SLOVENSKI STANDARD
SIST EN 62453-315:2010

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Specifikacija vmesnika orodja procesne naprave - 315. del: Integracija komunikacijskih profilov - IEC 61784 CPF 15 (IEC 62453-315:2009)

Field device tool interface specification -- Part 315: Communication profile integration - IEC 61784 CPF 15

Field Device Tool (FDT)-Schnittstellenspezifikation - Teil 315: Integration von Kommunikationsprofilen - IEC 61784 Kommunikationsprofilfamilie (CPF) 15

Spécification des interfaces des outils des dispositifs de terrain (FDT) - Partie 315: Intégration des profils de communication - CEI 61784 CPF 15

Ta slovenski standard je istoveten z: **EN 62453-315:2009**

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.240.50	Uporabniške rešitve IT v industriji	IT applications in industry

SIST EN 62453-315:2010 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62453-315

October 2009

ICS 25.040.40; 35.100.05; 35.110

English version

Field device tool (FDT) interface specification -
Part 315: Communication profile integration -
IEC 61784 CPF 15
(IEC 62453-315:2009)

Spécification des interfaces des outils des dispositifs de terrain (FDT) - Partie 315: Intégration des profils de communication - CEI 61784 CPF 15 (CEI 62453-315:2009)

Field Device Tool (FDT)-Schnittstellenspezifikation - Teil 315: Integration von Kommunikationsprofilen - Kommunikationsprofilfamilie (CPF) 15 nach IEC 61784 (IEC 62453-315:2009)

This European Standard was approved by CENELEC on 2009-08-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62453-315:2009 E

Foreword

The text of document 65E/131/FDIS, future edition 1 of IEC 62453-315, 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 was approved by CENELEC as EN 62453-315 on 2009-08-01.

Each part of the EN 62453-3xy series is intended to be read in conjunction with EN 62453-2.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2010-05-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-08-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62453-315:2009 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 referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 61131-3	–[1)]	Programmable controllers - Part 3: Programming languages	EN 61131-3	2003[2)]
IEC 61158-5-15	–[1)]	Industrial communication networks - Fieldbus specifications - Part 5-15: Application layer service definition - Type 15 elements	EN 61158-5-15	2008[2)]
IEC 61158-6-15	–[1)]	Industrial communication networks - Fieldbus specifications - Part 6-15: Application layer protocol specification - Type 15 elements	EN 61158-6-15	2008[2)]
IEC 61784-1	–[1)]	Industrial communication networks - Profiles - Part 1: Fieldbus profiles	EN 61784-1	2008[2)]
IEC 61784-2	–[1)]	Industrial communication networks - Profiles - Part 2: Additional fieldbus profiles for real-time networks based on ISO/IEC 8802-3	EN 61784-2	2008[2)]
IEC 62453-1	2009	Field device tool (FDT) interface specification - Part 1: Overview and guidance	EN 62453-1	2009
IEC 62453-2	2009	Field device tool (FDT) interface specification - Part 2: Concepts and detailed description	EN 62453-2	2009
IETF RFC 791	-[1)]	Internet Protocol - DARPA Internet Program Protocol Specification	-	-

[1)] Undated reference.

[2)] Valid edition at date of issue.

IEC 62453-315

Edition 1.0 2009-07

INTERNATIONAL STANDARD

Field device tool (FDT) interface specification – Part 315: Communication profile integration – IEC 61784 CPF 15

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 315: Communication profile integration – IEC 61784 CPF 15

FOREWORD

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International Standard IEC 62453-315 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This part, in conjunction with the other parts of the first edition of the IEC 62453 series cancels and replaces IEC/PAS 62453-1, IEC/PAS 62453-2, IEC/PAS 62453-3, IEC/PAS 62453-4 and IEC/PAS 62453-5 published in 2006, and constitutes a technical revision.

Each part of the IEC 62453-3xy series is intended to be read in conjunction with IEC 62453-2.

