



# SLOVENSKI STANDARD

## SIST EN 61784-3-3:2008

01-september-2008

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### Industrijska komunikacijska omrežja - Profili - 3-3. del: Funkcijska varnost procesnih vodil - Dodatne specifikacije za CPF 3 (IEC 61784-3-3:2007)

Industrial communication networks - Profiles - Part 3-3: Functional safety fieldbuses - Additional specifications for CPF 3

Industrielle Kommunikationsnetze - Profile - Teil 3-3: Funktional sichere Übertragung bei Feldbussen - Zusätzliche Festlegungen für die Kommunikationsprofilfamilie 3

Réseaux de communication industriels - Profils - Partie 3-3: Bus de terrain de sécurité fonctionnelle - Spécification supplémentaire pour CPF 3

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**Ta slovenski standard je istoveten z: EN 61784-3-3:2008**

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#### **ICS:**

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.05	Večslojne uporabniške rešitve	Multilayer applications

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61784-3-3**

June 2008

ICS 35.100.20; 25.040.40

English version

**Industrial communication networks -  
Profiles -  
Part 3-3: Functional safety fieldbuses -  
Additional specifications for CPF 3  
(IEC 61784-3-3:2007)**

Réseaux de communication industriels -  
Profils -  
Partie 3-3: Bus de terrain  
de sécurité fonctionnelle -  
Spécification supplémentaire pour CPF 3  
(CEI 61784-3-3:2007)

Industrielle Kommunikationsnetze -  
Profile -  
Teil 3-3: Funktional sichere Übertragung  
bei Feldbussen -  
Zusätzliche Festlegungen  
für die Kommunikationsprofilfamilie 3  
(IEC 61784-3-3:2007)

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**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 65C/470/FDIS, future edition 1 of IEC 61784-3-3, prepared by SC 65C, Industrial networks, 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 61784-3-3 on 2008-05-01.

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) 2009-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-05-01

The International Electrotechnical Commission (IEC) and CENELEC draw attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning the functional safety communication profiles for family 3 as follows, where the [xx] notation indicates the holder of the patent right:

EP1267270-A2 [SI] Verfahren zur Datenübertragung in einem Rechnersystem

WO00/045562-A1 [SI] Method and device for determining the reliability of data carriers

WO99/049373-A1 [SI] Shortened data message of an automation system

The IEC and CENELEC take no position concerning the evidence, validity and scope of these patent rights.

The holders of these patents rights have assured the IEC that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with IEC.

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[SI] Siemens AG  
A&D AS FA TC  
Karlsruhe  
Germany

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC and CENELEC shall not be held responsible for identifying any or all such patent rights.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61784-3-3:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60204-1	NOTE	Harmonized as EN 60204-1:2006 (not modified).
IEC 60870-5-1	NOTE	Harmonized as EN 60870-5-1:1993 (not modified).
IEC 61496	NOTE	Harmonized as EN 61496-1:2004 (modified) and as CLC/TS 61496-2:2006 (not modified) and CLC/TC 61496-3:2008 (not modified)
IEC 61508-4	NOTE	Harmonized as EN 61508-4:2001 (not modified).
IEC 61508-6	NOTE	Harmonized as EN 61508-6:2001 (not modified).
IEC 61784-5	NOTE	Harmonized in EN 61784-5 series (not modified).
IEC 61800-5-2	NOTE	Harmonized as EN 61800-5-2:2007 (not modified).
IEC 62061	NOTE	Harmonized as EN 62061:2005 (not modified).
ISO 10218-1	NOTE	Harmonized as EN ISO 10218-1:2006 (not modified).
ISO 12100-1	NOTE	Harmonized as EN ISO 12100-1:2003 (not modified).
ISO 13849-2	NOTE	Harmonized as EN ISO 13849-2:2003 (not modified).

