



---

Choose certainty.  
Add value.

Annex 1 of the Report  
to the  
Certificate  
Z10 067803 0020 Rev. 00

Safety-Related Programmable System

## **SIMATIC Safety System**

Manufacturer:

Siemens AG  
Gleiwitzer Str. 555  
D-90475 Nürnberg

Report No.: SN92961C-A1  
Revision 1.20 dated 2020-10-16

Testing Body:

TÜV SÜD Rail GmbH  
Rail Automation  
Barthstrasse 16  
D-80339 München

Certification Body:

TÜV SÜD Product Service GmbH  
Ridlerstraße 65  
D-80339 München



## Revision Log

Version	Name	Date	Changes/History
1.0	C. Dirmeier	2018-08-29	This Annex 1 of the Report to the Certificate is based on the Annex A1 of the Report to the Certificate SN83929C_A1_2.9. Changes: <ul style="list-style-type: none"> <li>Module added (SN92804T): ET 200eco PN F-DI 8 x 24 VDC, 4xM12 / F-DQ 3 x 24 VDC/2.0A PM, 3xM12 (6ES7 146-6FF00-0AB0)</li> <li>New Certificate number, replaced due to additional Factories</li> <li>STEP 7 Safety V15.0+HSP0204 added (717515765, Review report 2018-07-24)</li> </ul>
1.1	P. Weiß	2018-09-28	Module added: S7-1500 F SW Controller (6ES7 672-5SC11-0YA0 and 6ES7 672-5WC11-0YA0) (717515765, Review report 2018-08-28) STEP 7 Safety V15.0+HSP0269 added
1.2	C. Dirmeier	2018-10-02	FW-Version V1.0.1 added (SA93062T): <ul style="list-style-type: none"> <li>F-AI 4xI 0(4)..20mA 2-/4-wire HF (6ES7 136-6AA00-0CA1)</li> </ul>
1.3	G. Effenberger	2018-10-19	FW-Version V2.0.0 added (SA93094T): <ul style="list-style-type: none"> <li>ET200SP F-PM-E 24VDC/8A PPM ST (6ES7 136-6PA00-0BC0)</li> </ul> HSP 0249 added STEP 7 Safety V15.1.0 added (SF93093T) <ul style="list-style-type: none"> <li>Safety System Version V2.2 added</li> <li>SENDDP, RCVDP V3.0 added</li> </ul>
1.4	C. Dirmeier	2018-10-25	Firmware Version V1.0.6 added (SN93084T) <ul style="list-style-type: none"> <li>F-DI 8x24VDC (6ES7 136-6BA00-0CA0)</li> </ul>
1.5	P. Weiß	2018-11-21	Module added: S7-1500 F SW Controller (6ES7 672-8FC01-0YA0) (717517799, Review report 2018-11-21)
1.6	F. Seika	2018-12-12	Firmware Version V2.0.0 added (SN93401T) F-DQ 4x24VDC/2A PM HF (6ES7 136-6DB00-0CA0) HSP286 added (717517799, Review report 2018-12-12)
1.7	F. Seika	2019-02-12	EN 50156-1, EN 50156-2, EN 298 added (SN93620T) Modules ET 200eco PN - F-DI 8 x 24 VDC, 4xM12 / F-DQ 3 x 24 VDC/2.0A PM, 3xM12 (6ES7 146-6FF00-0AB0)
1.8	P. Weiß	2019-03-04	HSP276 (include the S7-1200 F-CPU V4.3) added (717517799, Review Protocol V1.0_Änderungsmittellungen zur FW Änderung V4.3.0)
1.8.1	P. Weiß	2019-03-11	Formal update of revision log
1.9	T. Paradzik	2019-03-15	<ul style="list-style-type: none"> <li>FS updated (SN93449T) F-DI 8 x 24 VDC, 4xM12 / F-DQ 3 x 24 VDC/2.0A PM, 3xM12 (6ES7 146-6FF00-0AB0)</li> <li>FS and FW updated (Review report 2019-03-06) SM 1226 F-DQ 2 x Relay 24VDC/24...230VAC/5A (6ES7 226-6RA32-0XB0)</li> </ul>