The text of this standard is based on the following documents:

FDIS	Report on voting
65E/131/FDIS	65E/144/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A 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 publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

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

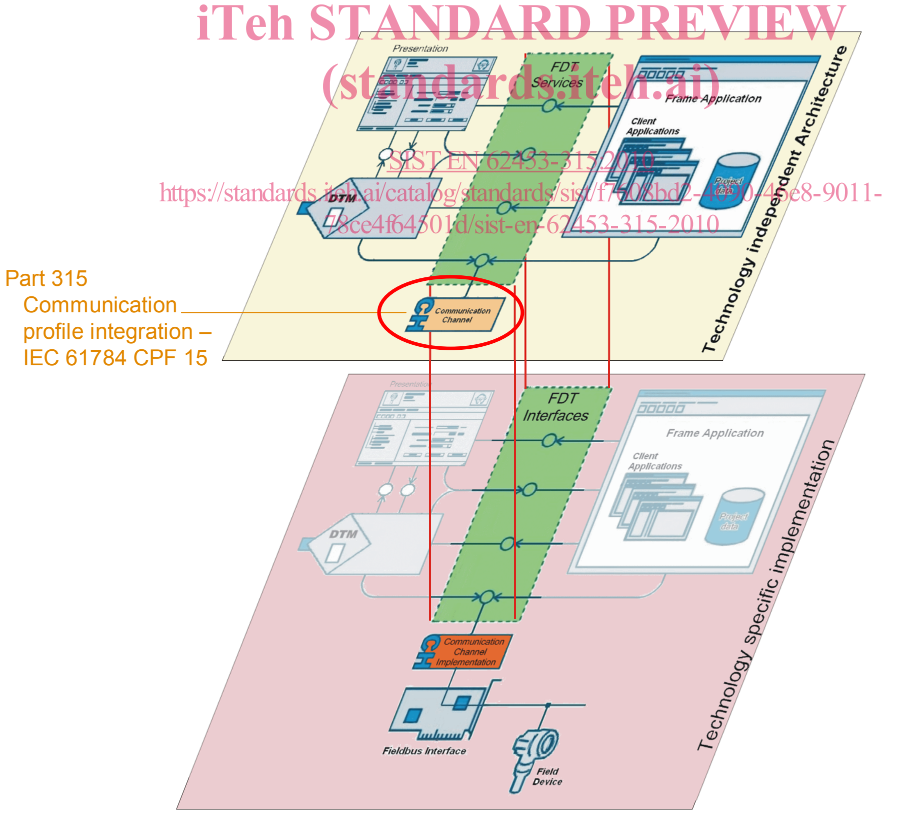
INTRODUCTION

This part of IEC 62453 is an interface specification for developers of FDT (Field Device Tool) 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 fieldbusses 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 DTM (Device Type Manager), 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 kinds of fieldbusses and thus meets the requirements for integrating different kinds of devices into heterogeneous control systems.

Figure 1 shows how IEC 62453-315 is aligned in the structure of the IEC 62453 series.



IEC 1136/09

Figure 1 – Part 315 of the IEC 62453 series

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 315: Communication profile integration – IEC 61784 CPF 15

1 Scope

Communication Profile Family 15 (commonly known as Modbus[1]) defines communication profiles based on IEC 61158-5-15 and IEC 61158-6-15. The basic profile CP 15/1 (Modbus TCP) is defined in IEC 61784-1. An additional communication profile (Modbus Serial Line) is defined in [2].

This part of the IEC 62453 provides information for integrating Modbus TCP® and Modbus Serial Line® protocol support into FDT based systems.

NOTE This part of IEC 62453 only specifies the mapping of Modbus parameters to FDT data types. For restrictions of protocol specific parameters concerning allowed values and concerning limitations of arrays used in the definition of FDT data types, refer to IEC 61158-5-15 and the MODBUS Application Protocol Specification.

2 Normative references

The following referenced documents are indispensable for the application 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, *Programmable controllers – Part 3: Programming languages*

IEC 61158-5-15, *Industrial communication networks – Fieldbus specifications – Part 5-15: Application layer service definition – Type 15 elements*

IEC 61158-6-15, *Industrial communication networks – Fieldbus specifications – Part 6-20: Application layer protocol specification – Type 15 elements*

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

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

IEC 62453-1:2009, *Field Device Tool (FDT) interface specification – Part 1: Overview and guidance*

IEC 62453-2:2009, *Field Device Tool (FDT) interface specification – Part 2: Concepts and detailed description*

RFC 791, *Internet Protocol (available at <http://www.ietf.org/rfc/rfc0791.txt)*

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