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## 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61010-1	- <sup>1)</sup>	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements	EN 61010-1 + corr. June	2001 <sup>2)</sup> 2002
IEC 61131-2	- <sup>1)</sup>	Programmable controllers - Part 2: Equipment requirements and tests	EN 61131-2	2007 <sup>2)</sup>
IEC 61131-3	- <sup>1)</sup>	Programmable controllers - Part 3: Programming languages	EN 61131-3	2003 <sup>2)</sup>
IEC 61158	Series	Industrial communication networks - Fieldbus specifications	EN 61158	Series
IEC 61158-2	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 2: Physical layer specification and service definition	EN 61158-2	2008 <sup>2)</sup>
IEC 61158-3-3	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 3-3: Data-link layer service definition - Type 3 elements	EN 61158-3-3	2008 <sup>2)</sup>
IEC 61158-4-3	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 4-3: Data-link layer protocol specification - Type 3 elements	EN 61158-4-3	2008 <sup>2)</sup>
IEC 61158-5-3	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 5-3: Application layer service definition - Type 3 elements	EN 61158-5-3	2008 <sup>2)</sup>
IEC 61158-5-10	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 5-10: Application layer service definition - Type 10 elements	EN 61158-5-10	2008 <sup>2)</sup>
IEC 61158-6-3	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 6-3: Application layer protocol specification - Type 3 elements	EN 61158-6-3	2008 <sup>2)</sup>
IEC 61158-6-10	- <sup>1)</sup>	Industrial communication networks - Fieldbus specifications - Part 6-10: Application layer protocol specification - Type 10 elements	EN 61158-6-10	2008 <sup>2)</sup>

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61326-3-1	- <sup>1)</sup>	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-1: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - General industrial applications	EN 61326-3-1	2008 <sup>2)</sup>
IEC 61326-3-2	- <sup>1)</sup>	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 3-2: Immunity requirements for safety-related systems and for equipment intended to perform safety-related functions (functional safety) - Industrial applications with specified electromagnetic environment	EN 61326-3-2	2008 <sup>2)</sup>
IEC 61508	Series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	Series
IEC 61511	Series	Functional safety - Safety instrumented systems for the process industry sector	EN 61511	Series
IEC 61784-1	- <sup>1)</sup>	Industrial communication networks - Profiles - Part 1: Fieldbus profiles	EN 61784-1	2008 <sup>2)</sup>
IEC 61784-2	- <sup>1)</sup>	Industrial communication networks - Profiles - Part 2: Additional fieldbus profiles for real-time networks based on ISO/IEC 8802-3	EN 61784-2	2008 <sup>2)</sup>
IEC 61784-3	- <sup>1)</sup>	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions	EN 61784-3	2008 <sup>2)</sup>
IEC 61784-5-3	- <sup>1)</sup>	Industrial communication networks - Profiles - Part 5-3: Installation of fieldbuses - Installation profiles for CPF 3	EN 61784-5-3	2008 <sup>2)</sup>
IEC 61918 (mod)	- <sup>1)</sup>	Industrial communication networks - Installation of communication networks in industrial premises	EN 61918	2008 <sup>2)</sup>
IEC 62061	- <sup>1)</sup>	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems	EN 62061	2005 <sup>2)</sup>
IEC 62280-1	2002	Railway applications - Communication, signalling and processing systems - Part 1: Safety-related communication in closed transmission systems	-	-
IEC 62280-2	- <sup>1)</sup>	Railway applications - Communication, signalling and processing systems - Part 2: Safety-related communication in open transmission systems	-	-
IEC/TR 62390	- <sup>1)</sup>	Common automation device - Profile guideline	-	-
ISO 13849-1	- <sup>1)</sup>	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design	EN ISO 13849-1	2006 <sup>2)</sup>

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 15745-3	- <sup>1)</sup>	Industrial automation systems and integration - Open systems application integration framework - Part 3: Reference description for IEC 61158 based control systems	-	-
ISO 15745-4	- <sup>1)</sup>	Industrial automation systems and integration - Open systems application integration framework - Part 4: Reference description for Ethernet-based control systems	-	-

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IEC 61784-3-3

Edition 1.0 2007-12

# INTERNATIONAL STANDARD

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**Industrial communication networks – Profiles –  
Part 3-3: Functional safety fieldbuses – Additional specifications for CPF 3**