Version	Name	Date	Changes/History
1.10	C. Dirmeier	2019-04-09	<ul style="list-style-type: none"> <li>FS 02 added (see related Review Report) F-AI 4xI 0(4)..20mA 2-/4-wire HF (6ES7 136-6AA00-0CA1)</li> <li>Information added regarding verification of the firmware of modules (chap. 1)</li> </ul>
1.11	P. Weiß	2019-07-11	<ul style="list-style-type: none"> <li>Added marker for F CPUs regarding to "type tested in accordance to EN 298:2012, EN 50156-1:2015 and EN 50156-2:2015" (717517799, Review Protocol V1.0_Änderungsmeldungen Nachprüfung SPH Umwelt - EN298)</li> <li>HSP287 (include the S7-1500 F SW Controller V2.7) added (717517799, Review Protocol V2.1, ÄM S7-1500 F SW Controller)</li> <li>Update 8 for V14 SP1 added (717517799, Review Protocol_Optionspaket STEP 7 Safety V14.0 SP1 UP8)</li> <li>FS updated (SJ94151T) <ul style="list-style-type: none"> <li>SM 1226 F-DI 16 x 24 VDC (6ES7 226-6BA32-0XB0)</li> <li>SM 1226 F-DQ 4 x 24 VDC (6ES7 226-6DA32-0XB0)</li> <li>SM 1226 F-DQ 2 x Relay 24VDC/24...230VAC/5A (6ES7 226-6RA32-0XB0)</li> </ul> </li> </ul>
1.12	P. Weiß	2019-07-22	<ul style="list-style-type: none"> <li>Formal; related to update 8 for V14 SP1 (717517799, Review Protocol_Optionspaket STEP 7 Safety V14.0 SP1 UP8)</li> </ul>
1.13	F. Seika	2019-10-07	<p>Compliance of the F-IO modules to the burner standards EN 50156-1, EN 50156-2 and EN 298</p> <ul style="list-style-type: none"> <li>F-DI 16x24VDC (6ES7 526-1BH00-0AB0)</li> <li>F-DQ 8x24 (6ES7 526-2BF00-0AB0)</li> <li>F-DI 8x24VDC HF (6ES7 136-6BA00-0CA0)</li> <li>F-DQ 4x24 (6ES7 136-6DB00-0CA0)</li> <li>F-PM-E 24VDC/8A (6ES7 136-6PA00-0BC0)</li> <li>F-RQ 1x24VDC (6ES7 136-6RA00-0BF0) (717518194, SN94473T Rev. 1.0)</li> </ul>
1.14	P. Weiß	2019-11-11	<p>Moduls added (SF94603T V1.0):</p> <ul style="list-style-type: none"> <li>F-CPU 1513proF-2 PN (6ES7 513-2GL00-0AB0)</li> <li>F-CPU 1515F-2 PN (6ES7 515-2FM02-0AB0)</li> <li>F-CPU 1516F-3 PN (6ES7 516-3FN02-0AB0)</li> </ul> <p>STEP 7 Safety V16.0 added including (SF94603T V1.0):</p> <ul style="list-style-type: none"> <li>Safety System Version V2.3</li> <li>SCALE-D V2.0</li> </ul>
1.14.1	P. Weiß	2019-11-11	<ul style="list-style-type: none"> <li>Formal; page 10</li> </ul>



