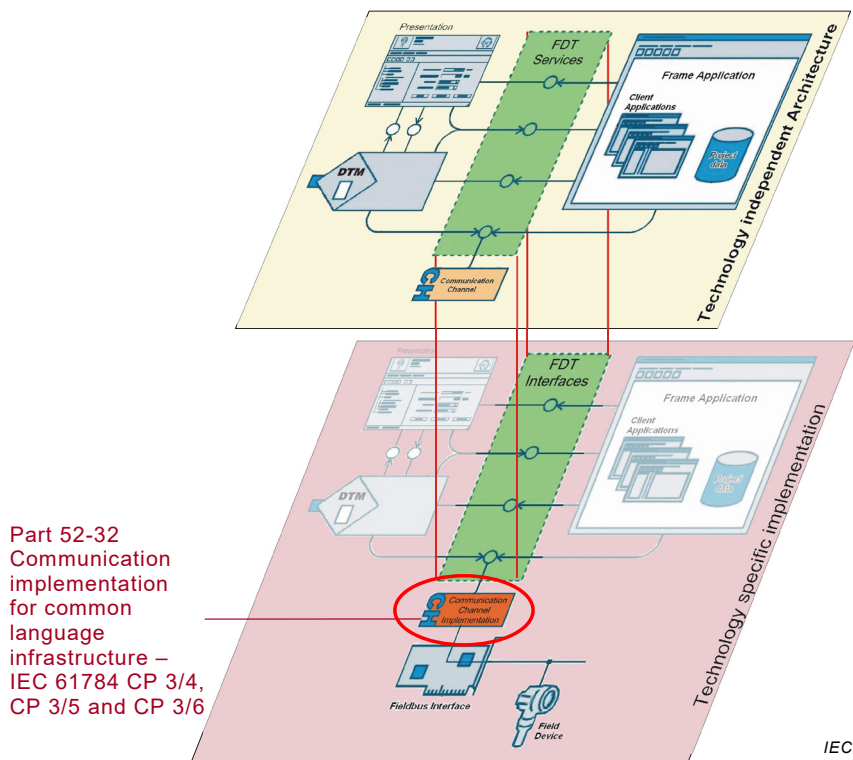


Figure 1 – Part 52-32 of the IEC 62453 series

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 52-32: Communication implementation for common language infrastructure – IEC 61784 CP 3/4, CP 3/5 and CP 3/6

1 Scope

This part of the IEC 62453-52-xy series, which is a Technical Report, provides information for integrating the PROFINET®¹ technology into the CLI-based implementation of FDT interface specification (IEC TR 62453-42).

This part of IEC 62453 specifies implementation of communication and other services based on IEC 62453-303-2.

This document neither contains the FDT specification nor modifies it.

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 61131-3:2013, *Programmable controllers – Part 3: Programming languages*

IEC 61158-6-10, *Industrial communication networks – Fieldbus specifications – Part 6-10: Application layer protocol specification – Type 10 elements*

IEC 61158 (all parts), *Industrial communication networks – Fieldbus specifications*

IEC 61784-1:2014, *Industrial communication networks – Profiles – Part 1: Fieldbus profiles*

IEC 62453-1:2016, *Field device tool (FDT) interface specification – Part 1: Overview and guidance*

IEC 62453-2:2016, *Field device tool (FDT) interface specification – Part 2: Concepts and detailed description*

IEC TR 62453-42: 2016, *Field device tool (FDT) interface specification – Part 42: Object model integration profile – Common language infrastructure*

IEC 62453-303-2:2009, *Field device tool (FDT) interface specification – Part 303-2: Communication profile integration – IEC 61784 CP 3/4, CP 3/5 and CP 3/6*
IEC 62453-303-2:2009/AMD1:2016

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