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## CONTENTS

FOREWORD.....	8
INTRODUCTION.....	10
1 Scope.....	13
2 Normative references .....	13
3 Terms, definitions, symbols, abbreviated terms and conventions .....	15
3.1 Terms and definitions .....	15
3.1.1 Common terms and definitions .....	15
3.1.2 CPF 3: Additional terms and definitions .....	19
3.2 Symbols and abbreviated terms.....	23
3.2.1 Common symbols and abbreviated terms .....	23
3.2.2 CPF 3: Additional symbols and abbreviated terms .....	23
3.3 Conventions .....	24
4 Overview of FSCP 3/1 (PROFIsafe™) .....	25
5 General .....	27
5.1 External documents providing specifications for the profile.....	27
5.2 Safety functional requirements .....	27
5.3 Safety measures .....	28
5.4 Safety communication layer structure.....	29
5.4.1 Principle of FSCP 3/1 safety communications .....	29
5.4.2 CPF 3 communication structures .....	30
5.5 Relationships with FAL (and DLL, PhL) .....	33
5.5.1 Device model.....	33
5.5.2 Application and communication relationships.....	33
5.5.3 Message format.....	35
5.5.4 Data types.....	35
6 Safety communication layer services .....	36
6.1 F-Host services .....	36
6.2 F-Device services.....	39
6.3 Diagnosis .....	40
6.3.1 Safety alarm generation.....	40
6.3.2 F-Device safety layer diagnosis including the iPar-Server.....	40
7 Safety communication layer protocol .....	41
7.1 Safety PDU format .....	41
7.1.1 Safety PDU structure.....	41
7.1.2 Safety I/O data .....	42
7.1.3 Status and Control Byte.....	42
7.1.4 (Virtual) Consecutive Number.....	44
7.1.5 CRC2 Signature .....	45
7.1.6 Appended standard I/O data .....	46
7.2 FSCP 3/1 behavior .....	46
7.2.1 General .....	46
7.2.2 F-Host state diagram .....	47
7.2.3 F-Device state diagram.....	50
7.2.4 Sequence diagrams.....	54
7.2.5 Timing diagram for a counter reset .....	60
7.2.6 Monitoring of safety times.....	60

7.3	Reaction in the event of a malfunction .....	63
7.3.1	Repetition .....	63
7.3.2	Loss .....	63
7.3.3	Insertion .....	63
7.3.4	Incorrect sequence .....	63
7.3.5	Corruption of safety data .....	63
7.3.6	Delay .....	64
7.3.7	Masquerade .....	64
7.3.8	Memory failures within switches .....	65
7.3.9	Network boundaries and router .....	66
7.4	F-Startup and change coordination .....	66
7.4.1	Standard startup procedure .....	66
7.4.2	iParameter assignment deblocking .....	66
8	Safety communication layer management .....	67
8.1	F-Parameter .....	67
8.1.1	Summary .....	67
8.1.2	F_Source/Destination_Address (codename) .....	67
8.1.3	F_WD_Time (F-Watchdog time) .....	68
8.1.4	F_Prm_Flag1 (Parameters for the safety layer management) .....	68
8.1.5	F_Prm_Flag2 (Parameters for the safety layer management) .....	69
8.1.6	F_iPar_CRC (value of iPar_CRC across iParameters) .....	70
8.1.7	F_Par_CRC (CRC1 across F-Parameters) .....	71
8.1.8	Structure of the F-Parameter record data object .....	71
8.1.9	F-Data fraction .....	71
8.2	iParameter and iPar_CRC .....	72
8.3	Safety parameterization .....	73
8.3.1	Objectives .....	73
8.3.2	GSD and GSDML safety extensions .....	73
8.3.3	Securing safety parameters and GSD data .....	74
8.4	Safety configuration .....	76
8.4.1	Securing the safety I/O data description (CRC7) .....	76
8.4.2	Dataltem data type section examples .....	77
8.5	Data type information usage .....	79
8.5.1	F-Channel driver .....	79
8.5.2	Rules for standard F-Channel drivers .....	80
8.5.3	Recommendations for F-Channel drivers .....	80
8.6	Safety parameter assignment mechanisms .....	81
8.6.1	F-Parameter assignment .....	81
8.6.2	General iParameter assignment .....	82
8.6.3	System integration requirements for iParameterization tools .....	83
8.6.4	iPar-Server .....	84
9	System requirements .....	92
9.1	Indicators and switches .....	92
9.2	Installation guidelines .....	93
9.3	Safety function response time .....	93
9.3.1	Model .....	93
9.3.2	Calculation and optimization .....	95
9.3.3	Adjustment of watchdog times for FSCP 3/1 .....	96
9.3.4	Engineering tool support .....	97