Version	Name	Date	Changes/History
1.15	F. Seika	2019-11-22	FS and FW updated (SN94636T) <ul style="list-style-type: none"> <li>F-DI 8x24VDC HF (6ES7 136-6BA00-0CA0)</li> </ul> FW updated (SN94593T) <ul style="list-style-type: none"> <li>F-DQ 4x24VDC/2A PM HF (6ES7 136-6DB00-0CA0)</li> </ul> FW updated (SN94617T) <ul style="list-style-type: none"> <li>F-DQ 8x24VDC/2A PPM (6ES7 526-2BF00-0AB0)</li> </ul>
1.16	C. Dirmeier	2020-03-04	Module added (SA94768T): <ul style="list-style-type: none"> <li>F-AI 4xU 0..10V HF (6ES7136-6AB00-0CA1)</li> </ul> HSP308 (includes the ET 200SP F-AI 4xU) added (Review Protocol V1.0 HSP 0308 (AI Baugruppe))  Compliance of the F-IO modules to the burner standards EN 50156-1, EN 50156-2 and EN 298 (SN94626T) <ul style="list-style-type: none"> <li>F-AI 4xI (0)4..20mA HF (6ES7 136-6AA00-0CA1)</li> <li>F-DQ 8x24VDC / 0,5A PP HF (6ES7 136-6DC00-0CA0)</li> </ul>
1.17	F. Seika	2020-03-24	Compliance of the F-IO modules to the burner standards EN 50156-1, EN 50156-2 and EN 298 <ul style="list-style-type: none"> <li>SM 1226 F-DI 16 x 24 VDC (6ES7 226-6BA32-0XB0)</li> <li>SM 1226 F-DQ 4 x 24 VDC (6ES7 226-6DA32-0XB0)</li> <li>SM 1226 F-DQ 2 x Relay (6ES7 226-6RA32-0XB0)</li> <li>(717519352, SN94627T Rev. 1.0)</li> </ul>
1.18	F. Seika	2020-04-08	Compliance of the F-CPU modules to the burner standards EN 50156-1, EN 50156-2 and EN 298 <ul style="list-style-type: none"> <li>CPU 1214FC DC/DC/DC (6ES7 214-1AF40-0XB0)</li> <li>CPU 1214FC DC/DC/RLY (6ES7 214-1HF40-0XB0)</li> <li>CPU 1215FC DC/DC/DC (6ES7 215-1AF40-0XB0)</li> <li>CPU 1215FC DC/DC/RLY (6ES7 215-1HF40-0XB0)</li> <li>(717519811, SJ95016T Rev. 1.0)</li> </ul>
1.19	C. Dirmeier	2020-10-08	New FS added (Review Protocol CCC): <ul style="list-style-type: none"> <li>SM 1226 F-DI 16 x 24 VDC (6ES7226 6BA32-0XB0)</li> <li>SM 1226 F-DQ 4 x 24 VDC (6ES7226 6DA32-0XB0)</li> </ul>
1.20	C. Dirmeier	2020-10-16	New FS and FW added (SN95827T): <ul style="list-style-type: none"> <li>F-AI 4xI 0(4)..20mA 2-/4-wire HF (6ES7 136-6AA00-0CA1)</li> </ul> New FS added (SN95827T): <ul style="list-style-type: none"> <li>F-AI 4xU 0..10V HF (6ES7 136-6AB00-0CA1)</li> </ul>



## 1 Safety-Relevant Hardware/Firmware Components

The following system components with their configuration by using STEP 7 Safety are certified 'safety related'. This allows the components to be used to process safety critical signals and functions:

Module	Order Number	Release Number / Firmware Version	Module Description
<b>CPUs:</b>			
CPU 1518F-4 PN/DP	6ES7 518-4FP00-0AB0 <sup>x)</sup>	01 or higher / V1.5 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1518F-4 PN/DP ODK	6ES7 518-4FP00-3AB0 <sup>x)</sup>	04 or higher / V2.0.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1518F-4 PN/DP MFP	6ES7 518-4FX00-1AB0 <sup>x)</sup>	01 or higher / V2.5.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1517F-3 PN/DP	6ES7 517-3FP00-0AB0 <sup>x)</sup>	01 or higher / V1.6 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1517TF-3 PN/DP	6ES7 517-3UP00-0AB0 <sup>x)</sup>	04 or higher / V2.0.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1516F-3 PN/DP	6ES7 516-3FN02-0AB0 <sup>x)</sup>	01 or higher / V2.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1516F-3 PN/DP	6ES7 516-3FN01-0AB0 <sup>x)</sup>	01 or higher / V1.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1516F-3 PN/DP	6ES7 516-3FN00-0AB0	01 or higher / V1.1.2 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1516TF-3 PN/DP	6ES7 516-3UN00-0AB0 <sup>x)</sup>	05 or higher / V2.5.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1516proF-2 PN	6ES7 516-2GN00-0AB0 <sup>x)</sup>	01 or higher / V2.0.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1513proF-2 PN	6ES7 513-2GL00-0AB0 <sup>x)</sup>	01 or higher / V2.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1515F-2 PN	6ES7 515-2FM02-0AB0 <sup>x)</sup>	01 or higher / V2.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.



Module	Order Number	Release Number / Firmware Version	Module Description
CPU 1515F-2 PN	6ES7 515- 2FM01-0AB0 <sup>x)</sup>	01 or higher / V1.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1515F-2 PN	6ES7 515- 2FM00-0AB0	01 or higher / V1.6 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1515TF-2 PN	6ES7 515- 2UM01-0AB0 <sup>x)</sup>	03 or higher / V2.1.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1513F-1 PN	6ES7 513- 1FL02-0AB0 <sup>x)</sup>	01 or higher / V2.5.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1513F-1 PN	6ES7 513- 1FL01-0AB0 <sup>x)</sup>	01 or higher / V1.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1513F-1 PN	6ES7 513- 1FL00-0AB0	01 or higher / V1.7.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1511F-1 PN	6ES7 511- 1FK02-0AB0 <sup>x)</sup>	01 or higher / V2.5.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1511F-1 PN	6ES7 511- 1FK01-0AB0 <sup>x)</sup>	01 or higher / V1.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1511F-1 PN	6ES7 511- 1FK00-0AB0	01 or higher / V1.7.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1511TF-1 PN	6ES7 511- 1UK01-0AB0 <sup>x)</sup>	03 or higher / V2.1.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1512SP F-1 PN	6ES7 512- 1SK01-0AB0 <sup>x)</sup>	01 or higher / V1.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1512SP F-1 PN	6ES7 512- 1SK00-0AB0	01 or higher / V1.7.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1510SP F-1 PN	6ES7 510- 1SJ01-0AB0 <sup>x)</sup>	01 or higher / V1.8.1 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1510SP F-1 PN	6ES7 510- 1SJ00-0AB0	01 or higher / V1.7.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.



Module	Order Number	Release Number / Firmware Version	Module Description
CPU 1215FC DC/DC/DC	6ES7 215- 1AF40-0XB0 <sup>x)</sup>	01 or higher / V4.1.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1215FC DC/DC/RLY	6ES7 215- 1HF40-0XB0 <sup>x)</sup>	01 or higher / V4.1.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1214FC DC/DC/DC	6ES7 214- 1AF40-0XB0 <sup>x)</sup>	01 or higher / V4.1.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1214FC DC/DC/RLY	6ES7 214- 1HF40-0XB0 <sup>x)</sup>	01 or higher / V4.1.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1212FC DC/DC/DC	6ES7 212- 1AF40-0XB0 <sup>x)</sup>	05 or higher / V4.2.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
CPU 1212FC DC/DC/RLY	6ES7 212- 1HF40-0XB0 <sup>x)</sup>	05 or higher / V4.2.0 or higher	CPU which is suitable for safety-related applications by using a fail-safe-application program.
S7-1500 F SW Controller	6ES7 672- 5SC01-0YA0  6ES7 672- 7FC01-0YA0  6ES7 672- 5SC11-0YA0  6ES7 672- 5WC11-0YA0  6ES7 672- 8FC01-0YA0	--- / V2.0 or higher    --- / V2.5 or higher   --- / V2.6 or higher	Soft-PLC which is suitable for safety-related applications by using a fail-safe-application program.
<b>Modules ET 200MP:</b>			
F-DI 16x24VDC	6ES7 526- 1BH00-0AB0	01 <sup>x)</sup> / V1.0.0, V1.0.1, V1.0.2	16 channel digital input module 24VDC
F-DQ 8x24VDC/2A PPM	6ES7 526- 2BF00-0AB0	01, 02 <sup>x)</sup> , 03 / V1.0.0 <sup>1</sup> V1.0.1, V1.0.2, V1.0.3	8 channel digital output module 24VDC
<b>Modules ET 200SP:</b>			