9.3.5	Retries (repetition of messages) .....	97
9.4	Duration of demands .....	98
9.5	Constraints for the calculation of system characteristics .....	99
9.5.1	Probabilistic considerations .....	99
9.5.2	Safety related constraints .....	101
9.5.3	Non safety related constraints (availability).....	102
9.6	Maintenance.....	102
9.6.1	F-Module commissioning / replacement.....	102
9.6.2	Identification and maintenance functions .....	102
9.7	Safety manual .....	103
9.8	Wireless transmission channels.....	103
9.8.1	Black Channel approach.....	103
9.8.2	Availability.....	104
9.8.3	Security measures.....	104
9.8.4	Stationary and mobile applications .....	106
9.9	Conformance classes .....	106
10	Certification.....	107
10.1	Safety policy .....	107
10.2	Obligations.....	108
Annex A (informative)	Additional information for functional safety communication profiles of CPF 3 .....	109
A.1	Hash function calculation.....	109
A.2	Response time measurements.....	111
Bibliography.....	<a href="https://standards.iteh.ai/catalog/standards/sist/963190cd-3c0f-48a2-9e0c-38f77bd8ed93/sist-en-61784-3-3-2008">SIST EN 61784-3-3:2008</a> <a href="https://standards.iteh.ai/catalog/standards/sist/963190cd-3c0f-48a2-9e0c-38f77bd8ed93/sist-en-61784-3-3-2008">https://standards.iteh.ai/catalog/standards/sist/963190cd-3c0f-48a2-9e0c-38f77bd8ed93/sist-en-61784-3-3-2008</a>	115
Table 1	– Deployed measures to master errors .....	28
Table 2	– Data types used for FSCP 3/1 .....	35
Table 3	– Safety layer diagnosis messages .....	40
Table 4	– F-Host states and transitions.....	48
Table 5	– F-Device states and transitions .....	52
Table 6	– SIL monitor times .....	63
Table 7	– Remedies for switch failures.....	65
Table 8	– Safety network boundaries .....	66
Table 9	– I/O data structure items (Version 2).....	76
Table 10	– Sample F-Channel drivers .....	80
Table 11	– Requirements for iParameterization.....	83
Table 12	– Specifier for the iPar-Server Request .....	87
Table 13	– Structure of the Read_RES_PDU ("read record").....	88
Table 14	– Structure of the Write_REQ_PDU ("write record").....	89
Table 15	– Structure of the Pull_RES_PDU ("Pull").....	89
Table 16	– Structure of the Push_REQ_PDU ("Push") .....	89
Table 17	– iPar-Server states and transitions.....	91
Table 18	– iPar-Server management measures.....	92
Table 19	– Information to be included in the safety manual.....	103
Table 20	– Security measures for WLAN (IEEE 802.11i) .....	105

Table 21 – Security measures for Bluetooth (IEEE 802.15.1) .....	106
Table 22 – F-Host conformance class requirements .....	107
Table A.1 – The table "Crctab24" for 24 bit CRC signature calculations .....	110
Table A.2 – The table "Crctab32" for 32 bit CRC signature calculations .....	111
Figure 1 – Relationships of IEC 61784-3 with other standards (machinery) .....	10
Figure 2 – Relationships of IEC 61784-3 with other standards (process) .....	11
Figure 3 – Basic communication preconditions for FSCP 3/1 .....	25
Figure 4 – Structure of an FSCP 3/1 safety PDU .....	26
Figure 5 – Safe communication modes .....	27
Figure 6 – Standard CPF 3 transmission system .....	29
Figure 7 – Safety layer architecture .....	30
Figure 8 – Basic communication layers .....	30
Figure 9 – Multiport switch bus structure .....	31
Figure 10 – Linear bus structure .....	31
Figure 11 – Crossing network borders with routers .....	32
Figure 12 – Complete safety transmission paths .....	32
Figure 13 – Device model .....	33
Figure 14 – Application relationships of a modular device .....	34
Figure 15 – Application and communication relationships (AR/CR) .....	34
Figure 16 – Message format .....	35
Figure 17 – FSCP 3/1 communication structure .....	37
Figure 18 – F user interface of F-Host driver instances .....	37
Figure 19 – F-Device driver interfaces .....	39
Figure 20 – Safety PDU for CPF 3 .....	42
Figure 21 – Status Byte .....	42
Figure 22 – Control Byte .....	43
Figure 23 – The Toggle Bit function .....	44
Figure 24 – F-Device Consecutive Number .....	44
Figure 25 – CRC2 generation (F-Host output) .....	45
Figure 26 – Details of the CRC2 calculation (reverse order) .....	46
Figure 27 – Safety layer communication relationship .....	46
Figure 28 – F-Host state diagram .....	47
Figure 29 – F-Device state diagram .....	51
Figure 30 – Interaction F-Host / F-Device during start-up .....	54
Figure 31 – Interaction F-Host / F-Device during F-Host power off → on .....	55
Figure 32 – Interaction F-Host / F-Device with delayed power on .....	56
Figure 33 – Interaction F-Host / F-Device during power off → on .....	57
Figure 34 – Interaction F-Host / F-Device while host recognizes CRC error .....	58
Figure 35 – Interaction F-Host / F-Device while device recognizes CRC error .....	59
Figure 36 – Impact of the counter reset signal .....	60
Figure 37 – Monitoring the message transit time F-Host ↔ F-Output .....	61