<sup>1</sup> ET200MP F-DQ 8x24VDC/2A PPM V1.0.0 only with restricted parameters according product information  
A5E37428391-AC, 09/2016



Module	Order Number	Release Number / Firmware Version	Module Description
F-DI 8x24VDC HF	6ES7 136-6BA00-0CA0	01 to 04 <sup>X</sup> ), 05 / V1.0.5, V1.0.6, V1.0.7	8 channel digital input module 24VDC
F-DQ 4x24VDC/2A PM HF	6ES7 136-6DB00-0CA0	01 to 04 <sup>X</sup> ), 05 / V1.0.2, V1.0.3, V1.0.4, V2.0.0, V2.0.1	4 channel digital output module 24VDC
F-PM-E 24VDC/8A PPM ST	6ES7 136-6PA00-0BC0	01 to 05 <sup>X</sup> ) / V1.0.5, V2.0.0	power module 24VDC; P- / M-switch
F-RQ 1x24VDC/24... 230VAC/5A	6ES7 136-6RA00-0BF0	01 <sup>X</sup> ) to 02	1 channel digital relay output module 24VDC/5A, 24...230VAC/5A
F-DQ 8x24VDC/0.5A PP HF	6ES7 136-6DC00-0CA0	01 <sup>X</sup> ) / V1.0.0	8 channel digital output module 24VDC
F-AI 4xI 0(4)..20mA 2-/4-wire HF	6ES7 136-6AA00-0CA1	01 <sup>X</sup> ) to 03 / V1.0.0, V1.0.1, V1.0.2	4 channel analog input module 0(4)..20mA
F-AI 4xU 0..10V HF	6ES7 136-6AB00-0CA1	01 <sup>X</sup> ) to 02 / V1.0.1	4 channel analog input module 0..10V
<b>Modules ET 200eco PN:</b>			
F-DI 8 x 24 VDC, 4xM12 / F-DQ 3 x 24 VDC/2.0A PM, 3xM12	6ES7 146-6FF00-0AB0	02 <sup>X</sup> ) to 03 / V1.0.0	8 channel digital input 24 VDC, 3 channel digital output 24VDC/2.0A PM
<b>Modules S7-1200:</b>			
SM 1226 F-DI 16 x 24 VDC	6ES7 226-6BA32-0XB0	01 <sup>X</sup> ) to 04 / V2.0.0	16 channel digital input module 24VDC
SM 1226 F-DQ 4 x 24 VDC	6ES7 226-6DA32-0XB0	01 <sup>X</sup> ) to 04 / V2.0.0	4 channel digital output module 24VDC
SM 1226 F-DQ 2 x Relay 24VDC/24...230VAC/5A	6ES7 226-6RA32-0XB0	01 <sup>X</sup> ) to 04 / V2.0.0, V2.0.1	2 channel digital relay output module 24VDC/24...230VAC/5A

The modules listed above – marked with « X » - comply with the Application Standards defined in the report to the certificate (see chapter 3.6). Only they are type tested in accordance to EN 298:2012, EN 50156-1:2015 and EN 50156-2:2015. In case of the F- IO Modules, this statement also applies to all release numbers after the marked release number with « X ».





The safety summary from the engineering system provides documentation of the safety-related project data. This printout contains only the major and minor version of the firmware (e. g. V1.0).

The complete Firmware Version and Release Number (Hardware Version) of modules can be checked using the online identification data (I&M0 e. g. V1.0.5).

The following elements listed in certificate S7 Distributed Safety can also be used with elements listed within the certificate of SIMATIC Safety System

- F- CPUs: CPU ET 200S, CPU ET 200pro, CPU S7-300, CPU S7-400 and Soft-PLC
- F- IO Modules: ET 200SP, ET 200M, ET 200S, ET 200pro, ET 200eco and ET 200iSP

For details please see chapter 2.4 in report to the certificate of SIMATIC Safety.



## 2 Safety-Relevant Software Components

### 2.1 CPUs S7-1200/S7-1500 and STEP 7 Safety V14 and higher

STEP 7 Safety	V14.0, V14.0 SP1 V14.0 SP1+HSP0202 V14.0 SP1 Update 4 (+HSP0202) / Update 8 V15.0 V15.0 +HSP203/HSP255/HSP204/HSP269/ HSP249 V15.1 +HSP286/HSP276/HSP287 V16.0 +HSP308
---------------	---

The Optional Package includes the following Safety system versions:

Safety System versions	
CPUs S7-1200	V 1.6, V 2.0, V 2.1, V2.2, V2.3
CPUs S7- 1500	V 1.6, V 2.0, V 2.1, V2.2, V2.3

The Optional Package includes the following system library elements:

Instructions (optional package STEP 7 Safety)		
Name	CPUs S7-1200	CPUs S7-1500
	Version	Version
ACK_GL	V1.3	V1.3
ACK_OP	V1.3	V1.3
BO_W	V1.4 V2.0 <sup>1</sup>	V1.4 V2.0 <sup>2</sup>
CTD	V1.3	V1.3
CTU	V1.3	V1.3
CTUD	V1.3	V1.3
ESTOP1	V1.5 V1.6	V1.5 V1.6
EV1oo2DI	V1.3	V1.3



Instructions (optional package STEP 7 Safety)		
Name	CPUs S7-1200	CPUs S7-1500
	Version	Version
FDBACK	V1.5	V1.5
MUT_P	V1.4	V1.4
RCVDP	V1.5 V2.0 <sup>1</sup> V3.0 <sup>1</sup>	V1.4 V1.5 V2.0 <sup>2</sup> V3.0 <sup>2</sup>
RD_ARRAY_I	-	V1.0 <sup>2</sup>
RD_ARRAY_DI	-	V1.0 <sup>2</sup>
SCALE	V1.2	V1.2
SCALE_D	V2.0 <sup>1</sup>	V2.0 <sup>2</sup>
SENDDP	V1.5 V2.0 <sup>1</sup> V3.0 <sup>1</sup>	V1.4 V1.5 V2.0 <sup>2</sup> V3.0 <sup>2</sup>
SFDOOR	V1.3	V1.3
SHL	V1.4 V2.0 <sup>1</sup>	V1.4 V2.0 <sup>2</sup>
SHR	V1.4 V2.0 <sup>1</sup>	V1.4 V2.0 <sup>2</sup>
TOF	V1.4	V1.4
TON	V1.4	V1.4
TP	V1.4	V1.4



Instructions (optional package STEP 7 Safety)		
Name	CPUs S7-1200	CPUs S7-1500
	Version	Version
TWO_H_EN	V1.3	V1.3
W_BO	V1.4 V2.0 <sup>1</sup>	V1.4 V2.0 <sup>2</sup>

<sup>1</sup> Firmwareversion V4.2 and higher

<sup>2</sup> Firmwareversion V2.0 and higher

## 2.2 CPUs S7-1200/S7-1500 and STEP 7 Safety V11 to V13

STEP 7 Safety	V11.0, V11.0+HSP0030, V12.0, V12.0+HSP0082, V13.0, V13.0 Update1, V13.0 SP1, V13.0 SP1 +Update4/Update 5 (+HSP0145/+HSP0086) V13.0 SP2
---------------	---

The Optional Package includes the following system library elements:

Instructions (optional package STEP 7 Safety)		
Name	CPUs S7-1200	CPUs S7-1500
	Version	Version
ACK_GL	V1.2	V1.1 V1.2
ACK_OP	V1.2	V1.1 V1.2
BO_W	V1.3	V1.2 V1.3
CTD	V1.2	V1.1 V1.2
CTU	V1.2	V1.1 V1.2