Figure 38 – Monitoring the message transit time F-Input ↔ F-Host .....	61
Figure 39 – F-Parameter data and CRC .....	64
Figure 40 – iParameter assignment deblocking by the F-Host .....	67
Figure 41 – F_Prm_Flag1 .....	68
Figure 42 – F_Check_SeqNr .....	68
Figure 43 – F_Check_iPar .....	69
Figure 44 – F_SIL .....	69
Figure 45 – F_CRC_Length .....	69
Figure 46 – F_Prm_Flag2 .....	70
Figure 47 – F_Block_ID .....	70
Figure 48 – F_Par_Version .....	70
Figure 49 – F-Parameter .....	71
Figure 50 – iParameter block .....	72
Figure 51 – F-Parameter extension within the GSDML specification .....	74
Figure 52 – CRC1 including iPar_CRC .....	75
Figure 53 – Algorithm to build CRC0 .....	75
Figure 54 – DataItem section for F_IN_OUT_1 .....	77
Figure 55 – DataItem section for F_IN_OUT_2 .....	78
Figure 56 – DataItem section for F_IN_OUT_5 .....	78
Figure 57 – DataItem section for F_IN_OUT_6 .....	79
Figure 58 – F-Channel driver as "glue" between F-Device and user program .....	79
Figure 59 – Layout example of an F-Channel driver .....	80
Figure 60 – F-Parameter assignment for simple F-Devices and F-Slaves .....	81
Figure 61 – F and iParameter assignment for complex F-Devices .....	82
Figure 62 – System integration of CPD-Tools .....	84
Figure 63 – iPar-Server mechanism (commissioning) .....	84
Figure 64 – iPar-Server mechanism (for example F-Device replacement) .....	85
Figure 65 – iPar-Server request coding ("status model") .....	86
Figure 66 – Coding of SR_Type .....	87
Figure 67 – iPar-Server request coding ("alarm model") .....	88
Figure 68 – iPar-Server state diagram .....	90
Figure 69 – Example safety function with a critical response time path .....	93
Figure 70 – Simplified typical response time model .....	94
Figure 71 – Frequency distributions of typical response times of the model .....	94
Figure 72 – Context of delay times and watchdog times .....	95
Figure 73 – Timing sections forming the FSCP 3/1 F_WD_Time .....	96
Figure 74 – Frequency distribution of response times with message retries .....	97
Figure 75 – Retries with CP 3/1 .....	98
Figure 76 – Retries with CP 3/RTE .....	98
Figure 77 – Residual error probabilities for the 24-bit polynomial .....	99
Figure 78 – Properness of the 32-bit polynomial for 52 octets .....	100
Figure 79 – Properness of the 32-bit polynomial for 132 octets .....	100
Figure 80 – Monitoring of corrupted messages .....	101

Figure 81 – Security for WLAN networks.....	104
Figure 82 – Security for Bluetooth networks.....	105
Figure A.83 – Typical "C" procedure of a cyclic redundancy check.....	109
Figure A.84 – Comparison of the response time model and a real application .....	112
Figure A.85 – Frequency distribution of measured response times.....	113
Figure A.86 – F-Host with standard and safety-related application programs .....	114

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