<b>Instructions (optional package STEP 7 Safety)</b>		
	<b>CPUs S7-1200</b>	<b>CPUs S7-1500</b>
<b>Name</b>	<b>Version</b>	<b>Version</b>
<b>CTUD</b>	<b>V1.2</b>	<b>V1.1 V1.2</b>
<b>ESTOP1</b>	<b>V1.3 V1.4</b>	<b>V1.2 V1.3 V1.4</b>
<b>EV1oo2DI</b>	<b>V1.2</b>	<b>V1.1 V1.2</b>
<b>FDBACK</b>	<b>V1.3 V1.4</b>	<b>V1.2 V1.3 V1.4</b>
<b>MUT_P</b>	<b>V1.3</b>	<b>V1.2 V1.3</b>
<b>RCVDP</b>	<b>---</b>	<b>V1.2 V1.3</b>
<b>SCALE</b>	<b>---</b>	<b>V1.1</b>
<b>SENDDP</b>	<b>---</b>	<b>V1.2 V1.3</b>
<b>SFDOOR</b>	<b>V1.2</b>	<b>V1.1 V1.2</b>
<b>SHL</b>	<b>V1.3</b>	<b>V1.2 V1.3</b>
<b>SHR</b>	<b>V1.3</b>	<b>V1.2 V1.3</b>
<b>TOF</b>	<b>V1.2 V1.3</b>	<b>V1.1 V1.2 V1.3</b>
<b>TON</b>	<b>V1.2 V1.3</b>	<b>V1.1 V1.2 V1.3</b>
<b>TP</b>	<b>V1.2 V1.3</b>	<b>V1.1 V1.2 V1.3</b>
<b>TWO_H_EN</b>	<b>V1.2</b>	<b>V1.1 V1.2</b>



Instructions (optional package STEP 7 Safety)		
Name	CPU S7-1200	CPU S7-1500
	Version	Version
W_BO	V1.3	V1.2 V1.3

Other Instructions and F-system blocks (optional package STEP 7 Safety)		
Name	CPU S7-1200	CPU S7-1500
	Version	Version
Instructions (without own version)	V1.3	V1.2 V1.3
F-system blocks	V1.3	V1.2 V1.3
F-IO access	V1.3	V1.2 V1.3

### 2.3 CPUs S7-300/S7-400 and STEP 7 Safety V11 and higher

STEP 7 Safety	V11.0, V11.0+HSP0030, V12.0, V12.0+HSP0082, V13.0, V13.0 Update1, V13.0 SP1, V13.0 SP1 +Update4/Update 5 (+HSP0145/+HSP0086) V13.0 SP2, V14.0, V14.0 SP1 V14.0 SP1+HSP0202 V14.0 SP1 Update 4 (+HSP0202) / Update 8 V15.0 V15.0+HSP203/HSP255/HSP204/HSP269/HSP249 V15.1+HSP286 V16.0+HSP308
---------------	--



The Optional Package includes the following Safety system versions:

Safety System versions (STEP 7 Safety V14 and higher)	
CPU S7-300 CPU S7-400	V 2.0

Instructions (optional package STEP 7 Safety)				
Name	CPUs S7-300 S7-400			
	Version	Block name	Signature	Initial value signature
ACK_GL	V1.0 V1.1	F_ACK_GL	8B12	F2DE
	V1.2 V1.3	FIACK_GL	9FB4	D360
ACK_OP	V1.0 V1.1	F_ACK_OP	351F	A150
	V1.2 V1.3	FIACK_OP	BDC3	B593
BO_W	V1.0 V1.2	F_BO_W	20A5	---
	V1.3 V1.4 V2.0	FIBO_W	963B	BED5
CTD	V1.0 V1.1	F_CTD	F77D	2452
	V1.2 V1.3	FICTD	7AC0	A28F
CTU	V1.0 V1.1	F_CTU	8AC9	2452
	V1.2 V1.3	FICTU	2304	A28F
CTUD	V1.0 V1.1	F_CTUD	7C8F	2452
	V1.2 V1.3	FICTUD	E51F	E876
ESTOP1	V1.0	F_ESTOP1	2E11	AE5E
	V1.1 V1.2 V1.3 V1.4 V1.5 V1.6	F_ESTOP1	4E49	2283
EV1oo2DI	V1.0 V1.1	F_1oo2DI	6AA7	2C7D
	V1.2 V1.3	FI1oo2DI	C2E2	AEAA
FDBACK	V1.0	F_FDBACK	F521	F965



Instructions (optional package STEP 7 Safety)				
Name	CPUs S7-300 S7-400			
	Version	Block name	Signature	Initial value signature
	V1.1 V1.2 V1.3 V1.4 V1.5	F_FDBACK	8395	5740
MUT_P	V1.0 V1.1 V1.2	F_MUT_P	CB71	7D3C
	V1.3 V1.4	FIMUT_P	E8D5	2C45
MUTING	V1.0	F_MUTING	606B	AF14
		FIMUTING	D5F9	B0C4
RCVDP	V1.0 V1.2 V1.3 V1.4 V1.5 V2.0 V3.0	F_RCVDP	42F1	54E4
RCVS7	V1.0 V1.1 V1.2	F_RCVS7	4D3C	E1A5
RD_FDB	V1.0	F_DI_RD	D579	---
		F_INT_RD	BA20	---
		FIDI_RD	DE7E	6168
		FIINT_RD	1D3F	8BAA
SCALE	V1.0 V1.1 V1.2	F_SCA_I	D8CA	2452
		FISCA_I	A0FB	50E4
SENDDP	V1.0 V1.2 V1.3 V1.4 V1.5 V2.0 V3.0	F_SENDDP	F0B9	4E03
SENDS7	V1.0 V1.1 V1.2	F_SENDS7	71D7	9BFF
SFDOOR	V1.0 V1.1 V1.2 V1.3	F_SFDOOR	86DA	76E6





Instructions (optional package STEP 7 Safety)				
Name	CPUs S7-300 S7-400			
	Version	Block name	Signature	Initial value signature
SHL	V1.0	F_SHL_W	4D39	---
	V1.2			
	V1.3			
	V1.4	FISHL_W	146E	8E58
	V2.0			
SHR	V1.0	F_SHR_W	E4E3	---
	V1.2			
	V1.3			
	V1.4	FISHR_W	AB8F	8E58
	V2.0			
TOF	V1.0	F_TOF	14B4	980D
	V1.1			
	V1.2			
	V1.3	FITOF	69AF	3326
	V1.4			
TON	V1.0	F_TON	6B7E	980D
	V1.1			
	V1.2			
	V1.3	FITON	E1DF	ED43
	V1.4			
TP	V1.0	F_TP	669E	980D
	V1.1			
	V1.2			
	V1.3	FITP	7E15	3326
	V1.4			
TWO_H_EN	V1.0	F_2H_EN	26CD	6EF7
	V1.1			
	V1.2	FI2H_EN	6855	5F72
	V1.3			
TWO_HAND	V1.0	F_2HAND	EEB8	6EF7
		FI2HAND	7131	F85A
W_BO	V1.0	F_W_BO	BD67	---
	V1.2			
	V1.3			
	V1.4	FIW_BO	7A7F	BED5
	V2.0			
WR_FDB	V1.0	F_DI_WR	C8D3	---
		F_INT_WR	A78A	---
		FIDI_WR	E939	DF33
		FIINT_WR	CFA9	AD11



Other Instructions and F-system blocks (optional package STEP 7 Safety)				
Name	CPUs S7-300 S7-400			
	Version	Block name	Signature	Initial value signature
<b>Instructions (without own version)</b>	V1.0 V1.2 V1.3	---	---	---
<b>F-system blocks</b>	V1.0 V1.2 V1.3	---	---	---
<b>F-IO access</b>	V1.0 V1.2 V1.3	---	---	---
<b>F_CONTROL</b>	V1.0 V1.2 V1.3 V2.0	F_CTRL_1	7CB2	904B
	V1.0 V1.2 V1.3 V1.4	F_CTRL_2	A9D8	9E40
<b>F_DIAG</b>	V1.0	F_DIAG_N	937B	3612
<b>F_DRIVER</b>	V1.0	F_IO_CGP	D82D	F146
<b>F_RTGCOM</b>	V1.0	F_RTGCO2	D292	7A4A

Munich,  
TÜV SÜD Rail GmbH  
Rail Automation

Peter Weiß  
Technical Certifier